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Contents

Articles

Special Features

(continued on next page)

Psychologically Speaking

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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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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

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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, or the Arkansas Symposium for Psychology Students. 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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Sympathy and Perspective Taking as Mediators of Gender Differences in Altruism

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University of Nebraska-Lincoln

Eagly and Crowley (1986) found that men and women differ on the type of help they are more likely to give. The present study examined whether gender differences in personality variables may account for gender differences in altruistic behavior. A total of 100 undergraduate students (63 women, 37 men) completed measures of sympathy, perspective taking, and social desirability. We then presented the students with an opportunity to donate money to a charity of their choice. Results indicated that women donated significantly more money than men and that gender differences in sympathy accounted for gender differences in the amount donated.

Altruism is one of the most examined phenomena in social psychology. Perhaps this situation exists because altruism is not easily understood. Altruism is the unselfish act of helping another person, typically with some cost to the helper (e.g., donating to a charity). Why might one individual be more altruistic than another? To answer this question, researchers have explored the relationship between altruism and various personality variables. Because men and women differ on the types of help in which they are more likely to participate, research (Eagly & Crowley, 1986) has examined gender differences in personality and altruism.

Meta-analytic reviews indicate that gender differences in altruism depend on the type of helping behavior examined (Eagly & Crowley, 1986; Eagly & Wood, 1991). Women are more likely to be helpful in caring for others and in providing emotional support, whereas men are more helpful in situations involving chivalry and short-term dangerous encounters with strangers. One question of interest is whether gender differences in altruism can be accounted for by gender differences in personality variables relevant to these helping opportunities.

One personality variable that might account for gender differences in altruism is sympathy. Empathy, feeling the same emotions as another person, and sympathy, feelings of concern or sorrow for another needy person, are primary motivators for altruism (Hoffman, 1975). Although some scholars have speculated that empathy often leads to sympathy, investigators have often not distinguished between empathy and sympathy. Researchers (Batson & Coke, 1981; Carlo, Eisenberg, Troyer, Switzer, & Speer, 1991; Eisenberg & Miller, 1987; Toi & Batson, 1982) have found evidence that increases in empathy-sympathy are associated with increases in altruism. Furthermore, researchers have found that women express more empathy-sympathy than men on self-report measures and that women more accurately decode emotions from auditory and visual cues than men (Eisenberg & Lennon, 1983).

Another personality variable that might account for gender differences in altruism is perspective taking. Researchers define perspective taking as the tendency to understand another's thoughts, emotions, and social situation (Davis, 1983; Eisenberg, Shea, Carlo, & Knight, 1991). Perspective taking involves the tendency to try to understand another's situation and is considered the cognitive component of empathy-sympathy. Some researchers have noted that individuals who tend to take the perspective of another are likely to have high levels of empathy and sympathy (Eisenberg et al., 1991). Individuals' increased awareness about another's feelings or social situation and their emotional sensitivity to another's situation might lead to helping behaviors. In previous studies, investigators (Carlo et al., 1991; Underwood & Moore, 1982) havve found a positive association between perspective taking and altruism.

The altruistic behavior we examined was donating to charities. Because this task involved caring for others and offered no potential for physical danger, we hypothesized that women would donate more money to a charity than men. Based on previous evidence and theories (e.g., empathy-altruism hypothesis; Batson & Coke, 1981, Eisenberg, 1986), we expected women to exhibit higher levels of sympathy and perspective taking than men, and we expected both sympathy and perspective taking to correlate positively with altruism. Furthermore, we expected that gender differences in sympathy would account for gender differences in altruism. Also, individuals might act altruistically in order to portray themselves in a positive light (Archer, 1984; Cialdini et al., 1987). To control statistically for this possibility, we included social desirability as a covariate.

Gustavo Carlo from the University of Nebraska-Lincoln was faculty sponsor for this research project. The authors appreciate the helpful suggestions of Richard Dienstbier and the statistical advice of Cal Garbin.

Method

Participants

One hundred undergraduate college students (63 women, 37 men), enrolled in an introductory psychology course at a medium-sized Midwestern university, served as participants. Ages ranged from 17 to 26 years (M = 19.13, SD = 1.46). The sample included 95 European-Americans, 2 African-Americans, 1 Hispanic, and 1 Asian-American (1 participant did not specify ethnicity). Participants received partial credit for a course requirement. They also received $2, although they were not informed of the payment when they agreed to participate.

Materials

Sympathy and perspective taking. The 28-item multidimensional measure of empathy (Davis, 1980, 1983) consisted of four subscales: fantasy empathy, perspective taking, empathic concern, and personal distress. Of the subscales, empathic concern and perspective taking were relevant to the study. Participants ranked items on a 5-point Likert-type scale ranging from 1 (*not very well*) to 5 (*very well*). The empathic concern (hereafter referred to as sympathy; Eisenberg, 1986) subscale measures other-oriented feelings of concern and sorrow for unfortunate others (e.g., "When I see someone being taken advantage of, I feel kind of protective towards them."). The perspective taking subscale measures the tendency to understand another's emotional and social situation (e.g., "Before criticizing somebody, I try to imagine how I would feel if I were in their place."). Cronbach's alpha coefficients were .77 and .80 for the 7-item sympathy and 6-item (one item missing because of experimenter error) modified perspective taking subscales, respectively.

Social desirability. We included a measure of social desirability (Crowne & Marlowe, 1960) to control for self-presentation. The scale consisted of 33 true-false items (1 = false, 2 = true). Social desirability refers to the tendency to present oneself in a positive manner (e.g., "I never hesitate to go out of my way to help someone in trouble."). The scale had a Cronbach's alpha coefficient of .76.

Procedure

After completing the questionnaires, participants returned them to the experimenter. They received a debriefing form explaining that the purpose of the study was to examine the relationships among personality variables. Participants then received an envelope with $2 (four quarters and a dollar bill) as payment for their participation. Attached to the envelope was an instruction sheet presenting participants with an opportunity to donate none, some, or all of the $2 to one of four charities of their choice (Food Bank of Lincoln, Red Cross, People's City Mission, or Amnesty International). Participants were instructed to mark the charity of their choice if they donated and drop the envelope in a large manila envelope on their way out, regardless of whether they donated. On the back of the envelope was a discreet code used to match the envelope to the participant's questionnaire packets. Thus, the participants were lead to believe the experimenter would have no knowledge of whether and how much they donated. Participants then received a full debriefing sheet explaining that the donation task was used to examine altruism.

Results

Preliminary Analyses

We conducted a series of one-way analyses of variance to examine gender differences in sympathy, perspective taking, social desirability, and amount donated. These analyses revealed that women donated more money than men, F (1, 98) = 5.87, $p < .05$. Women also reported higher sympathy scores than men, F (1, 98) = 20.55, $p < .01$. Analysis of perspective taking and social desirability scores did not yield significant gender differences. Table 1 shows the means and standard deviations for sympathy, perspective taking, social desirability, and amount donated.

We conducted Pearson correlational analyses to assess the relationships among amount donated, sympathy, and perspective taking. Results revealed a significant positive correlation between amount donated and sympathy, r (98) = .26, $p < .01$. There was also a positive correlation between perspective taking and sympathy, r (98) = .31, $p < .01$. However, perspective taking was not correlated significantly with amount donated, r (98) = -.09, p =.37. We conducted a second set of correlational analyses to examine the relations among the previous variables, while statistically controlling for social desirability. Results of partial correlational analyses were virtually identical to the results of the zero-order correlational analyses.

Tests for Mediation

Because we were interested primarily in explaining gender differences in donating behavior, we conducted mediational analyses to examine whether the predictors

Table 1
Scores for Sympathy, Perspective Taking, Social Desirability and Amount Donated

	Men		Women		Total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Amount Donated[a]	1.16	0.99	1.59	0.75	1.43	0.86
Sympathyb	3.69	0.64	4.21	0.50	4.02	0.61
Perspective Taking[b]	3.47	0.68	3.46	0.77	3.46	0.73
Social Desirability[c]	1.44	0.18	1.44	0.19	1.44	0.16

Note. Higher scores indicate greater values for each variable. The four variables were scored on different scales.

[a]amount donated out of $2.
[b]scores ranged from 1 to 5.
[c]scores ranged from 1 to 2.

(sympathy and perspective taking) accounted for gender differences in donating behavior. Following the procedure outlined in Baron and Kenny (1986; see also James & Brett, 1984), we conducted a set of regression analyses. We examined the predictors to determine if they met the criteria necessary for mediation. Based on the preliminary analysis previously described, sympathy was a potential mediator. However, because there were no gender differences in perspective taking, and because perspective taking was not correlated with the amount donated, it was not a mediator. In contrast, preliminary analyses indicated gender differences in sympathy, and sympathy was related significantly to the amount donated.

To examine whether gender differences in sympathy accounted for gender differences in amount donated, we conducted a set of hierarchical multiple regression analyses. These analyses revealed that gender was significantly related to both amount donated (R^2 = .06; standardized beta = .24, p < .02) and sympathy (R^2 = .17; standardized beta = .42, p < .001). Furthermore, sympathy was related significantly to amount donated (R^2 = .07; standardized beta = .26, p < .009). When we entered gender and sympathy simultaneously into a regression equation predicting amount donated, the standardized coefficient between gender and amount donated was not significant (standardized beta = .16, p > .10; Multiple R^2 = .09). Furthermore, the relation between sympathy and amount donated dropped to marginal significance (standardized beta = .20, p < .07). These findings indicate that gender differences in sympathy, but not perspective taking, partially accounted for the relation between gender and amount donated.

Discussion

Consistent with expectations, women and highly sympathetic individuals were more likely to donate money to charity. Additionally, women were more sympathetic than men. Perhaps more importantly, gender differences in donating behavior were partly because of gender differences in sympathy. These findings are consistent with prior findings that indicate women express more affectivity than men (Eisenberg & Lennon, 1983) and and consistent with suggestions that women are oriented toward caring for others (Gilligan, 1982). Furthermore, the findings support the theory that feelings of sorrow or concern for another may motivate individuals to act altruistically (Batson & Coke, 1981; Eisenberg, 1986; Toi & Batson, 1982) and suggest that women may be more motivated by these altruistic tendencies than men.

In contrast, because there were no gender differences in perspective taking, and because perspective taking was not related significantly to amount donated, gender differences in perspective taking did not account for gender differences in donating. Thus, the affective (i.e., sympathy), rather than the cognitive (i.e., perspective taking), component of empathy was partially responsible for gender differences in donating.

The fact that women donated more money to the charities than men is supportive of Eagly and Crowley's (1986) conclusion that women are more altruistic in situations requiring an acquiescent (i.e., agreeing or consenting without protest) response rather than an assertive response (e.g., emergency situations involving a stranger). Moreover, women exhibited higher levels of sympathy than men. This finding supports previous research findings on gender differences in sympathy (Eisenberg & Lennon, 1983). However, the lack of gender differences in perspective taking may be because of the fact that perspective taking skills are acquired by adolescence (Eisenberg, 1986); thus, both men and women may be relatively adept at this skill. By adolescence, individual differences in perspective taking may be more attributed to situational factors such as cost or risk than to

gender.

Although perspective taking was correlated positively with sympathy it was not correlated with amount donated. There may be circumstances in which understanding another's situation or feelings does not lead to altruistic behavior. For example, Feshbach (1987) noted that perspective taking can sometimes lead to manipulative, or even aggressive, behaviors. Furthermore, other researchers (Knight, Johnson, Carlo, & Eisenberg, 1994) have found evidence indicating perspective taking may need to function jointly with sympathy (or other personality factors) to predict prosocial behavior.

Future research should examine the relationships among sympathy, perspective taking, and altruism using different types of helping behavior. There may be certain types of helping behavior in which perspective taking may be more relevant and sympathy may be less relevant. Gender differences in perspective taking may account for gender differences in helping. For example, changing a tire for a stranger stranded along the side of the road should not require high levels of emotional involvement because emotion evoking cues would be minimal. Instead, understanding the stranger's situation, the cognitive component of empathy and sympathy, might be enough for helping behavior. In this situation, gender differences in perspective taking might account for gender differences in helping. This finding would be consistent with Eisenberg's (1986) notion that dispositional traits are related to helping only when the traits are relevant in the given situation.

The present findings have potential implications for the development of intervention programs aimed at promoting prosocial behaviors and mitigating aggressive behaviors. Prior research shows that empathy-training interventions are successful at promoting prosocial behaviors and mitigating aggressive behaviors (Eisenberg & Miller, 1987; Feshbach, 1987). However, in some studies, the intervention programs were more effective for men but not women. The present findings suggest that gender-specific intervention programs might be needed to maximize the effectiveness of such programs.

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Susceptibility to Illness: The Impact of Cardiovascular Reactivity and the Reducer-Augmenter Construct

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The study investigated how individuals responded to stress and susceptibility to illness. The 41 participants, aged 18 to 21 years, reported the number and the severity of illnesses they experienced in the last nine months and also completed the Revised Reducer-Augmenter Scale (RRAS). Cardiovascular reactivity was determined by measuring the blood pressure and heart rate of participants immediately after they had completed a mental arithmetic task and again 10 minutes later. Participants with low cardiovascular reactivity became ill more often than participants with high cardiovascular reactivity (F (1, 40) = 4.56, p = .04). RRAS scores were not significantly correlated with participant's number of illnesses. These and previous results demonstrate that cardiovascular reactivity is an important variable for understanding how stress affects the immune system.

The emerging field of psychoneuroimmunology has made it increasingly clear that psychological processes influence the immune system (Bishop, 1994). Studies have shown that the stress of final examinations, sleep deprivation, divorce, and bereavement all influence the immune system (Maier, Watkins & Fleshner, 1994). Caring for someone with Alzheimer's disease also consistently decreases the competency of the caregiver's immune system (Zakowski, McAllister, Deal & Baum, 1992). In fact, "It is difficult to think of an aspect of immunity that has not been found to be altered by some stressor" (Maier, et al., 1994, p.1008).

Stone, Reed & Neale (1987) reported a correlation between negative events and illness. This study used a prospective design in which participants recorded the number of desirable and undesirable events that occurred in their lives. They also reported the number of physical symptoms they experienced. The results showed that negative events tended to precede episodes of illness by several days. This finding suggested that the stress of the negative events reduced the competency of the immune system, allowing pathogens to invade the body. The symptoms of the illness appeared several days after the incubation time of the pathogens (Stone, et al., 1987).

As Herbert and Cohen (1994) stated in their meta-analysis of research in this area, numerous variables may have affected whether specific changes in immune cells led to illness. These authors cited evidence suggesting that certain kinds of stress may lead to habituation. After long-term exposure to chronic stress, the immune system of some people may no longer show the same changes in response to stress. Different kinds of stress also affect the immune system differently. Short-term laboratory stressors increase the number of T-cells in the blood, whereas long-term, naturalistic stressors have the opposite effect.

In addition, stress does not affect all people equally. Some individuals respond more strongly to stressors. These individual differences in stress reactivity tend to be a stable characteristic (Kiecolt-Glaser, Cacioppo, Malarkey & Glaser, 1992). Petrie (1967) conceptualized this difference as a personality characteristic that exists on a continuum from augmenters to reducers. The nervous system of reducers tends to respond minimally to stimuli, whereas augmenters' nervous systems tend to magnify stimuli (Clapper, 1990). Petrie (1967) believed that augmenters tended to avoid strong stimuli because their powerful reactions to such stimuli could lead to unpleasantly high levels of arousal. Using similar logic, Petrie believed reducers tended to seek out exciting stimuli to compensate for the less strong reaction they had to stimuli. Research has demonstrated that reducers do tend to seek out greater amounts of stimulation from their environment, and reducers tend to have a higher tolerance for pain (Clapper, 1990).

Another way to classify an individual's reaction to stress is to measure cardiovascular responses to stress, such as changes in blood pressure and heart rate (Kiecolt-Glaser, et al., 1992). The magnitude of an individual's cardiovascular response to stress can predict how stress will affect that person's immune system. Manuck, Cohen, Rabin, Muldoon & Bachen (1991) conducted a study typical of research on this topic. In the study, participants completed a version of the Stroop color-word interference test and did a mental arithmetic task. After these brief psychological stressors, the number of immune cells in the participant's blood was measured. Cardiovascular reactivity was determined by measuring the size of the

Ken Keith from Nebraska Wesleyan University (now at the University of San Diego) was the faculty sponsor for this research project.

changes in the participant's heart rate and blood pressure before, during, and after the stressor. The results revealed that the best predictor of the magnitude of change in the immune system was cardiovascular reactivity. Those individuals whose heart rate and blood pressure increased the most during the stress had the highest levels of cytotoxic/suppresser T-cells. These immune cells destroy viruses and bacteria infected cells (Sommers, 1998).

T-cell mitogenesis, which is the rate of creation of new T-cells, also decreased the most in participants with high cardiovascular reactivity, apparently because of the inhibitory effect of the cytotoxic/suppresor T-cells (Manuck, et al., 1991). The body's ability to create adequate numbers of T-cells is important for the healthy functioning of the immune system; low levels of mitogenesis can be harmful (Sommers, 1998). Although Manuck, et al. (1991) did not attempt to determine how these cellular changes affected the functioning of the immune system, their results consistently demonstrated that high reactors experienced the largest changes in cellular immunity after exposure to stress.

Similar studies also demonstrated that cellular immunity of high reactors experienced larger changes after exposure to stressors than low reactors. Lymphocyte, or white blood cell, proliferation decreased as blood pressure reactivity increased, leaving high reactor individuals with fewer lymphocytes to fight infections (Zakowski, et al., 1992; Cacioppo, et al., 1995). After stressful situations, high reactors had the largest change in the relative percentage of cytotoxic T-cells and natural killer cells, which are important immune cells for destroying infected cells. In addition, the immune cells of high reactors had a weaker response to the mitogen phytohemagglutin (PHA), indicating the immune cells were less able to respond to infections (Herbert, et al., 1994).

Changes in the concentrations of specific kinds of immune cells do not necessarily mean the overall functioning of the immune system is compromised (Maier, et al., 1994). More studies are needed to examine the relationship between cardiovascular reactivity and the functioning of the immune system. The present correlational study was undertaken to learn if differences in people's responses to stressful stimuli, as measured by either the reducer-augmenter construct or cardiovascular reactivity, are related to the functioning of their immune systems. Specifically, this study investigated the relationship between cardiovascular reactivity or the reducer-augmenter trait and susceptibility to illness.

Method

Participants

A total of 41 introductory psychology students from a small Midwestern university participated. There were 39 were Caucasian and 28 women. The ages of participants ranged from 18 to 21 years. The participants were informed that the study was investigating health among college students. The students participated voluntarily and received extra course credit.

Instruments

A standard sphygmomanometer was used to measure participants' blood pressure. Heart rate was measured by taking the radial pulse of participants for 15 s and multiplying that number by 4 to determine the number of heartbeats per minute. The Revised Reducer-Augmenter Scale (RRAS), developed by Clapper (1990), was used to categorize participants as augmenters or reducers. The RRAS includes questions about participants' preferences for types of music, recreational activities, and food. Participants also completed a questionnaire about the number of illnesses (excluding chronic conditions) they had experienced during the last nine months. They were asked to rate the severity of illnesses on a 10-point Likert scale and to report actions they had taken because of the illness, such as visiting a doctor or missing work.

Participants were classified as augmenters, reducers or moderates using Clapper's (1990) procedure. Augmenters were defined as those participants who scored in the highest one-third on the RRAS, reducers as those with scores in the lowest one-third, and moderates as those with scores in the middle third of the scores.

Procedure

After participants signed consent forms, they were asked if they had any heart problems. If the answer was negative, as it was in every case, participants were then asked to complete a test of "mental ability." This test consisted of mental arithmetic and served as the brief psychological stressor. Several studies have reported using mental arithmetic as a stressor (Kiecolt-Glaser, et al., 1992; Fleming, Baum, Davidson, Rectanus, McArdle, 1987; Herbert, et al., 1994). The participants were told that "It is important to try to do well, because your score will be compared with the scores of others like you." The test required participants to count backwards from 715 in increments of 13 as quickly as possible. Participants were

told they would be given four min to complete the test because most people could count back to zero in that time.

Immediately after the four min ended, heart rate and blood pressure were measured. Participants then spent approximately 10 min answering the health questionnaire and the RRAS. These 10 min served as a non-stressful rest period. After this period, heart rate and blood pressure were measured again. Cardiovascular reactivity was defined by the participants' cardiovascular response (as measured by the magnitude of the changes in heart rate and blood pressure) during the 10 min following the stressor.

The definition of high cardiovascular reactivity that Herbert, et al. (1994) used was followed to classify participants. Participants high in cardiovascular reactivity were defined as those whose cardiovascular response was larger than the median in two of the three cardiovascular parameters (heart rate, diastolic blood pressure, and systolic blood pressure). Therefore, if the decrease in a participant's diastolic blood pressure and systolic blood pressure during the 10 min following the stressor exceeded the median value, that person was be classified as a high reactor.

In addition to counting the raw number of illnesses each participant had in the last nine months, the severity of their illnesses was estimated by adding together each-participant's severity ratings for each illness. Higher ratings indicated more severe sickness, so a higher total score in severity indicated more incapacitating illness. To obtain a total score for the behavioral impact of all the illnesses the participants reported, each behavior was given a value corresponding to its severity. Staying in bed all day or missing an entire day of work was counted as five times more severe than visiting a student health center or taking over-the-counter medication. Beginning a prescription medication or missing part of a day of class or work was counted as three times more severe than visiting a student health center. Reducing activity levels or visiting a doctor (other than at a student health center) were counted as twice as severe as visiting a student health center.

Results

The mental arithmetic task was associated with a significant change in the heart rate and blood pressure of the participants. Using an alpha value of .05, the decrease in participants' heart rates during the rest period following the mental arithmetic was significant, t (40) = 2.39, p = .02. The decrease in systolic blood pressure was also significant, t (40) = 5.13, $p < .001$. The decrease in diastolic blood pressure following the stressor was close to significant, t (40) = 1.93, p =. 06.

Participants with low cardiovascular reactivity reported having more illnesses in the last nine months (M = 3.46, SD = 1.90) than participants with high reactivity (M = 2.32, SD = 1.00). This difference in the number of illnesses was statistically significant, F (1,39) = 4.56, p = .04. The participants with low cardiovascular reactivity also reported that their illnesses were more severe than those participants with high reactivity, F (1,40) = 5.39, p = .03. No significant differences in the behavioral impact of their illnesses were found between the augmenters and reducers (as classified by RRAS scores). The behavioral impact of illnesses did not differ between participants classified as high or low in cardiovascular reactivity. The differences among augmenters, reducers and moderates did not reach significance on either the number or the severity of illnesses, although the reducers did become ill slightly more (M = 3.29, SD = 1.94) than did the augmenters, (M = 2.69, SD = 1.32).

There was no significant correlation between RRAS scores and the magnitude of the change in heart rate, r (39) = .183, p = .25, between RRAS scores and the size of the change in diastolic blood pressure, r (39) = .045, p = .78, or systolic blood pressure, r (39) = -.164, p = .31. Participants with low cardiovascular reactivity were slightly more likely to be reducers. Of the 22 low reactivity participants, 41% were reducers, whereas only 32% were augmenters. Of the 19 high reactivity participants, 32% were augmenters and 26% were reducers.

Discussion

Findings from this study support previous research showing that cardiovascular reactivity influences how the immune system functions. Participants with low cardiovascular reactivity had significantly more illnesses than participants with high reactivity. Augmenters and reducers did not differ significantly in the number of illnesses they experienced.

Previous research had found larger changes in cellular immunity in people with high reactivity (Herbert & Cohen, 1994; Manuck, et al., 1991; Zakowski, et al., 1992; Cacioppo, et al., 1995). These changes tend to be larger in people with high reactivity, but the functional significance of the immune system changes is not yet known (Herbert & Cohen, 1994). If these changes compromised immune function, one would expect people

with high cardiovascular reactivity tobe more susceptible to illness. However, in this study, people with low reactivity became ill more often. Several factors could explain this finding. This study did not distinguish between participants who were classified as high reactors because of the high reactivity of their sympathetic nervous system and those participants whose high reactivity was because of their parasympathetic nervous system. Kiecolt-Glaser, et al., (1992) suggest this information may be important for understanding the relationship between reactivity and the functioning of the immune system.

The type of stressors that participants experienced during the months preceding this study, and whether or not the stress was chronic, would be expected to influence how the participants' immune system functioned (Herbert & Cohen, 1994). Differences in the level of stress participants experienced during the previous months could also help to explain the results of this study.

For the immune system to function best, the relative number of each kind of immune cell must be at certain levels (Sommers, 1998). Manuck, et al., (1991) demonstrated that participants with low reactivity had fewer cytotoxic/suppressor T-cells than high reactors following stressful situations. This observation could help explain why low reactors experienced more illnesses in the present study. Further research is needed to understand more fully the subtle relationships between the immune and neuroendocrine systems that influence susceptibility to illness.

Earlier studies have found physiological response to stimuli to be an accurate way to determine whether a person is an augmenter or reducer (Clapper, 1990). This study found a weak correlation between the RRAS scores and physiological measurements of cardiovascular reactivity. One reason for this result may be that the cardiovascular measurements were only taken twice. The use of automated blood pressure cuffs, which can take multiple measurements before, during and after the stressor, and an echocardiogram, which can monitor heart rate continuously, might have revealed different results.

The different characteristics of augmenters and reducers highlight another difficulty with this study. One would expect augmenters to perceive their illness symptoms as more severe than reducers; such perceptions make it difficult to compare accurately rates of illness between these groups. Questions about the behavioral effects of the illness were included to provide more objectivity to illness ratings, but these too are subject to self-report bias. Perhaps reducers actually experienced significantly more symptoms, but augmenters perceived their symptoms as more severe. This difference in perception may have obscured a difference in the levels of illness.

As scientists continue to investigate the individual differences in people's responses to stress, they should consider both the augmenter/reducer component of personality and the influence of cardiovascular reactivity. Cardiovascular reactivity and the reducer-augmenter construct are two ways to identify differences in people's physiological response to stress. However, discerning how these response differences influence susceptibility to illness is challenging. More studies are needed to assess the relationship between the reducer-augmenter construct, cardiovascular reactivity, and the functioning of the immune system.

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Cohesive Reference Devices in Children's Personal Narratives

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Twenty-eight boys and girls, ages 3 to 5 and 6 to 8 years old, produced personal narratives about a birthday party experience. The narratives were analyzed for complexity by comparing narrative length and the number of each type of connective. Older children produced longer narratives and used more connectives, particularly additive and temporal conjunctions, than did the younger children. Girls generally had longer narratives than boys. No sex differences were found in the proportion of connectives used in younger children's narratives. In contrast narratives by older girls contained a higher proportion of connectives, especially additive and temporal conjunction, than those by older boys.

One tool for examining natural language development in preschool and elementary school-aged children is the personal narrative. Personal narratives are stories told about an event that one has personally experienced. When relating an experience, children use specific constructs, such as interclausal connectives, to create cohesion in the story (Peterson & McCabe, 1991b). The production of a narrative is a cognitive and linguistic task that requires a variety of knowledge concepts, including an understanding of how to create narrative cohesion (Hudson & Shapiro, 1991). That is, children must learn how to join multiple clauses together through a variety of linguistic reference devices (e.g. connectives). The current study examines development in children's ability to construct cohesive personal narratives. This task involves the creation of clauses and the use of connectives for joining the clauses together.

Children's ability to produce clauses in speech develops during the first five years of life (Scott, 1984). At age two years, most children are able to produce clauses consisting of a noun and verb that describe relationships between objects and events (Brown, 1973). At about age 3 or 4 years, children create multiple word clauses with a subject and predicate. By ages 6 to 7 years, children's speech is similar to that of adults, with all construct components of a narrative, such as nouns, verbs, adjectives, adverbs, and conjunctions that follow rules of syntax (Dale, 1976).

Analyzing the use of linguistic devices in narratives is one way to assess the personal accomplishments children have made toward mastering language usage. Major developments in sentence structure occur during the late preschool years and early school years. During this period, children learn to express relationships between isolated events and become more proficient at narration (de Villiers & de Villiers, 1979). By the age of three years, children are able to organize their narrative structurally through the use of connected discourse. That is, instead of stringing together short phrases, they can use "and" to group simple ideas. With age, they learn to express more complex relationships between clauses through the employment of other types of connectives (e.g., but, because). Shapiro and Hudson (1991) found that six-year-olds produced narratives that were more complex and cohesive than those by four-year-olds. However, the authors noted that the length and quality of the narrative was affected by a storyteller's motivation to relate his or her experience.

Hudson and Shapiro (1991) contend that narration is the earliest form of connected discourse in children. Use of linguistic reference devices, such as connectives, create narrative cohesion by joining sentences to form a whole. Connectives play an important role by providing semantic coherence for narratives. They are used in language as transitions between thoughts to hold together a framework of spoken or written communication. Connectives help listeners to define meaning by providing cues on how events and objects of a narrative are intended by the narrator to relate to one another (Segal & Duchan, 1997). Within a narrative, connectives are used to link propositions. Thus, connectives describe information about the relationship between juxtaposed clauses (Caron, 1997). The employment of connectives illustrates how children can match form with meaning in language, and their ability to link complete, independent clauses.

The variety of connectives used to join clauses and prepositional phrases can be organized into four categories of interclausal conjunction that include additive,

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temporal, causal, and adversative (Halliday & Hasan, 1976). Additive and temporal conjunctions are the simplest conjunctions for children to use when linking clauses. Shapiro & Hudson's (1991) examination of cohesive devices used in personal narratives revealed that 34% contained additive conjunction, 22% temporal conjunction, and only 11% causal and adversative conjunction. Additive conjunctions involve the connection of two independent clauses. The connective "and" is the first and most widely used additive conjunction by children in the formation of sentence structure (Peterson & McCabe, 1987, 1991a). Preschool children often do not understand the true meaning of some conjunctions until the early elementary school years. For example, children age 2 and 3 years often loosely link sentences or clauses by using the connective "and" without the intention of organizing the information (de Villiers & de Villiers, 1979). Children may subsequently use "and" as a simple way to signal continuity in the story to the listener when narrating about the co-occurrence of two independent events (Peterson & McCabe, 1987, 1991b). Garvey (1984) proposed that the frequent use of the connective "and" in young children's narratives could be a result of the adult use of the phrase "and what else?" as a method of eliciting narrative production.

Temporal conjunctions can connect contingent clauses and/or portray temporary linkage usually describing the order in which an event occurred. In this way, temporal conjunctions can be used to place events in chronological sequence when reciting a narrative about a personal experience. The connective "and," by combining with other connectives (e.g., "and then"), can vary in semantic function to indicate temporal linkage between clauses (Peterson, 1986). The two connective forms "then" and "and then" are used about 50% of the time by children when temporally linking clauses in personal narratives, whereas other forms of connectives are used the rest of the time (Peterson & McCabe, 1991a).

Adversative and causal conjunctions connect dependent clauses to independent clauses. Authorities consider them more complex devices for creating narrative cohesion than are additive and temporal conjunctions. Adversatives involve contrast, such as opposition (e.g., but), where one clause can cancel the other. They can also involve exception, where one clause qualifies the other, as well as violation of expectation. Peterson and McCabe (1991a) reported that "but" represented 15% of the connectives used in personal narratives told by children ages 3.6 to 6.6 years old and represented 7% of connectives in narratives told by children ages 7 to 9 years old. However, preschoolers' inclusion of "but" was often semantically inappropriate, whereas older children correctly employed "but" to indicate antithesis (Peterson & McCabe, 1987, 1991b).

Causal conjunctions, in contrast, show conditional or causal linkage among clauses in narrative production. They can display reasoning or establish cause and effect relationships. According to Shapiro and Hudson (1991), causal conjunctions can be used to describe goal-directed actions or people's thoughts and emotions. Causal conjunctives are often represented by the connectives "so" and "because." Research findings indicate that "so" is used to show psychological causality (e.g., motives), whereas "because" is employed to represent both psychological and physical causality (Corrigan, 1975; Hood & Bloom, 1979; Johnson & Chapman, 1980; McCabe & Peterson, 1985; Peterson & McCabe, 1985). McCabe and Peterson (1997) report that of the connectives used in children's narratives about their experiences, about 20% of the connectives were "because" and "so."

From early to middle childhood, children's dependency on the use of temporal connectives in narratives decreases as the employment of causal and adversative connectors increases (Kernan, 1977; McCutchen & Perfetti, 1982; Peterson & McCabe, 1991b; Scott, 1984; Shapiro & Hudson, 1991). Thus, children more often use "so," "and so," or "so then," rather than "then" or "and then" in personal narratives during the elementary school years (Kernan, 1977; McCutchen & Perfetti, 1982). This change in the type of conjunction employed is the result of development in story structure as children become more competent at narrating causally related events (McCabe & Peterson, 1997; Shapiro & Hudson, 1997).

Researchers have reported age differences in children's ability to produce connected narratives (de Villiers & de Villiers, 1979; Peterson & McCabe, 1991a, 1991b), but few have focused on sex differences (cf. Shapiro & Hudson, 1991). During the preschool and early elementary school years, Maccoby (1966) indicated that girls exceed boys in most aspects of verbal performance. They say first words sooner, articulate more clearly and at an earlier age, use longer sentences when reciting personal narratives, and are more fluent in speech. Reznick and Goldfield (1992) indicated that initial vocabulary growth progresses at an early age and at a higher rate for girls than for boys. Halpern (1992) also stated that girls have more advanced verbal abilities than boys as indicated by their scores on various tests of verbal ability. The components of verbal ability analyzed in Helper's research included word fluency, grammar, spelling, reading, verbal analogies, vocabulary, and oral comprehension.

Because of reported sex differences in children's verbal ability, one can predict that narratives by boys and girls would also differ. Because past research (Halpern, 1992; Maccoby, 1966; Reznick & Goldfield, 1992) has indicated that girls have advanced language skills, including longer utterances in narratives and greater vocabulary, then girls should produce connected discourse that is longer than that constructed by boys.

This study examined narrative construction by preschool and elementary school-aged children. Linguistic ability was analyzed by the length of the narrative produced and the usage of connectives. An unusual experience was provided to inflame children's desire to communicate what happened to them. We predicted that older children would develop longer, more cohesive narratives (i.e., containing more connectives) than younger children. Moreover, we expected girls to employ more connectives in their personal narratives than were boys.

Method

Participants

Twenty-eight children (14 boys, 14 girls) from lower-middle to middle class, predominately Caucasian families participated in the study. Half of the children were ages 3 to 5 years ($M = 4.17$ years) and the other half were ages 6 to 8 years ($M = 7.0$ years). Participants were recruited through letters sent home to parents through public schools in a central North Carolina city.

Procedure

Children participated in groups of two in a special birthday party for a stuffed cow named Jesse. Children were given invitations and then brought to a room where their photographs were taken in front of a sign that read, "Happy Birthday Jesse." Children were told to put on cow costumes, and they sat down to eat. However, the cupcakes that were to be served were melted. The experimenter went to another room and returned with a "good" batch of cupcakes. The experimenter lit three candles and asked the children to sing "Old MacDonald's Farm" in honor of Jesse's birthday. Children were asked to help Jesse blow out the candles. Because the candles kept relighting, the experimenter extinguished them by dipping them in water. After children finished eating the cupcakes, they played "Pin-the-Tail-on-the-Donkey" and ring-toss. They received prizes for these games and returned to their classrooms with party bags.

One week and seven weeks after the birthday party, each child was interviewed individually by an experimenter who did not attend the party. The experimenter first instructed the child, "Tell me what happened at Jesse's birthday party." The child was also asked, "Can you tell me more about that?" as a way of eliciting elaboration for any information already provided. The child was given temporally cued prompts, "Tell me everything that happened again, starting with the first thing that happened at the birthday party. What happened next?" until he or she provided no new information. All of the interviews were videotaped. The second author trained research assistants to transcribe the narratives verbatim.

Coding

Coding was performed on all of the narrative transcripts. A minimum intercoder reliability of .90 between the authors was established for 20% of the narratives. The first author then coded the rest of the narratives for the number of propositions and the number of each type of conjunction.

Narrative length. Responses to both types of elicitation probes were used for coding, with all repetition omitted. The narratives were divided into propositions that were independent clauses containing a subject or implied subject and a predicate. The total number of propositions in each child's personal narrative was used as a measure of narrative length.

Connected discourse. Each narrative was analyzed for the number of each type of conjunction. Interclausal connectives were classified as one of three types of conjunction, specifically additive, temporal, and a combined group of causal and adversative. Table 1 lists the conjunctions and the words used to represent the conjunctions.

Table 1
Examples of Connectives for Each Type of Interclausal Conjunction

Conjunction	Connective
Additive:	and, so
Temporal:	then, first, next, after, as soon as, before
Causal:	so, because
Adversative:	but, maybe, except, though, if

Results

Each dependent variable was subjected to a 2 x 2 x 2 (Age x Sex x Time) mixed model ANOVA with age and sex as the between subject variables and time as the within-subject variables, except where noted otherwise. All significant interactions were examined using Turkey's honestly significant difference (HSD) post-hoc test.

Length

The length of the narrative, an index of task difficulty, was represented by the number of propositions in children's reports. A significant main effect of age, F (1, 24) = 6.92, $p < .015$, showed that elementary school-aged children constructed longer narratives about their birthday party experience (M = 16.56, SD = 10.11) than did preschool-aged children (M = 12.72, SD = 5.26). This finding is congruent with age differences found in the length of personal narratives by children in Hudson and Shapiro's (1991) study.

The two-way interaction of Age x Sex approached significance, F (1, 24) = 4.05, p = .056. The elementary school-aged girls tended to produce longer narratives (M = 21.62, SD = 14.24) than did the elementary school-aged boys (M = 11.50, SD = 5.97). The preschool-aged girls also tended to produce longer narratives (M = 17.22, SD = 4.47) than did preschool-aged boys (M = 8.22, SD = 6.04). In contrast, there were no age differences in the length of the narratives for boys or for girls.

Number of Each Type of Connectives

The number of each type of connective was subjected to a 2 x 2 x 2 x 3 (Age x Sex x Time x Connective) mixed model ANOVA with age and sex as between-subjects variables and time and connective as within-subject variables. Significant main effects for age, F (1, 24) = 8.77, $p < .007$, and of Connective, F (2, 48) = 19.99, $p < .001$) were interpreted within a significant Age x Connective interaction, F (2,48) = 4.85, $p < .012$. Elementary school-aged children produced narratives with more connectives (M = 3.38, SD = 3.69) than did preschool aged children (M = 1.41, SD = 1.60). The results are supportive of the research by Shapiro and Hudson (1991) showing that older children created more cohesive narratives than did younger children.

The Age x Sex, F (1, 24) = 6.12, $p < .012$, and the Sex x Connective interactions, F (2,48) = 3.54, $p < .037$, were interpreted within the significant three-way interaction of Age x Sex x Connective, F (2, 48) = 4.65, $p < .014$. by using connectives. Table 2 contains the means for each Type of Connective x Sex and Age. Girls created narratives with a greater number of connectives (M = 3.25, SD = 4.11) than did boys (M = 1.37, SD = 1.67).

As shown in Table 2, additive connectives were used the most by children to create cohesion in their narratives. Sex differences in connective use was also indicated but was mediated by age. Older girls used more additive and temporal connectives than did the older boys. In addition, older girls used additive and temporal connectives more than adversative and causal connectives. There were no sex differences in use of connectives for the younger children. Older children used additive and temporal connectives more than adversative and causal connectives. Compared to their younger counterparts, older children also used more additive and temporal connectives, but not more adversative and causal connectives. Peterson and McCabe (1991a, 1991b) found that children's greatest use was of additive conjunction regardless of age and sex.

Discussion

Table 2
Mean Number (and Standard Deviations) for Each Type of Conjunction by Age and Sex

Age / Sex	Type of Conjunction: Additive	Temporal	Causal/Adversative
3- to 5-year-olds			
Male	1.36 (2.03)	0.64 (0.97)	0.37 (0.52)
Female	2.72 (1.79)	1.86 (2.34)	0.56 (1.15)
6- to 8-year-olds			
Male	2.36 (1.74)	2.50 (2.92)	1.01 (1.83)
Female	7.00 (4.66)	6.36 (6.22)	1.02 (1.45)

The purpose of the present study was to investigate age and sex differences in children's linguistic productions. Older children were expected to be more capable than their younger counterparts in constructing longer, more cohesive discourse. Before the age of five years, children are in the process of learning the meaning of new words and how to construct sentences (Carey, 1977). Their ability to narrate is influenced by the elicitation context. Specifically, very young children can use various connectives correctly (Bloom, Lahey, Hood, Lifter, & Fiess, 1980; French & Nelson, 1985) and better relate relatively long narratives about their experiences (Hudson & Shapiro, 1991; Peterson & McCabe, 1991a) in informal conversations than in formal interviews. Employment of

conjunction to weave ideas together into a cohesive narrative demonstrates a significant advancement in language (de Villiers & de Villiers, 1978). This task is difficult because it requires children to coordinate their memory of the event with their knowledge of how to narrate and how to use linguistic markers, such as connectives, to create cohesion.

Consistent with past research, our findings revealed that narratives by elementary school-aged children included more propositions and more connectives than those by preschool-aged children (Hudson & Shapiro, 1991; Peterson & McCabe, 1991a). In addition, older children employed more additive and temporal conjunction but not more adversative and causal conjunction, than the younger children. Thus, between ages 6 and 8 years, children become increasingly more competent at restructuring their experience and knowledge into a narrative frame. Yet, they are still in the process of mastering adversative and causal conjunction, which authorities consider more sophisticated linguistic markers.

We expected narratives by girls were to be longer and more cohesive than those by boys. Both Halpern (1992) and Maccoby (1966) indicated that girls have more advanced verbal abilities than boys. There is some evidence, however, that the advantage girls have over boys in language and language related skills may be because of parental behavior rather than genetics.

Sex differences in narrative production may begin during the preschool period because of differences in parents' style of conversing about past events with their sons and daughters. Research has shown that parents elaborate more when talking about personal experiences with their daughters than with their sons, which would lead to embellished discourse (Haden & Reese, 1994; Reese & Fivush, 1993). The current study did not find a significant sex difference in narrative length, although there was a trend for girls to tell longer tales than boys. In contrast, girls used more connectives to join propositions in their narratives than did boys. In particular, this sex difference was reflected in elementary school children's use of both additive and temporal conjunction. Despite the ease older girls seem to have in creating narrative cohesion, they employed fewer adversative and causal conjunction than additive or temporal conjunction to express relationships among propositions in their narratives.

Analyzing the personal narratives of children serves as an insightful method for assessing language development. The findings can help developmental psychologists establish age expectations for when children are capable of using cohesive reference devices during narration. In addition, this type of research will help psychologists to learn whether differences exist in the ability of boys and girls to construct cohesive tales. Boys and girls may follow different linguistic trajectories for learning about connectives. This type of information can provide educators with guidelines for when to teach various language concepts to children. Future research should investigate whether sex differences exist in children's ability to use types of cohesive devices other than connectives when narrating.

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International Adoptions: The Case of Romania

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American couples have adopted thousands of children from Romania since 1990. There are risks for families who adopt from Romania. Romanian adoptees often have medical problems, developmental delays, socioemotional problems, and disrupted attachment. The purpose of this article is to review post-adoption studies to investigate why people adopt internationally from a country such as Romania and to identify the associated risks and processes. Programs are needed to educate and support families who have already adopted and to inform families who plan to adopt from Romania.

After the Romanian Revolution in December of 1989, the world was exposed to the poor quality of institutional care in Romania. Authorities estimate that there were 100,000 to 200,000 children in over 600 orphanages at that time (Johnson, Edwards, & Puwak, 1993; Serbin, 1997). Many orphanages in Romania are drab, colorless, and quiet, providing little auditory or visual stimulation (Groze & Ileana, 1996). The orphanages also have large numbers of children for every employee (Marcovitch, Cesaroni, Roberts, & Swanson, 1995).

Several studies have confirmed that Romanian orphanages provide little nutrition, health care, and stimulation that is necessary for children to develop normally. Such deficiencies can result in extreme developmental delays (Goldberg, 1997; Groze & Ileana, 1996; Johnson et al., 1992; Morison, Ames, & Chisholm, 1995).

Thousands of Romanian children have been adopted into other countries since 1990 (Goldberg, 1997; Groze & Ileana, 1996). Almost 6000 Romanian children were adopted into the United States during the 1990s (U.S. State Department, 1999).

There are adjustments for any family who adopts internationally, but there seem to be additional risks specifically associated with adoptions from Romania. Many Romanian adoptees exhibit problem behaviors ranging from hyperactivity and bed wetting to aggressive and antisocial behaviors (Groze & Ileana, 1996). They may show symptoms of attachment disorder including rocking and biting themselves (Serbin, 1997).

Many children also have medical or physical problems when they enter the United States, some of which cannot be reversed or cured (Johnson et al., 1992).

The purpose of this article is to review the literature on post-international adoption studies, particularly from Romania. I will address several questions: Why do people choose to adopt from a foreign country? What are the risks associated with international adoption? What are some of the problems associated with adoption from Romania? What factors have contributed to such problems? How can these problems be explained by developmental theory? What can be done to help adoptees and their families, both now and in the future?

Reasons for International Adoption

Americans first started adopting foreign-born children after World War II. Children were abandoned in many countries because of wars or conflicts, and people began to adopt international babies to rescue them from the unstable conditions of their birth countries (Serbin, 1997). The Korean War, in particular, provided many orphans for intercountry adoption. Nearly two-thirds of the orphans adopted by U.S. citizens between 1967 and 1987 came from the Republic of Korea alone (Alstein & Simon, 1991). Adoption of children born in other countries has steadily increased over the years (Smith, 1988). Nearly 78,000 foreign-born children were adopted by U.S. citizens between 1977 and 1987, an increase from about 32,000 in the previous decade (Alstein & Simon, 1991). Between 1988 and 1998, American families adopted 106,196 children from different countries (U.S. State Department, 1999).

Perhaps one reason couples adopt internationally is a shorter waiting period than domestic adoption. Infertility is one motivation for many couples to adopt, whether from within the United States or from another country. Sometimes couples have to wait 5-10 years to adopt a child in the United States, but they can adopt a child from another country in only 1-2 years (Smith, 1988). Part of the reason that waiting periods for domestic adoption are lengthy is because the number of potential adoptees in

Robert F. Rycek from the University of Nebraska at Kearney was the faculty sponsor for this research project.

the United States has decreased (Alstein & Simon, 1991). American birth rates have consistently decreased over the last few decades (Cherlin, 1996). Birth rates have decreased, in part, as women have increasingly become a significant portion of the labor force (Ettner, 1995). Some couples decide to not have children at all, and many postpone childbearing in order to first establish two careers. Meanwhile, ages at first marriage for both men and women are higher today than at any other time in the twentieth century (Cherlin, 1996). As women have postponed marriage and childbearing, infertility has also become more of a problem. One-fourth of women 35-39 years of age have fertility problems, compared to 14% of women 30-34 years of age (Alstein & Simon, 1991). Taken together, these societal factors have contributed to a decline in birth rates in the United States, thus decreasing the number of potential adoptees in this country.

When adoptive parents begin to explore foreign adoption, they may focus on countries that have been highlighted in the media. Goldberg (1997) mentioned that media may indeed increase a family's interest in adoption from a particular country. International adoptees often come from heavily publicized countries characterized by economic and political turmoil. Couples may adopt from other countries as a means of helping or rescuing a child (Serbin, 1997).

International Adoption Risks

As international adoption has become a more popular alternative for couples, scholars have focused more attention on the problems and risks associated with such adoptions. One important factor that prevents many families from seriously considering international adoption is the cost. Jeffreys (1996) noted that adoptions from a foreign country may cost over $20,000.

Another adoption risk debated by researchers is psychosocial adjustment. Verhulst and Versluis-Den Bieman (1995) followed a group of international adoptees for three years and found that the adoptees demonstrated more behavioral and emotional problems during adolescence than did their nonadopted peers. Other researchers contend that most international adoptees do not have any more behavioral problems than nonadopted children (Brodzinsky, Smith, & Brodzinsky, 1998), although there do seem to be more socioemotional and academic problems for boys and children placed at a later age than there are for girls, younger children, and infants (Marcovitch et al., 1995). Brodzinsky et al. (1998) pointed out that Romanian adoptees in particular have demonstrated significant problems and that these problems may be attributed to preplacement factors such as widespread institutionalization in that country.

Because other countries have different health standards than the United States, another risk for international adoptees is poorer physical health, especially for adoptees from impoverished or Third World countries where health care is scarce. Some medical problems that foreign adoptees may exhibit include lactose intolerance, Hepatitis B, deficient immunizations, intestinal parasites, and skin diseases (Smith, 1988).

Societal attitudes may compound problems with international adoption. An adoptive family's community plays an important role in the transition and acceptance of the adoptee. Additional problems surface when there are negative attitudes in the community. Racism and stereotypes may exist even in social work agencies (Serbin, 1997). Race seems to be a factor that families weigh heavily before adoption. Goldberg (1997) found that many families who adopted internationally did not want to make it obvious that they had an adoptee in the family. They wanted the family to look as "natural" as possible. For families in that study, Romania was a good country from which to adopt because they could adopt a child of the same race.

Romanian Adoption Risks

Although there are general risks when adopting from any foreign country, there seem to be particular risks associated with adoption from Romania. These problems exist because the majority of the children adopted from Romania come from institutions (Morison, et al., 1995). Romanian institutional care is of poor quality and results in poor health and medical problems, developmental delays, socioemotional problems, and disrupted attachment.

All children are given medical evaluations before they leave Romania. A problem occurs, however, when adoptive parents have been informed that their adoptee does not have any diseases but later find the opposite to be true. Studies have shown that after adoptees have arrived in the United States, diseases that were not previously identified surfaced in post-adoption medical evaluations, revealing a discrepancy in evaluation by personnel between the two countries (Marcovitch et al., 1995). Several diseases are prevalent in Romanian orphanages, including Hepatitis A and B, AIDS, and tuberculosis (Goldberg, 1997; Marcovitch et al., 1995). In fact, the Centers for Disease Control reported that there were more children with AIDS in Romania in 1990 than in any

other country except the United States (as cited in Groze & Ileana, 1996).

There are several other medical problems that Romanian adoptees have exhibited. Adoptive parents often reported that their children have had parasites, bronchitis, jaundice, ear infections, skin rashes, diarrhea, dehydration, and they were malnourished and underweight (Goldberg, 1997; Marcovitch et al., 1995). Some of those medical problems were unexpected, but fortunately most of them can be treated successively. Of the Romanian children who were adopted between October of 1990 and 1991, only 15% seemed to be healthy and to be developing at normal levels (Groze & Ileana, 1996). Other studies have yielded conflicting results. Marcovitch and her colleagues (1995) found that 50% of the patients in their study rated their adoptee's health as "generally healthy." Only 21.6% considered their child to be "very unhealthy." The definitions of health may vary from one person to another. An adoptee with some of the aforementioned problems may still be "healthy." Fortunately, few adoptees have long-term medical problems (Goldberg, 1997).

Developmental delays are another risk among these children. Perhaps the most obvious delay associated with Romanians was small stature. A study by Johnson et al. (1992) revealed that 34% of adoptees had experienced growth failure and that there was a positive relationship between the degree of growth delay and length of time spent in institutional care. Such conditions not only affected size of body (height and weight), but also size of brain. The same researchers found that 41% of the adoptees over 10 months of age had an abnormally small head size.

Other common developmental delays were speech and language skills, gross-motor skills, fine motor skills, and social skills (Groze & Ileana, 1996; Marcovitch et al., 1995; Morison et al., 1995). The difference between an adoptee's skill level and a child who has developed "normally" was greatest at the time of adoption. Fortunately, most of the delays and skill levels improved over time (Groze & Ileana, 1996; Johnson et al., 1992; Marcovitch et al., 1995). One study found that after three years in the United States, many of the adoptees were functioning at a skill level comparable to that of their peers (Groze & Ileana, 1996). Less than one-third of the adoptee sample demonstrated learning disabilities or delays in fine motor, gross motor, language, or social skills.

Morison et al. (1995) assessed developmental progress in Romanian adoptees with the Revised Denver Prescreening Questionnaire. When parents first met their adoptees, all of them had delays in at least two developmental areas (fine-motor and adaptive, gross motor, personal-social, and language) and 78% of them demonstrated delays in all four areas. Eleven months after the adoption, parents reported that only 32% were delayed in all four areas and 36% had delays in only one area or none at all. Improvement is more likely in younger children (Johnson et al., 1992). This finding may reflect a greater resiliency in younger children or a relationship between the degree of developmental problems and the time spent in care with minimal stimulation.

In addition to developmental delays, there were delays in socioemotional or behavioral development (Goldberg, 1997; Johnson et al., 1992; Marcovitch et al., 1995). Adoptive parents reported symptoms that are consistent with other research on effects of emotional abuse or neglect (Johnson et al., 1992). Romanian adoptees sometimes did not interact with others in ways that were appropriate for their age (Marcovitch et al., 1995) and might withdraw from others to play by themselves (Johnson et al., 1992). Others exhibited aggressive and antisocial behavior, particularly frequent temper tantrums. Some children exhibited excessive insecurity and shyness or aggressive behavior, causing concern for parents (Groze & Ileana, 1996). These emotional delays may improve with time, but they are particular areas of concern for parents with older children. Generally, when older adoptees are placed with an American family, they were more likely to exhibit problem behaviors (Marcovitch et al., 1995).

Romanian adoptees also often demonstrate disrupted attachment. Marcovitch et al. (1997) found that only 30% of their Romanian adoptee sample demonstrated secure attachment at preschool age compared to 42% of their normative peers. The adoptees exhibited more dependent and controlling patterns than did the normative group, although avoidant attachment was not demonstrated by any of the adoptees. Another study (Chisholm, Carter, Ames, & Morison, 1995) found less attachment security in adoptees who had spent at least eight months in Romanian institutional care compared to those who had never been adopted or were adopted from Romania before four months of age. The former group also displayed more indiscriminate friendly behavior than the latter groups. For instance, 47% of the adoptees who lived in an orphanage for at least eight months did not seem to be shy with new adults, compared to 11% of the other adoptee group. Indiscriminate friendly behavior seems to be similar to behavior demonstrated by disrupted attach-

ment, although there was no correlation between indiscriminate friendly behavior and attachment security in that study.

The Causes of Delays

Because most of the developmental problems that are typically demonstrated by Romanian adoptees can be linked to the poor quality of institutional care, I will examine why hundreds of thousands of children are in orphanages. Societal factors can explain why institutional care became such an extensive part of Romanian society and why the care in orphanages has been so poor.

Only a small percentage of children in the orphanages were true orphans, that is those without parents. Many children were in institutions because their parents were unable to care for them (Goldberg, 1997). The decision to place children in orphanages was not easy for Romanian parents. Johnson, et al. (1993) declared that strong family bonds are an important part of the Romanian heritage. Familial ties have been strong for centuries. The authors stated that the period of dictatorship under Nicolae Ceausescu weakened family ties. He planned for drastic population growth and industrialization, while simultaneously moving society from rural to urban areas. His policies handicapped Romanian families' ability to care for children and led an entire nation into great poverty.

Central to Ceausescu's policies was his goal to inflate the population from 23 million to 30 million people. This plan was enacted in 1966 when he outlawed birth control and abortions (Goldberg, 1997; Johnson et al., 1993; Marcovitch et al., 1995). Women were required to have five children if they were under the age of 45 years (Johnson et al., 1993). Those who were over 25 years old and still single, as well as married couples who did not have children, were fined one-third of their incomes for not following these laws.

The government also enforced policies for doctors as well, such as imprisoning those who assisted abortions (Johnson et al., 1993). Doctors were expected to help babies develop and become healthy, productive members of society. They could be punished if a child died under their care. Consequently, physicians referred many sick and unhealthy children to institutions and hospitals (Johnson et al., 1993). Children who were labeled "incurables" were placed in institutions where they were severely neglected. Healthy children were cared for in institutions where more services were provided. Yet, the level of medical, educational, and developmental services in these orphanages was still very limited (Marcovitch et al., 1995). Whether or not a child was unhealthy upon entering an orphanage, the institutional care was likely to have a negative impact on development.

"Systematization," the forced movement of families and society from rural to urban areas, was designed to benefit the state economically. Families had to move into small apartments that were too crowded for children and extended families. Apartment buildings housed hundreds of families, and many buildings did not have plumbing or heating (Johnson et al., 1993). Thus, quality of health dropped for family members. Women as well as men were required to work full-time. After delivering a child, a mother received only 3-6 months maternity leave, crippling her ability to care for her newborn and other children. The elderly were also denied health care, so they became less healthy and could not care for children in their households (Johnson et al., 1993). In the meantime, social services designed to served younger children were eliminated. Ceausescu emphasized industrial development and streamlined other areas, including agriculture. His policies resulted in tremendous national debt and food shortages (Johnson et al., 1993), and Romania acquired the lowest standard of living in Europe (Johnson et al., 1992). With no other options for child care and with societal and familial poverty increasing, families had to turn to orphanages. Such poor institutions were, and still are, the only thread of hope for many Romanian children.

Human developmentalists across the world agree that stimulation is especially important for children during the first two years of life (Berger, 1994). There is evidence that orphanages in Romania do not provide very much stimulation, delaying emotional, social, and physical development. Institutionalization also affects essential development in infants by disrupting the normal bonding that would take place between parents and children (Groze & Ileana, 1996). This condition, in turn, might lead to social problems as children age.

Originally developed by John Bowlby, attachment theory is used to explain the importance of secure relationships in an infant's life. Attachment is generally defined as the affective relationship between an infant and a caregiver, typically the mother (Becker, Billings, Eveleth, 1997; McCormick, 1997). Attachment provides security for infants and empowers them to explore their own environments and develop their own personalities (Berger, 1994). From this first relationship, infants begin to develop a cognitive model of the world around them and of their interaction with their caregivers. Institutional care often robs an infant's establishment of this important

developmental foundation. Some note that almost any kind of parental care is preferable to care without a parent figure. Bowlby even asserted that "a home must be very bad before it is bettered by a good institution" (as cited in Zinsmeister, 1998, p. 31).

Infants must be nurtured and cared for to develop the security in social relationships that comes from attachment. Degree of attachment is compromised and difficulties develop when caregivers are not available, do not respond, or respond in negative ways to an infant (Groze & Rosenthal, 1993). Infants find comfort and develop confidence in secure attachments and typically demonstrate this attachment by exploring their environments and periodically returning to the caregiver for encouragement and affection. Those who demonstrate insecure attachment may be afraid of, angry at, or seemingly indifferent to the caregiver (Berger, 1994). Insecure infants typically demonstrate extremes; they may cling to their caregiver or go off on their own, without any concern for where the caregiver may be.

Information gathered from adoption studies supports the use of attachment theory to explain some of the developmental problems with Romanian adoptees. Attachment difficulties are fairly common in older adopted children, particularly those with histories of abuse, neglect, and/or abandonment (Groze & Rosenthal, 1993). These children have a difficult time developing secure bonds with their adoptive parents, and scholars assume that these difficulties stem from their pre-placement environments. Many years ago, Tizard and Hodges (1978) concluded that the difficulties in attachment for adopted children seem to be greater for those who have been institutionalized prior to placement. All of the factors (abandonment, neglect, and institutionalization) that seem to lead to attachment difficulties between adoptees and adoptive parents are typical of Romanian orphanages. Thus, one can expect that some of the social problems that Romanian adoptees demonstrate can be partially explained by attachment theory.

Factors Increasing Successful Adoptions

Despite all of the research findings that highlight the negative aspects of adoption of children from Romania, there have been families who have had successful transitions. Identifying factors that fuel such successes can assist families with international adoption, particularly from Romania.

Although a majority of post-adoption research focuses on the problems adoptees have at the time of placement, Groze and Ileana (1996) asserted that the success of the adoptive transition has more to do with the family than it does the adoptee. Pre-adoption preparation is an important variable because it helps the family explore issues and problems that may arise. Those who understand the risks are better prepared to be flexible and adjust better to the adoption than those who are unprepared (Smith, 1988).

Another family characteristic that seems to foster successful adoption is exploration of the adoptee's birth culture. Serbin (1997) recommended that families and even communities of adoptees become interested in and, perhaps, even somewhat fond of the child's birth country. Frequently, international adoptees want to investigate their countries of origin. Smith (1988) believes that the more children are supported in this process and are proud of their country of origin, the more secure they are in their adopted family.

An obvious measure of adoption success is improvement in the adoptee's condition. Romanian adoptees can improve and be positively affected by moving from institutional care to family care, and the adoptive family environment determines, to a great extent, the level of functioning that the adoptee can and will attain. Serbin (1997) adds that even if an adoptee lags in different areas of development when compared to peers in the adopted country, the adoptee is more likely to be much ahead in development when compared to institutionalized peers left in the country of birth.

Conclusions and Implications

Although one must acknowledge the role of individual and family differences, there are some general characteristics of Romanian adoptees, such as developmental delays. Parents must be informed of and expect such risks when they consider Romanian adoption. Most of the risks can be attributed to the institutional care that is common in Romania. There is a need for more pre-adoption workshops and services to assist those who are considering international adoption. Currently, there is more information available for families who adopt from foreign countries, but additional resources are needed to help families locate and process the information.

Children should have extensive medical, developmental, and mental health evaluation when they enter the United States. That information can provide parents with an accurate description of current and future problems. There is also a need for more physicians who specialize

in problems of adoptees from foreign countries. Doctors need to know the nature of problems they should anticipate and the types of intervention that are most beneficial. Parents provide their child with greater assistance if they have a knowledgeable starting place.

Additional programs are needed to foster different types of development for international adoptees. Although any child will typically improve when moved from institutional care to a family setting, the improvement can be maximized with developmental intervention. Currently, there are many resources available to help children with special needs. These resources include physical, occupational, and speech therapy, as well as therapeutic services for mental health, both in individual and group settings.

Socially, international adoptees have many needs that are similar to children from immigrant families (Smith, 1988). These situations are associated with societal attitudes and stereotypes against those of different races and cultures. Programs that foster multicultural education and acceptance, particularly in school systems, may benefit the incorporation of international adoptees into American society as well.

After evaluating the literature, one is aware of the need for longitudinal studies concerned with post-adoption programs for children from Romania. Information gathered from such studies is needed to plan intervention and assistance at several developmental levels, particularly as adoptees enter and progress through school systems. Because behavioral problems are likely to be more prevalent as international adoptees age (Verhulst & Versluis-Den Bieman, 1995), these data could help manage and prevent behavioral difficulties at home and at school.

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Mind/Body Connection: How Belief and Emotion Affect Physical Health

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This literature review examines the mounting evidence about the mind/body connection in physical health. The mind's power to affect the body, as seen in the placebo effect, shows how expectations and beliefs can influence the healing process. Emotions also play a role in physical health by affecting the cells of the immune system in a two-way communication between the nervous and immune systems, making it important for people to learn to manage their emotions and reduce stress. Other factors influencing the states of physical health include support systems, relationships between caretakers and patients, and religious faith.

The belief that the mind has an influence over the body reflects the philosophy of doctors during the nineteenth century, when disease was defined as "an unnatural imbalance in a person that was caused by the interaction of biological, behavioral, moral, psychological, and spiritual factors" (Benson & Myers, 1992, p. 5). This model depended on clinical observation by the doctor, and each case varied according to individual circumstances. The treatments also varied and included medication, special diets, and behavior modification. Doctor/patient relationships played a major role in treatment, and sensitivity to psychological factors was crucial. The doctor considered the patient's moral, spiritual, social, and psychological life in determining his or her health. Although helpful, this holistic approach to health had its limitations. Not only was it time-consuming, but knowledge gained from one patient could not be applied to another.

By the end of the nineteenth century, the medical model, which was laboratory-based, replaced the holistic model. Physicians only considered specific microorganisms and biological abnormalities as the causes of disease. The new definition of disease, "deviance from a norm that was characterized by a growing number of specific, measurable, physiological parameters" (Benson & Myers, 1992, p. 5), considered individual body systems separately rather than as a whole. As a result, the medical profession did not recognize the influence of the mind on the body for most of the twentieth century, perhaps because of a lack of scientific evidence that psychological factors can affect physical health. However, as the research discussed in this article will demonstrate, phenomena such as placebo effects, physiological effects, and cellular effects make mind/body interaction increasingly hard to ignore. Evidence is accumulating that indicates that the state of the mind can affect the state of the body. A person's beliefs, thoughts, and emotions can have a major impact on physical well-being.

Placebo Effects

The mind's power to affect the body has long been known in medicine as the placebo effect--the power for healing that can stem simply from a patient's belief that a treatment will be effective. Oftentimes, even the act of making a doctor's appointment can initiate healing, if one believes he or she will receive necessary treatment.

A study by Wolf (1950) conducted on pregnant women who suffered from nausea and vomiting illustrates the power of belief. The women were given a drug they were told would cure the problem, but they were given ipecac, which induces vomiting. The nausea and vomiting stopped completely. Their belief reversed the action of the drug.

In more recent research, Archer and Leier (1992) studied 24 patients with congestive heart failure. In randomly assigned groups, the experimental group received standard treatment plus a placebo pill, whereas the control group received only standard treatment. The group receiving the placebo showed a significant improvement in the time on a treadmill versus the group receiving no placebo.

In a group of asthmatic patients, the placebo, inert distilled water, actually caused or blocked bronchoconstriction, depending on the patient's belief (Butler & Steptoe, 1986). First, some of the patients received what they believed was a powerful bronchodilator that would prevent an asthma attack. Then the entire group believed they were inhaling a chest-constricting chemical. Those who believed they had been given the bronchodilator did not develop bronchial difficulties, but those who inhaled

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only the second substance developed bronchial spasms. Both times the participants were given only distilled water. This example of how expectations of getting sick can actually make one sick is called the "nocebo effect."

Ineffective treatments often receive positive clinical outcomes simply because of the placebo effect. Placebos are effective in 35% of cases of angina pectoris, bronchial asthma, herpes simplex, and duodenal ulcer (Brown, 1997). Although five different treatments for angina pectoris have been found ineffective in themselves, 70-90% of these treatments were effective if the patients believed in them. Specifically, patients could reduce nitroglycerin usage, improve electrocardiograms, and increase exercise tolerance by believing in the treatment. These results lasted up to a year or more for some patients.

In some cases, placebo treatment may even be effective in treating psychiatric disorders. In double-blind clinical trials, a new drug was compared to placebos in treating severe depression (Brown, 1998). Placebos were less effective than standard treatments, but still showed some positive results. Thirty to forty percent of depressed people benefited from taking placebos. The results showed that placebos were more effective when used with people suffering from short-term depression that lasts less than three months and does not require hospitalization. Placebos were found to be as effective as interpersonal, behavioral, and cognitive therapy in treating less severe depression (Brown, 1997).

Explanations for the Placebo Effect

Different researchers offer various explanations for the power of the placebo. For example, Benson (1996) believes that the three components necessary to evoke the placebo effect are (a) positive beliefs and expectations of the patient, (b) positive beliefs and expectations of the physician or care-giver, and (c) a good relationship between the two parties. Letvak (1995) offers two explanations for why the placebo effect works—reduced anxiety and conditioning. Other researchers who have offered examples of the placebo effect in action include Pogge (1963), Siegel (1986), Egbert, Battit, Welch, & Bartlett (1964), and Sunshine & Laska (as cited in Letvak, 1995).

Benson (1996) holds that patient's expectations may improve the healing properties of placebos. In addition, expectations could also improve the healing properties of "real" medicine. When asthma patients were given a real bronchodilator that would open up their airways and make breathing easier, it was twice as effective when they were told its true effects as when they were told it would tighten their airway and make breathing difficult (Letvak, 1995). Similarly, people can develop side effects even when they are only taking a placebo (Pogge, 1963). The most common side effects reported are drowsiness, headaches, insomnia, nausea, and constipation.

A physician's enthusiasm can also contribute to a patient's successful treatment. Talking and listening to patients, giving them undivided attention, and encouraging them promote the placebo effect. According to Siegel (1986), when a doctor instills hope, the healing process sometimes starts even before treatment begins. This hope comes as a result of the patient's confidence and trust in the healer, and requires the physician's compassion, acceptance, availability, and willingness to provide information. Studies have shown that when patients were visited by the anesthesiologist before surgery and received explanations and reassurances, they only needed half as much pain medication as those not visited (Egbert, et al., 1964). The patients also left the hospital more than two days sooner.

A good relationship between the doctor and patient requires learning each other's beliefs (Siegel, 1986). If a doctor believes a certain treatment is best, but the patient rejects it, the treatment may not be as effective. Patients' bodies respond to the patients' own beliefs, not their doctors' beliefs. Other treatments may be available that are more accepting to the patient, or the doctor may change the patient's beliefs through education about a treatment.

Patients' beliefs that they will receive beneficial treatment can reduce stress and anxiety (Letvak, 1995). This reduction in stress and anxiety can account for positive effects in some patients. Also, environmental factors associated with successful treatments in the past may influence the placebo effect. A neutral substance given after patients have received relief from a therapeutically effective drug can elicit the same response as the drug itself. Patients have learned through conditioning to expect certain results. Even the shape or the color of the pill or the context in which the pill is given can bring expected results. In a study conducted by Laska and Sunshine (as cited in Letvak, 1995), placebos relieved pain in patients to the same degree as the pain medication they received the day before. They also found that because of patient's beliefs, placebo injections were more potent than placebo pills, capsules were more potent than tablets, two placebo pills had greater effect than one, larger pills were more powerful than smaller pills, and blue placebo pills were more sedating than pink ones.

The power of the placebo is an example of the

mind's effect on physical well-being. Mind/body medicine takes into account patients' thoughts and emotions, as well as their medical problems.

Interaction of the Nervous System and the Immune System

Recent research by Gold and Sternberg (1997) and Pert (1997) reveals how the nervous system and the immune system interact, communicate, and regulate each other through intricate networks. That research can help to explain how our emotions and thoughts can influence health.

The brain's stress response system is the body's way of handling challenging or threatening situations (Gold & Sternberg, 1997). The stress response involves the sympathetic nervous system, which promotes changes in physiology and behavior, eliciting the fight-or-flight response. If this system is not properly regulated, problems with arousal, thoughts, and feelings will result. The immune system works to prevent pathogens from entering the body, destroys those that do enter, neutralizse toxins, repairs damaged tissue, and disposes of abnormal cells. This system also requires constant regulation to prevent autoimmune and inflammatory diseases.

The brain's sympathetic nervous system and the immune system both rely on chemical signals between neurons for effective communication with each other (Gold & Sternberg, 1997). The brain produces corticotrophin-releasing hormone (CRH), which unites stress and immune responses. The hypothalamus releases CRH into the bloodstream, which the pituitary gland detects and then releases adrenocorticotrophin hormone (ACTH). ACTH stimulates the adrenal glands to produce cortisol, a well-known stress hormone. Cortisol affects many functions to prepare the body for a stressful situation. It also acts as an immune regulator and anti-inflammatory agent to prevent the immune system from damaging tissue by overreacting to injuries. Cortisol also inhibits the release of CRH, which starts this process, acting as a negative feedback loop and keeping the stress response under control. The link between CRH and cortisol maintains a homeostatic balance between the immune and stress systems (Gold & Sternberg, 1997).

The two-way communication that takes place between the nervous and immune systems involves information carriers known as neuropeptides (Pert, 1997). Monocytes, white blood cells that travel through the body by "scenting" certain neuropeptides for which they have receptors, have been found to have receptors for the emotion-affecting opiates. Immune cells have receptors for mood-controlling chemicals, but also make, store, and secrete chemicals that can regulate mood or emotion.

The hormonal responses that the stress and immune systems have in common may explain why relaxation and meditation methods that reduce stress can affect immune responses. Some of the response to stress may be genetically determined, but some may be consciously controlled (Pert, 1997).

Disruptions in Stress and Immune Regulation

Disruption in communication between the stress and immune systems caused by damage to the Hypothalamus-Pituitary-Adrenal (HPA) Axis will lead to lower levels of CRH, lower levels of cortisol, and thus result in a hyperactive immune system (Gold & Sternberg, 1997). This upset in the stress response can lead to lethargy, fatigue, increased sleep, increased appetite, and has been linked to such disorders as atypical depression, chronic fatigue syndrome, fibromyalgia, and seasonal affective disorder. These findings suggest that illnesses characterized by fatigue and hyperimmunity could be treated by drugs that mimic CRH actions in the brain. Also, the research results may explain why some patients are susceptible to both inflammatory disease and depression. Both these diseases have the same hormonal dysregulation, so a person may develop inflammatory disease if the stressor is pro-inflammatory or depression if the stressor is psychological (Gold & Sternberg, 1997).

Any disruptions in communication between the nervous and the immune systems can lead to immune complications and inflammatory disease (Gold & Sternberg, 1997). When brain-immune communication is disrupted in animals through surgery or drugs, they become highly susceptible to inflammatory and infectious diseases. Studies done on rats in which a drug blocks cortisol receptors show an increase in autoimmune inflammatory disease. Rats injected with cortisol gain resistance to inflammation again. Evidence that an impaired stress response will lead to greater susceptibility to inflammatory disease has been demonstrated across species--in rats, mice, chickens, and humans, although the evidence in humans is less direct (Gold & Sternberg, 1997).

Regulation of the immune system by the stress sys-

tem provides evidence that stress can affect human responses to viruses and bacteria. In Gold and Sternberg's study (1997), volunteers knowingly received a dose of the common cold virus. Some of the participants were immediately exposed to stress and others were not. The stressed individuals showed more viral particles and produced more mucus than did the nonstressed individuals.

Methods That Reduce Stress and Contribute to Health

Because of the mounting evidence that a person can affect illness by the way in which he or she thinks and believes, one might learn to control these aspects of life. Many techniques that initiate stress reduction, positive attitude, improved lifestyle, social support, and spirituality can improve a person's life and contribute toward increased health.

If stress can be consciously controlled, then, perhaps, so can the immune system. In 1990, Hall (as cited in Pert, 1997) showed that the immune system could be consciously controlled. Human participants were instructed in relaxation, guided imagery, self-hypnosis, biofeedback, and autogenic training. Using these techniques, individuals could increase the stickiness of their white blood cells, measured by saliva and blood tests. The fact that there was change at the cellular level by psychological factors indicates that the thoughts and emotions involved in stress response can alter the immune system.

Meditation, relaxation, visualization, hypnosis, and biofeedback techniques can help to alleviate stress. Benson (1996) reported that use of such methods can affect conditions such as hypertension, cardiac arrhythmias, insomnia, migraine and cluster headaches, anxiety, and depression. Any condition affected by stress can be improved using relaxation, meditation, and other therapies. Because as many as 60-90% of all doctor visits in the United States are stress-related, patients should be aware of the benefits of mind/body medicine (Benson, 1996). The physical and emotional risk of these therapies is low, whereas the potential benefit is great. The economic costs are also low. Moreover, these methods can be used conveniently in conjunction with conventional medicine.

Attitudes and expectations determine how people perceive life events, and how they choose to cope with stress can influence the impact that stress has on the immune system. Learning how to express emotions can avoid a build up of tension or an explosive outburst. By learning to manage their own psychological states, people may be able to prevent disease or improve health.

An optimistic outlook on life may improve the quality of life and health. Optimists believe that expectations play a major role in determining what actually happens to them and that they have control over what attitude they will have in life. Scheier and Carver (1993) found that optimism may play a role in the effect stress has on physical health by testing the development of physical symptoms over a very stressful four-week interval at the semester end. After taking the Life Orientation Test to determine whether they showed an optimistic or pessimistic orientation, 141 participants answered 39 questions relating to commonly occurring physical symptoms that might occur during stressful times. Optimistic individuals reported fewer physical symptoms during the assessment period than did the less optimistic individuals. How one perceives and reacts to events determines whether the outcome is positive or negative. Optimistic students may handle problems sooner than pessimistic students, eliminating some of the stress that could lead to physical problems. Also, Seligman (1990) found that pessimism lowers immune functioning, making a person more susceptible to infectious illness.

Cognitive therapy can help people become more optimistic and change habits of thinking that lead to illness. Aaron Beck, a psychiatrist at the University of Pennsylvania, believes "that people maintain their negative views because they think in irrational ways that keep them from changing their distorted perspective" (as cited in Goleman & Gurin, 1993, p. 362). In cognitive therapy, patients can realize that self-defeating thoughts have a direct impact on their mood and can lead to depression. They learn that such thoughts are automatic and can determine whether these thoughts are warranted by evidence. If the thoughts are consistent with life circumstances, then cognitive therapists can help people change their circumstances. If the negative thoughts are unwarranted, individuals can replace those thoughts with more positive ones. Success in achieving an optimistic attitude with cognitive therapy may take several months but can make a difference in physical health.

People also need others for physical and emotional health. A supportive environment can improve immune functioning and resistance to disease. Spiegel, Bloom, Kraemer, and Gottheil (1989) studied women with breast cancer. Assessment 10 years after treatment revealed that women who had participated in support groups during

treatment lived 18 months longer on average than women who did not. Being connected with others seems to have survival value. Support groups can enhance one's ability to cope more effectively with illness. They provide a safe atmosphere to learn about the illness, share feelings, and learn from others' experiences.

Religious services also offer an element of fellowship that may foster good health. In a study on 1,700 adults at least 65 years and older, Duke University researchers found that those who attended religious services at least once a week had healthier immune systems than those who did not (Koenig, et al., 1997). Blood tests were taken with older adults to measure levels of interleukin 6 (IL6) and other substances that regulate immune and inflammatory responses. Patients with AIDS, Alzheimer's disease, osteoporosis, and diabetes all had high levels of IL6, often associated with stress and depression. Those who attended religious services were half as likely as nonattenders to have elevated levels of IL6. Although healthier people are more likely to attend church, the connection could also be attributed to the social aspect or the faith aspect of attending religious services.

Koenig and Larson (1998) examined the relationship between religious attendance, religious affiliation, and use of hospital services by older medical patients. Results show that patients who attended church at least weekly were less likely to have been hospitalized in the previous year. Patients with church affiliation spent an average of 11 days in the hospital whereas patients with no church affiliation spent an average of 25 days in the hospital.

Limitations of Mind/Body Healing

Although many studies (Cohen & Herbert, 1996) show that the immune system is affected by psychological factors, researchers cannot always specify what, how, and where immunological changes connected with emotion actually take place. Glaser (1999) pointed out the difficulty in showing that stress has caused an illness or that stress reduction has prevented one. There are many factors affecting illness--exposure to viruses or bacteria and the state of the immune system. Glaser argued that persons who become ill because of stress probably already have immune systems that have been compromised either by disease or lifestyles that include alcohol and drug abuse, poor nutrition, lack of exercise, or poor sleeping habits.

According to Glass (American Psychological Association [APA], 1995), increased knowledge of mind-body interaction in disease could lead to feelings of self-blame. People believe they have a serious illness because they simply do not think the right thoughts. Glass (APA, 1995) also said that with the increased use of support groups, a trained professional should be present to help patients cope with their illnesses. Not every person may be ready to hear others talk about the cold, hard facts of disease.

Finally, Haber (APA, 1995) asserted that although psychological help can improve the quality of one's life, it may not affect illness. While sharing hope, caretakers must not give patients an exaggerated view for recovery.

Conclusions and Future Directions

If traditional medical practices are combined with methods for reducing stress, managing emotions, and maintaining an optimistic attitude, perhaps all people can improve the quality of their health. People's interpretation of life events and actions related to this interpretation can direct their path. Even though people are affected by their environments, they can consciously decide how to think about it and thus feel about it. There may be limitations to how much the mind can alter a disease process, but perhaps the mind can alter the way people experience the symptoms of disease (Goleman & Gurin, 1993).

A possible next step may be for caretakers to implement training programs intended to improve patients' outlooks for their health, steering them away from fear and worry and toward hopeful expectations. Psychology in the medical setting can contribute to initiating healing and recovery or preventing illness by helping patients change illness behaviors or beliefs. As stated in the Book of Proverbs, "A merry heart doeth good like a medicine."

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“Is This REALLY APA Format?”:

A Presubmission Checklist for the *Psi Chi Journal of Undergraduate Research*

Kirsten L. Rewey
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Emporia State University

At the 2000 meeting of the Southwestern Psychological Association we presented a poster detailing the most common formatting errors among submissions to the *Psi Chi Journal of Undergraduate Research* (Juve, Weiser, Kennedy, Davis, & Rewey, 2000). To summarize, we reviewed 69 papers submitted to the Psi Chi Journal and identified all deviations (but not repetitions of deviations) from current standards set in the *Publication Manual of the American Psychological Association* (*PM*; APA, 1994). Juve et al. (2000) reported 780 total errors, an average of 11.3 deviations from the *PM* per manuscript. In addition, we concluded that the majority of errors were mechanical problems that could be easily corrected. The purpose of the present editorial is to provide student authors and faculty advisors with a check-list of common formatting errors. Using the checklist during careful and deliberate proofreading of manuscripts prior to submission to the *Psi Chi Journal* should eliminate many of the formatting difficulties student authors encounter during the submission process.

General Formatting and Typing

I have read the manuscript and I know that:	**Manual Section**
___ there are 1-in. (2.54-cm) margins on all four sides of each page of the manuscript	4.04
___ the font is the correct size (12 points on a word processor) and the correct style (serif fonts such as Courier, Palatino, or Times Roman)	4.02
___ the manuscript is double-spaced throughout, including title page, references, tables, figure captions, author notes, and appendixes	4.03
___ the page header is the first two or three words of the title	4.06
___ the page number appears on the same line with the page header and is five spaces to the right of the page header	4.06
___ the page header and page number are typed at the top of each page of the manuscript	4.06
___ the page header and figure number are handwritten on the back of figures	4.22

Guidelines reported for the *Psi Chi Journal of Undergraduate Research* also apply to the *Journal of Psychological Inquiry.* - Ed.

General Formatting and Typing

I have read the manuscript and I know that:	Manual Section
___ there is only one space after punctuation marks including: commas, colons, semicolons, punctuation at the end of sentences, periods in citations, and all periods in the reference section	4.11
___ letters have been used to indicate a series of events or items within a paragraph	4.12
___ words are not broken (hyphenated) at the end of a line	4.04
___ all units of measurement have correct abbreviations	3.25, 3.51
___ Arabic numerals have been used correctly to express: all numbers in the Abstract, numbers that are greater than 10, numbers that immediately precede a unit of measurement, numbers that represent fractions and percentages, numbers that represent times, dates, ages, participants, samples, populations, scores, or points on a scale, numbers less than 10 *only when* those numbers are compared to a number greater than 10 (e.g., “Participants included 15 humanities and 3 natural science majors.”)	3.42
___ words have been correctly used to express: numbers less than 10, numbers at the beginning of a title, sentence, or heading	3.42

Title Page

I have read the manuscript and I know that:

___ the running head is aligned with the left margin and is less than 50 characters and spaces long	4.15, 1.06
___ the author note *does not* appear on the title page; instead the author note appears on a separate page after tables and figures (if included) and before appendixes (if included)	3.89, 4.20

Abstract

I have read the manuscript and I know that:

___ the word “Abstract” is typed at the top of the page	4.16
___ the first line of the abstract is even with the left margin	4.16
___ the abstract is between 100 and 120 words	1.07, 4.16

Body of the Manuscript

I have read the manuscript and I know that:		Manual Section
___	there are *no* one-sentence paragraphs	2.03
___	gender-inclusive language is used through plural pronouns (e.g., they, their), alternating between gendered pronouns (e.g., he…, she…), or by using nouns (e.g., "one," "an individual," "participant's")	2.13
___	the words "male" and "female" are used only as adjectives (e.g., female quail) whereas the words "men," "women," "boys," and "girls" are used as nouns	2.17
___	quotations are word-for-word accurate and page numbers are provided	3.35, 3.39
___	the word "while" is used *only* to indicate events that take place simultaneously (alternatives: although, whereas, and, but)	2.10
___	the word "since" is used *only* to indicate the passage of time (alternative: because)	2.10
___	terms that are abbreviated are written out completely the first time they are used, then always abbreviated thereafter	3.21
___	Latin abbreviations are used sparingly and *only* in parenthetical material	3.24
___	the word "and" is used in citations outside of parentheses	3.95
___	the ampersand ("&") is used in citations within parentheses	3.07, 3.95
___	when two or more citations are in parentheses the citations are typed in alphabetical order	3.99
___	each and every citation used in the manuscript is correctly typed in the Reference section	3.104
___	the phrase "et al." is used *only* when there are three or more authors	3.95
___	in the Method section the word "participants" is consistently used (do *not* use "subjects")	1.09
___	in the Results section all test statistics (e.g., F, t, X^2, p) are underlined	4.14

References Section

I have read the manuscript and I know that:

___	all entries are typed in alphabetical order	3.107
___	each and every entry occurs in the body of the manuscript	3.104
___	author's names are separated by commas	3.111
___	the volume number of a journal is underlined	3.114
___	the first line of each entry is indented	4.18, 3.110
___	the names of journals, book chapters, and books are correctly capitalized	3.113

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Juve, J. A., Weiser, A., Kennedy, K. M., Davis, S. F., & Rewey, K. L. (2000, April). "*There are HOW MANY spaces after punctuation!": Common APA format errors of student authors*. Poster presented at the annual meeting of the Southwestern Psychological Association, Dallas, TX.

Special Features

Richard L. Miller

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 provided a variety of psychological perspectives in the essays contained in the first part of this section. From a developmental psychology perspective, Fred Abboud assessed Stand By Me. *Two very different perspectives were brought to bear on the move* Fight Club. *Travis Mounce explained how dissociative identity disorder can account for one of the key figure's behavior. Von Alavi took a social psychological perspective to look at* Fight Club *as a cult. Andrew Farmer applied Kubler-Ross' stages of acceptance of death to the movie,* The Sixth Sense.

The "Call for Papers" also invited students to take opposing sides in presenting research evidence regarding a controversial issue. Jennifer Hong took the position that parental notification laws that require doctors to inform the parents of pregnant teenagers benefit the minors who seek abortions. In opposition to this view, Lisa Lawton suggests that parental notification laws are unnecssary to promote communication between pregnant adolescents and their parents.

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.*

Do Parents and Peers Stand by Each Other in *Stand By Me?*

Fred Abboud

Creighton University

The individuals in a child's life can have a significant impact on that child's development. Of course, in the early stages, children are influenced to a great extent by their parents. But, even though parents are important to understanding a child's development, they are not the sole influence. As a child starts to interact more and more with other children and adults, they also become important influences on that child's psychological development. In other words, both parents and other people affect how a person develops psychologically. An example of a movie that illustrates that point is *Stand By Me* (Scheinman, Evans, & Gideo, 1986). In that film, the plot, characters, and circumstances of the film make this notion about psychological development come to life.

Psychological Issues In The Movie Plot

Stand By Me is a tale of growing up and maturing through the eyes of a man reflecting on his adolescent days. The man and story narrator, Gordon, reads about the death of his childhood best friend, Chris, and recalls one of his most vivid childhood events—the time he and his friends Chris, Teddy, and Vern went to look for the body of a 12 year-old boy named Ray Brower.

Vern heard about the body from his brother, and the four set out to find Brower. During their adventure, they encountered many obstacles; fights among themselves, a long journey, leeches, trains, and even an evil gang of juveniles bent on finding the body. In the end, they found Brower, stood off the gang, and decided not to take back Brower's body. During the trip, the boys learned a great deal about themselves, each other, and life in general. They came to a greater realization about who they were, who they wanted to be, and what they could accomplish in their lives and the lives of those around them.

An interesting idea explored in the movie was that the development of a child is based in part on the quality and quantity of parental attention he or she receives. For example, in Gordon's family, his brother Denny got most of the attention. The little attention that Gordon got from his parents was negative, mostly criticizing him for not being more like his wonderful brother. Denny was given praise by his parents for his football skills and nice girlfriend, whereas Gordon was criticized for his friends,

Richard Miller is editor of this journal's Special Features section.

whom his parents considered inappropriate, and interest in writing, which his parents deemed a waste of time.

Denny realized how his brother felt about his home life, and tried to get his parents to pay more attention to Gordon by telling them about the good things that Gordon did, for example writing stories. However, the parents remained more absorbed in Denny, making Gordon, in his own words, "feel invisible to them." Tragically, Denny was killed in a car accident, and the family was hit hard by his death. Gordon had a dream of his dad saying to Gordon, "It should have been you." This parental focus on the accomplishments of the oldest child contributed to Gordon having a negative outlook on life, his writing talent, and his future. He was helped a great deal by his friend Chris, who encouraged Gordon and helped him through the difficult times.

Do children whose actions and behaviors are criticized eventually conclude that they are no good and have no potential? This consequence certainly seemed true for the character of Chris in the movie. Most of the adults who knew Chris thought he was just a common criminal and would not amount to anything in life. Gordon made this point clear in the movie. "Everyone knew he would turn out bad, including him." After hearing such comments so often, Chris began to believe them himself. He did not think that he was smart, had a future, or was worth anything. Gordon came to the aid of Chris. Gordon, like a parent, told Chris that he was intelligent and could make something of himself with effort. He even convinced Chris to enroll in some tougher courses in school and to try harder to succeed. Chris proved everyone wrong; he eventually went to college and became an attorney.

Do children need quality attention and positive feedback on their accomplishments to develop into healthy, confident, and mentally sound people? Gordon and Chris were lucky enough to have each other to act as a positive influence for one another. Their other friends were not as fortunate and did not develop into healthy, successful individuals. Perhaps adolescents, such as the ones in *Stand By Me*, needed positive reinforcement and attention during this dynamic and chaotic period of their lives, and would turn to any source, be it parents, friends, or even other relatives, to get this attention and reinforcement.

Examining Development in *Stand By Me*: Ideas And Themes

The issues concerning child development and parental attention raised in the movie *Stand By Me* can prompt examination of several psychological concepts based on outside influences such as parents and others. The ways in which Gordon and his friends interacted with their parents and each other gave viewers a powerful insight into the roles that both parents and peers play. A person's early years can contribute to how the person thinks, acts, and lives for the rest of his or her life.

One thing to consider is that parents have a great impact on the development of their children's self-image and esteem. Child attachment to parents is very powerful and begins at an early age (Myers, 1998, p.95). Children depend on their parents for many things, including the development of their notion self-image and self-worth. This relationship was depicted in *Stand By Me*. Gordon's self-image was greatly damaged by his parents' lack of attention and interest in his life. In the early and formative years of a child's life, parental attention and feedback can greatly influence how a child develops, both cognitively and socially.

Does parenting style affect how a child develops psychologically and socially? On one side of the coin, children raised in predominately neglectful and authoritarian households exhibit several problems including immaturity, impulsivity, lower academic performance, low self-esteem, and lower social skills (Cooney, 2000). There is a clear example of this phenomenon in *Stand By Me*, when the parental neglect that Gordon and Chris experienced caused them to doubt their potential, talent, and even abilities. In addition, child order and number can have an impact on how much attention parents pay to a child. Claxton (1994) examined the relationship between parental feedback and birth order and found that "last-borns reported receiving significantly less of both types of feedback than first born or middle children" (p.475). In Gordon's family, Denny received the bulk of his parent's attention and feedback, whereas Gordon received very little.

On the other side of the coin, a strong and positive sense of parental attention and feedback can do wonders to aid a child in development. Focused and genuine parental attention can even work to help a child make it through a tough and/or painful ordeal. One study reported that "focused parental attention to a child during a painful procedure—surgery or another uncomfortable

event—was shown to have a positive effect on reducing the child's level of distress" (Naber, Halstead, Broome, & Rehwaldt, 1995, p. 79). Cooney (2000) also confirmed that children reared by authoritative parents who exhibited high levels of attention, control, and warmth, developed a higher level of social skills and academic performance.

Parenting style, amount of attention, and type of feedback exhibited by parents to their children has an impact on how a child develops. However, parents are not alone in fostering their children's development. "Keeping in mind that lives are formed by influences both under and beyond the parent's control, we should, perhaps, be slower to credit parents for their child's achievements and slower still to blame them for their child's traits" (Myers, 1998, p. 111). As children interact with persons outside the home, they are influenced by several factors, especially their peers. In fact, studies show that as children grow older, the influence of their parents grows fainter as peer influence strengthens. "In Western cultures, adolescence is typically a time of growing peer influence and diminishing parental influence" (Myers, 1998, p.125). This development is evident in *Stand By Me* because Gordon and Chris have more influence on each others' lives than do their respective parents And it seems that just as parental influence was strong in the life of a developing younger child, peer influence is just as strong in the life of an adolescent.

Through the lives of Gordon and friends, a person can get a more personal and vivid picture about how important parental influence can be. The movie could have been much more effective in illustrating this point had the producers provided a greater variety of parents to examine. The only parents that viewers saw were Gordon and Denny's. The parents of the other boys were mentioned by the boys, but they were never shown raising their children. Therefore, viewers got a limited example of the effects that parents can have. Even though parents have a strong influence on their children's development, they cannot take sole credit or blame for their children's behavior. Outside forces, especially peers, also have a strong impact during the adolescent years. The developmental process of a child relies heavily on both parents and others.

In conclusion, we can learn many things from the big screen. Many films are more than just entertainment; they are also tools that one can use to educate about life and society. Movies can force a person to examine his or her own life—where he or she is doing well and what his or her shortcomings are. *Stand By Me* develops the notion that parents and peers that affect children's develops, especially during adolescence, and that developmental influence can affect the life of a person long after he or she have left home. That idea is not a fictional story for the big screen; it is an idea that exists in the households of society on a daily basis.

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Dissociative Identity Disorder in *Fight Club*

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This essay discusses the psychological state of the main character, Jack, in the movie, *Fight Club.* The movie is a black comedy which uses post modern techniques, such as flashbacks, to illustrate the amnesia, fugue states, and emotional turmoil associated with Dissociative Identity Disorder (DID). *Fight Club* is not a conventional portrayal of DID; rather, the disorder is used to represent the alienation of and type of identity struggles faced by the movie's characters. The film talks about many psychological and social themes including DID, amnesia, fugue states, support groups, and social conditioning.

The movie is about a man (Jack) who is depressed by the structured life he leads. In frustration, he seeks out catharsis from 12-step programs where he pretends to have a number of different illnesses in order to have con-

tact with others who will feel sympathy for him. For a time this relieves his stress and cures his insomnia until he meets Marla Singer, another posing victim. This causes his problems to return until he meets up with Tyler Durden. Tyler befriends Jack and after an explosion destroys his apartment, Jack decides to move in with Tyler. The two then form a club for men in which the participants fight in underground arenas. This gives Jack a new form of therapy. Eventually, Marla comes back into the picture when Tyler begins a relationship with her. Later Tyler begins forming a terrorist group out of the club and Jack and Tyler begin to have opposing views about the way in which the army should be ran. Tyler leaves and Jack soon realizes that Tyler is really his other personality and not another person. Jack uncovers Tyler's plans to destroy the nation's credit history by blowing up the major headquarters of the credit companies, and he and Tyler engage in a battle that ends with the death of Tyler's personality just moments before the bombs accomplish Tyler's mission.

The major focus of this paper deals specifically with the character's DID. First the paper gives a definition of a dissociative disorder. Second, it outlines some of the ideas and associated problems that lead to the ultimate manifestation of Jack's disorder. Third, it describes the disorder as it is portrayed in the film. Fourth, it makes closing statements about the film.

Defining the Disorder

DID is defined as the presence of two or more distinct identities of personality states that recurrently take control of behavior (Diagnostic And Statistical Manual of Mental Disorders [APA], 1994). When this happens, the individual experiences amnesia, which is accompanied by dissociative fugue. Dissociative fugue is the state in which an individual will perform various daily activities while assuming an alternate identity. For instance, an individual experiencing a fugue state may find himself or herself in strange places with no recollection of how they got there.

Each personality typically has a separate and distinguished self-history, self-image, and identity. Usually there is a primary identity that carries the individual's given name. An alternate identity often has a different name and set of traits that contrast with those of the primary and other identities. (APA, 1994). Commonly, the individual who has DID is a victim of extreme physical or sexual abuse. Less frequently, combat, rape, natural disasters, accidents, concentration camp experiences, loss of loved ones, financial catastrophes, and severe marital discord have all been cited causes (Coons, 1986). Patients suffering from DID also have been known to experience suicidal feelings and to commit acts of self -mutilation. (APA, 1994).

Therapy methods vary according to individual situations, but always includes establishing trust with the individual. Communication is established with all alter personalities, and the therapist administers treatments to all of the personalities for their individual disorders. When this process is complete, the therapist must then find a way to integrate all of the personalities.

Symptoms Displayed by Jack

Jack exhibits various signs of psychopathology related to DID such as insomnia, depression, self-mutilation, and suicidal tendencies. In the beginning of the film he describes his sleepless nights and how he feels that he is never really awake or asleep.

He later seems depressed when he describes the relationship between Marla Singer and his other personality, Tyler Durden, as a meaningless sexual relationship, much like his own parents' relationship. Perhaps he never had a stable sense of family or felt what it was like to be loved. He also has suicidal feelings and a habit of self-mutilation. He fantasizes about experiencing a mid-air collision while on a jet, and, later in the movie he burns himself with lye.

Jack attends various support groups and so expresses his need for fulfillment. By pretending to have physical illnesses, which resulted in acceptance, he found a sense of belonging. As he put it, "I was the center of the universe." This served, for a time, to cure Jack's insomnia until he met Marla Singer, a very unstable woman who had been using the groups in the same fashion as Jack. After meeting Marla, Jack realized that his own misuse of therapy groups was not ethical and he again began to suffer from insomnia. He realized that he had another set of problems. He states, "Her lie reflected my lie."

Jack interprets some of his symptoms, such as waking up in places with no recollection of how he got there, as narcolepsy. These experiences, however, later turn out to be the results of transitions from one personality to another, the major symptom of DID. After discovering that he has another personality, Jack also learned that he had been building a nationwide army, placing several calls to them, and leaving orders for them to carry out. Jack begins to experience flashbacks about his encoun-

ters with Marla and his malicious terrorist excursions, which indicate the existence of another identity.

Jack and Tyler Durden

A key point in the film is when Jack loses his apartment and all of his possessions in an explosion. At this point, he calls a man named Tyler, whom he met on a business trip. After meeting at a bar, the two decide to become roommates. Unbeknownst to Jack, Tyler is his alter personality.

Tyler then talks Jack into a fistfight. After this the two begin to fight regularly and eventually Tyler decides to get other males involved. *Fight Club* is formed. No longer relying on his support groups, Jack uses the weekly fights as a way to cope with his feelings.

Even though Jack stops attending the support groups, he still sees Marla, who seems to have begun a relationship with Tyler. The film depicts Jack as the reluctant, outside observer of Tyler and Marla's relationship. After seeing Marla, Tyler tells Jack to get rid of her, who in turn is offended by Jack's seeming ambivalence. This problem manifests itself later in the film, as Marla becomes a liability to Tyler's "Project Mayhem," a plan to eliminate the nation's credit history.

As more members begin attending club meetings, Tyler begins to come up with assignments for each member to do, such as picking a fight with a total stranger. As Tyler becomes more openly aggressive conflict arises between him and Jack. The club serves Jack as an alternative form of therapy in which he is able to physically relive his aggressions without feeling restricted by society, absent the added complications of romantic relationships with females, which Marla represents. Tyler, on the other hand, uses these meetings to condition males against social conformity, claiming that society has robbed humans of their true nature.

Eventually, Tyler forms an underground army that commits a streak of destructive pranks aimed at corporations. After Tyler threatens the police commissioner and burns a few offices, Jack becomes concerned that he is taking things too far. Tyler begins to send the army out on missions without consulting Jack. Jack eventually confronts Tyler and after another potentially self-destructive incident involving a car wreck, Tyler leaves and once again the two operate as separate identities.

Soon after, Jack learns that he is suspected as being the bomber of his own apartment. Desperately he leaves in search of Tyler. After he has another conversation with Tyler, Jack, realizes that he and Tyler Durden are the same person. At this point Jack learns that Tyler sees Marla as a threat to Project Mayhem. Jack sets out to save Marla and turn himself in to the authorities. He soon finds that Tyler has recruited members from every walk of life, including law enforcement agencies. Fleeing the police, Jack rushes to stop Tyler, only to lose another fight with Tyler.

The film climaxes as Jack finally relieves himself of Tyler by shooting himself through the jaw, ritualistically symbolizing the death of Tyler Durden. Moments later, Jack is met by members of his army and their captive, Marla Singer. After apologizing to Marla, the couple holds hands as they watch the credit offices explode.

A Final Assessment and Commentary

Fight Club is an unconventional, post-modern representation of DID. The film provides examples of depression, and conditions related to DID, including insomnia, amnesia, and fugue states. The movie uses flashbacks and dreams to enhance these themes.

The personalities of Tyler and Jack are contrasted to illustrate how Jack and his alter ego come together to create an army working cooperatively at times and independently at others. The film shows the potential social impact of untreated psychological disorders, and strongly suggests that the complexity of our society is obscuring our inner longings and passions. The movie ultimately provides us with a look at the dark side of life, proposing a nihilistic view of the future. Jack's condition results in anarchy and destruction where his rage carries over from his personal life into the realm of social deconstruction. Although the film is, at times, subject to Hollywood's engine of exaggerations, it is still an interesting metaphor for psychological disturbance.

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Tactics Used in the Formation of a Cult in the Movie *Fight Club*

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The movie *Fight Club* presents its audience with a plethora of psychological phenomena. Throughout the movie, the main character played by Edward Norton (the name of the character is never in the movie) battles his alter ego, Tyler Derdan. As Tyler begins to organize his "army" for Project Mayhem, he uses many of the psychological principles that a cult leader uses to control land and recruit members. These principles include creating a social reality, creating a grand falloon, escalating commitment, propagating leader myths, recruiting new members, and distracting from undesirable thoughts. Perhaps the only idea that Derdan does not use is fixating the group on a phantom image.

A phantom image is a ghost or some type of supernatural object that the leader says is going to come and whose coming will save the group. This phenomenon was illustrated when Marshall Herff Applewhite and his disciples committed suicide to be carried to heaven upon a U.F.O that followed the Hale-Bopp comet.

Many cults have adapted this methodology of control with astonishing results. Oftentimes cult leaders become so revered and trusted that their followers are willing to die for their leader. Such was the case in Guyana in 1974 when 914 of Revered Jones's followers died by obeying his order to drink a poisoned beverage. As well, the Branch Davidians gave their leader, David Koresh, control of their money and possessions. Furthermore, the men were convinced to live a life of celibacy while Koresh slept with their wives and children.

The characteristic of recruits is another important variable in cult formation. In 1979, Margaret Singer (as cited in Myers, 2000) found that middle class Caucasians, who lacked the street smarts of the lower class and the skepticism of the upper class, were the most vulnerable to cult recruiting efforts. In the same study, Singer found that converts are usually at a turning point in their lives, facing a crisis or living away from home.

Fight Club

The premise of the movie *Fight Club* revolves around Norton's character and his battle with his alter ego, Tyler Derdan. However, Norton's character does not realize that he and Derdan are actually one person. Throughout the movie, they are depicted as two separate characters. When Norton's character's apartment blows up, he moves in with Derdan. At that time, they begin to develop Fight Club, which is an underground fighting organization. However this club does not satisfy Derdan. From this club, he recruits individuals to formulate his army for Project Mayhem. Derdan uses Project Mayhem to destroy that in which he does not believe. Finally, when Norton's character discovers that he is in fact Tyler Derdan, he attempts to put an end to Project Mayhem and Derdan's plans.

Escalating Commitment

Derdan advances the new recruits' involvement in a variety of ways. First, recruits come from an underground fighting organization that he developed. These recruits voluntarily stand on the porch of Derdan's home for three days without food or water to gain acceptance into the residence that houses members of Project Mayhem. Once recruits gain admittance, they are given various tasks to complete. These tasks begin with vandalism and escalate into arson and eventually terrorist bombings.

By first assigning simple tasks, Derdan effectively drew members of Project Mayhem closer to committing serious offenses. These events illustrate the "foot-in-the-door technique" (Myers, 2000). Once members have vandalized something, setting a fire and blowing up an object is not as big a step. However, if Derdan had immediately asked the recruits to blow up a skyscraper, they would have been more tentative.

Volunteering to become part of the organization is also important. Klaus found that when people volunteered (vs. when coerced) to do something, they began to think of themselves in terms of that kind of activity and were more likely to remain in the organization (as cited in Myers, 2000).

Creating a Social Reality

Once inside the house, recruits entered an all-encompassing world. All of the Project Mayhem members lived inside the house. The house had a garden in which members could grow their own food. Furthermore, the group's source of income and business was centered the house. Members did not have to leave the house in order to work. Because members of Project Mayhem lived and

worked in the house, their access to the outside world became limited. Except for carrying out their assignments, members had no need to expose themselves to the outside world. Derdan had effectively created a world of his own, much like that created by many cult leaders. Separating themselves from the outside world and forming a strong group attachment is important psychologically. Also, once all group members' needs are met, they become more dependent on the environment and less likely to leave. Brambridge (1980, as cited in Myers, 2000) termed this phenomenon "social implosion."

Grand Falloon

Another strategy that both cult leaders and Derdan used is the creation of a grand falloon or a group that enjoys higher status than others among the group. By creating this "in group," the leader establishes a goal for which new recruits can strive. They begin to think that if they follow the rules of the group, live life as they are told to live, and carry out their assignments then they too will be able to gain access to the "in group." For example, in *Fight Club*, the "in group" was responsible for managing Project Mayhem. The newer members were actually assigned to carryout the more menial tasks. But the new members hoped that they could move into the "in group" if they were able to carryout their tasks to Derdan satisfaction.

Propagating Myths About the Leader

There were a variety of different myths about Derdan that served to elevate his status from human to a more mythical being. In the movie, a member of Fight Club asked if it were true that Derdan was born in a mental hospital and only slept one hour a night. Myths, which we assume Derdan himself propagated, engaged the group members' minds and elevated his status among the group. We can clearly see this phenomenon when the wide-eyed followers question Norton's character about Derdan.

Recruiting New Members

An age-old cliché is that the best way to learn something is to teach it to someone else. This idea is used in cults in that current members are used to recruit prospective members. In Fight Club, Derdan used more established members of Project Mayhem in the recruiting process to reinforce the recruiters' own beliefs because they taught younger members. In one scene, a member of Project Mayhem yells at prospective recruits as they attempt to stay on the porch for three days without food and water. Derdan first carried out this job, but as the group began accumulating members, this job was passed on. There were many scenes in which members repeated the rules of Project Mayhem to other members or repeated some of Derdan's speeches to lower ranking members of Project Mayhem.

Distracting From Undesirable Thoughts

Derdan is able to keep members' minds off undesirable thoughts by keeping them busy with various tasks. Members were made to garden, make soap, clean and perform other acts that were associated with Project Mayhem. All these acts served to keep the members busy and did not allow them time to think about other than the group's goals. If members were given idle time, they may have thought about the rationale behind their actions and perhaps quit or rebelled against the group. Thus, Derdan to keep members of Project Mayhem busy at all times.

Summary

By successfully enforcing principles associated with cult formation and control, Tyler Derdan built an army that spanned many cities and states. The army was created to carry out the work of its charismatic leader, Tyler Derdan. Members of Project Mayhem were drawn in by simple tasks that escalated in severity, which served to consolidate commitment to the group. Derdan created an independent world for the group so he could limit group member's access to the outside world. Derdan also created a grand falloon that other group members hoped to join. Derdan propagated myths about himself to elevate his status among followers. Derdan used members in recruiting and teachings perspective members. Lastly, by giving the members a variety of tasks and keeping them busy, Derdan prevented members from thinking about antithetical ideas. These methods were effective in creating an army that was willing to die for Derdan without questioning his logic.

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The Sixth Sense

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The Sixth Sense revolves around a boy with an apparent psychological condition, but who actually saw dead people. Dr. Malcom Crowe (Bruce Willis) diagnosed Cole Sear (Haley Joel Osment) with a possible mood disorder. Crowe was a distinguished child psychologist who eventually led Cole out of his personal hell, and in return, Cole helped Crowe become aware of his situation. The movie depicted many trials children experience, such as divorce, stress, and being in precarious situations.

In the movie, Cole proceeded through Elizabeth Kubler-Ross's five stages of acceptance of death even though he only dealt with dead people and was not dying himself. Although the ghosts in the film were figments of the filmmaker's imagination, Cole's responses to his situation were true to life. In addition, Cole used emotion-focused and problem-focused coping strategies as defense mechanisms. The movie also portrayed an interesting physiological component of emotions—body temperature.

Cole had a tough life in Philadelphia. His parents were divorced, and his mother worked two jobs to support them. Cole's only support system was his mother. He had no friends, and he was hard on himself.

The stages of acceptance of death were not in the order delineated by Kubler-Ross, except for acceptance as the final stage (Kubler-Ross, 1969). Denial was the first stage he encountered. Cole hid in churches and in a self-made tent that protected him from the ghosts trying to contact him. He closed his eyes and pretended they did not exist.

The anger stage was apparent when people stared at Cole. He made the comment that it was not nice to stare. When people gawked at him, he believed people thought he was a freak. In one incident, when his teacher stared at him, he began to yell, calling his teacher "stuttering Stanley" (Marshall & Shyamalan, 1999). Cole also displayed anger in free association writing. Freud developed this technique to help patients uncover forgotten memories (Hockenbury, 2000). Cole used it to vent anger.

Cole gave the impression he was depressed. His occasional smiles came when his mother lifted his spirits, but Cole's situation did not improve. He maintained a melancholy look. Cole bargained at only one time in the film. Crowe asked Cole that if he could have one thing what would it be. Instead of asking for something, Cole asked if he could not have something. Cole said he did not want to be afraid anymore.

Acceptance occurred at the end of the film when Cole realized, with the help of Crowe, that the souls tormenting him were in need of his help. Cole accepted a mediator role and was no longer afraid of the dead people.

Cole was placed in situations that demanded stress reducers. He used emotion-focused and problem-focused coping strategies to help reduce anxiety. Cole had little or no control over the ghosts interacting with him. He attempted the escape-avoidance strategy by hiding in churches and in his self-made tent church at home. These strategies were only temporary escapes because he saw ghosts most of the time. Avoidance tactics can be helpful for stressors that are brief and have limited consequences but tend to be counter-productive when the stressor is severe or long lasting. These strategies can also cause symptoms of depression and anxiety (Stanton & Snider, 1993).

Crowe helped Cole by using planful problem solving. Crowe analyzed the situation, identified potential solutions, and implemented them. In the end, Crowe's advice to Cole was that he had to talk to the dead people. Cole talked to them and discovered that they only wanted this help. After Cole realized his purpose, his stress decreased.

Physiological components studied by Levenson (1990) showed that body temperature rose when participants were angry. In the movie, temperature change was the opposite for ghosts. When a ghost became angry, the immediate area became so chilly it made human breath visible. Other studies by Levenson (1990) showed a lower body temperature when participants were afraid. This lowering of Cole's body temperature, when he was afraid, explained his constant wearing of sweaters, coats, and gloves.

The Sixth Sense furnished the viewer with an unexpected ending. While watching the film, the viewer saw Cole's problems and understood how Crowe helped him. Not until the end of the movie does the viewer realize that Crowe was not Cole's therapist but actually a ghost. As Cole stated in the movie, we see what we want to see; one needs to take a step back and look at the whole picture before making judgments.

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Parental Notification Laws Benefit Minors Seeking Abortions

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With each birthday, a child grows a year closer to becoming an adult. Along the way, he/she is given more responsibilities and privileges. At 16 years old, teens can be licensed to drive a car; at 18 years of age, they can vote; and at 21 years old, they can legally buy and consume alcohol. These events are the beginnings of a child's entrance to adulthood and making adult decisions. Children are making adult choices earlier and earlier. By choosing to become sexually active at a younger age, children are placing themselves at a greater risk for pregnancy.

Each year in the United States, about one million adolescents become pregnant (Francoeur, 1996). The majority of these, 85%, are unplanned (Griffin-Carlson & Schwanenflugel, 1998), which leads many of these minors to seek abortions. Minors often view an abortion as the easiest solution to unwanted pregnancies (Griffin-Carlson & Schwanenflugel, 1998). What is most shocking is the number of girls who do not involve their parents in these decisions. One study found that almost 40% of 1,500 pregnant adolescents surveyed did not inform one or both parents about their intended abortion (Altman-Palm & Treblay, 1998).

When any woman becomes pregnant, she is faced with life-altering decisions. For a young girl, these difficulties are multiplied by her physical, emotional, and financial status (Hayhurst, 1997). Major decisions that minors make needs to be carefully considered. In an attempt to protect these children, several states have imposed parental notification/consent laws. Within each state, these laws vary from requiring parental consent, parental notification, or no parental involvement at all. Seeking parental guidance can help promote maternal health as well as protect the best interest of the minors (Focus on family and Family Research Council, 1990).

An abortion is a very invasive and risky procedure for women. Tharaux-Deneux, Buoyer, Job-Spira, Coste, and Spira (1998) found that women who have had an abortion are at greater risk for an ectopic pregnancy. Furthermore, according to Cates, Schulz, and Grimes, (1983), the anatomy of a minor has not fully developed and can be easily damaged upon dilation. Their studies showed that teenage mothers were more prone to cervical damage. Difficulties resulting from abortions are not limited to affecting their mothers, but can also severely affect future pregnancies (Tharaux-Deneux et al., 1998). These conditions are major problems for minors. Abortions have been connected to sterility and premature and retarded births in subsequent pregnancies that are carried to term (Green & Poteteiger, 1978).

More damaging than physical complications are psychological and emotional harms. An abortion can be a traumatic experience for an adult woman; a minor is even more at risk for psychological problems (Griffin-Carlson & Schwanenflugel, 1998). Minors who have had an abortion seem to experience more long-term unhealthy results. "Compared with adults, adolescents appear to have somewhat more negative responses on the average following abortion" (Melton, 1986, p. 84). Adverse effects can include depression and isolation, which in some, can lead to suicide attempts (Focus on family and Family Research Council, 1990, p. 177). Having a support network is crucial for minors. Indeed in Minnesota, one of the purposes of the notification statute is to promote a strong parent-child relationship and aid the minor in making these traumatic decisions (Joseph, 1992).

Parental notification laws were enacted to preserve the best interest of the minor. The Revised Act, Montana Code Ann. § 50-20-202(2) states that the purpose of parental notification is to (a) protect the minors from their own immaturity, (b) promote family unity and values, (c) protect the constitutional rights of the parents to raise their children, (d) reduce teenage pregnancies and unnecessary abortions (Hayhurst, 1997).

Each state has set its own statutes regarding a minor seeking an abortion. Some states require parental consent or parental notification, whereas some states have no requirements. By setting such statutes, states hope to help minors make the best decision for them. By being required to notify her parents, she can gain the support of her family. In sharing her situation with her parents, she can obtain help to dispel her apprehensions. Initially, many adolescents fear their parents' reactions and feel that they will be rejected (Francoeur, 1996; Griffin-Carlson & Schwanenflugel, 1998). Research results reveal that almost two-thirds of parents were very supportive of the situation (Francoeur, 1996, Griffin-Carlson & Schwanenflugel, 1998).

Regression analyses have confirmed that parental involvement has reduced abortion rates. According to Haas-Wilson (1996), abortion rates in states that have parental notification laws are significantly lower than those without such mandates. In 1981, Massachusetts implemented a parental consent law. As soon as the law took effect, there was a sharp drop in the number of abortions among minors. In fact, following the first full month after the execution of the law, the abortion rate was the lowest in the state of any recorded month (Cartoof & Klerman, 1996). Many who oppose parental consent suggest that while states with parental notification laws may see a decrease in abortion rates, the surrounding states without such laws will see an increase. In Minnesota, the parental notification law lowered the state's abortion rates, but did not raise the rates of the nearby states (Altman-Palm & Treblay, 1998).

Not only have abortion rates decreased, but pregnancy rates have declined as well (Altman-Palm & Treblay, 1998). With the impending concern for having to inform their parents about a potential pregnancy, minors are opting to take increased precautions to avoid pregnancy (Altman-Palm & Treblay, 1998; Grifffin-Carlson & Schwanenflugel, 1998).

As evidenced by the thousands of minors becoming pregnant and opting to abort their babies, this issue needs to be addressed. To protect the interests of minors, states have enacted laws that require parental notification or parental consent. The decision to abort a baby is not an easy one. It needs to be thought out carefully and rationally. Many adults tussle with such decisions. The decision to have an abortion may come back to haunt the person. For a minor, this decision may be even more risky and dangerous. With a lack of physical and emotional maturity, a child who obtains an abortion is at great risk for health problems. Lack of support may compound the problem.

This issue is not a question of a minor's right to an abortion. It is not a debate between pro-life or pro-choice. States are not trying to take away constitutional rights of pregnant adolescents. Instead, they are trying to do what is best for the minor. The issue is about protecting minors and helping them make the best decision for themselves.

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The Fallacy of Parental Notification Law Benefits

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Abortion is a prevalent issue in society. Every year in the United States, one million adolescents become pregnant, and this number is equivalent to 12% of all women between the ages of 15 and 19 years of age. Of these one million pregnancies, 85% are unplanned (Griffin-Carlson & Schwanenflugel, 1998). Because of these statistics, one facet of the abortion issue that has been the subject of many debates in recent years is the issue of parental notification laws. Thirty-six states have some form of parental notification laws in effect (Griffin-Carlson & Schwanenflugel, 1998). Opponents of parental notification laws argue that such laws are unnecessary, are inconsistent with the legal trend, and may lead to greater health risks for minors.

Parental notification laws appear to be unnecessary with respect to promoting communication between pregnant adolescents and their parents. Most adolescents involve their parents in their pregnancies regardless of the presence or absence of parental involvement laws. In support of this notion, Griffin-Carlson and Schwanenflugel (1998) stated that daughters inform 45% of parents who were aware of their daughters' pending abortions. A survey of 1500 teenage girls, who had abortions in states with no parental involvement laws, revealed that 61% of the girls informed their parents about the abortion before it occurred (Francoeur, 1996). Furthermore, 90% of the girls in the survey, who were 14 years-old or younger, talked to their parents about the abortion before it took place (Francoeur, 1996). Similarly, Limber (1992) found that 71% of adolescent girls reported that they would consult their mothers about abortion.

Parental notification laws also seem to be unnecessary with respect to the covert attempt to reduce the number of abortions. In fact, such laws do not always lower the abortion rate. To test this idea, Joyce and Kaestner (1996) gathered data on birth and abortion rates in South Carolina, Tennessee, and Virginia. Data from Virginia was used as a control. Data was collected for unmarried teenage girls who were 18 years old or younger in Tennessee as well as those who were 17 years old or younger in South Carolina. Joyce and Kaestner (1996) identified a 10% decrease in the probability of having an abortion among 16-year-old non-black minors from South Carolina. Nevertheless, more than 30% of these 16-year-old non-black minors traveled out of state to obtain an abortion (Joyce & Kaestner, 1996).

A similar rise in out of state travel to obtain abortions has been noted in other states. When a parental involvement law took effect in Missouri, interstate travel among minors to obtain abortions increased by more than 50% (Ellertson, 1997). In Massachusetts, law requires the consent of both parents before a minor can receive an abortion. Avallone (1990) reviewed data from Massachusetts and found that one third of minors, who wanted an abortion in that state, traveled to nearby states to obtain one. Indeed, the decrease in the number of abortions performed on minors in Massachusetts is accounted for in the increase in the number of abortions performed on minors from Massachusetts in the six states surrounding it. Clearly, parental notification laws may not be effective in reducing abortions because the decline in abortions can be accounted for by a corresponding increase in the amount of travel to obtain an abortion in nearby states without such laws.

Beyond being unnecessary, parental notification laws are inconsistent with the current legal trend. In 1967, a Supreme Court decision held that "minors have a constitutional right to privacy that includes the right to obtain contraceptives and the right to decide to terminate an unwanted pregnancy" (Donovan, 1992, p. 6-7). Because of this decision, minors have gained increased freedom. Most states give minors the freedom to consent to treatment for sexually transmitted diseases without parental involvement. Twenty-seven states allow a pregnant minor to receive prenatal care and delivery aid without asking her parents. In 21 states, minors can obtain general nonemergency medical care without their parents' knowledge or permission. Furthermore, 16-year-olds can drop out of school without their parents' involvement or approval in 34 states, and 17-year-olds can do the same in 8 additional states. Moreover, 46 states allow a minor, who becomes a mother, to put her child up for adoption without the knowledge or permission of the infant's grandparents (Donovan, 1992).

This evidence of an increasing amount of freedom granted to minors affirms the legal system view that minors are capable of making potentially life-altering decisions on their own. As stated above, minors are allowed to consent to treatment for sexually transmitted diseases. These diseases, if left untreated, could "lead to cancer, infertility, pelvic inflammatory disease, ectopic pregnancy, and death" (Donovan, 1992, p. 11). These circumstances are potentially life-changing. Both the decisions to drop out of school and to put a baby up for adoption have potentially life-altering consequences. In fact, in most cases, the decision to place a baby for adoption is an irrevocable one, much like abortion. If a female minor is mature enough according to the legal system to have the right to make independent and potentially life-changing decisions, then thinking that she should not be mature enough to decide to terminate her own pregnancy is counterintuitive.

The legal system provides minors with a way to prove that they are mature enough to terminate their pregnancies. This legal option makes the maturity of a minor seem slightly irrelevant when one thinks about the benefit of parental notification laws in relationship to minors. Almost all of the 36 states that had some form of parental involvement laws in effect as of 1998 have some form of a judicial bypass option incorporated into their laws. This option allows a minor to obtain permission from a judge to have an abortion without talking to her parents. The judge can grant permission for an abortion if he or she believes that the minor is mature enough or if an abortion is believed to be in the minor's best interests (Donovan, 1992). So, the claim that a minor needs her parents to help her make a mature decision about her pregnancy is irrelevant because a minor can circumvent her parents and go to a judge to prove she is mature enough to have an abortion.

The judicial bypass option seems to be effective. During the first year that a parental consent laws was in effect in Massachusetts, judges saw 647 pregnant teens, and all of these girls were granted permission for an abortion (Avallone, 1990). In Minnesota, of the girls who were deemed immature, almost all of them still were given permission by a judge to have an abortion. In each case, an abortion was believed to be in the minor's best interests (Melton, 1987).

However, if a minor must wait to obtain a judicial bypass to have an abortion, she may be facing greater health risks. Because many courtrooms are only open during the hours in which a minor attends school, she may be forced to delay her attempt to receive judicial bypass. In Massachusetts minors must wait an average of 4.5 days after they contact an attorney before their cases can be heard. Sometimes, they have to wait up to two weeks. Furthermore, some minors delay contacting a health clinic because they are anxious about the judicial bypass proceedings (Melton, 1987). This delay can contribute to serious health consequences including an increasing risk of second trimester abortions. According to Griffin-Carlson and Schwanenflugel (1998), second trimester abortions are more harmful because they are more complicated and associated with higher incidences of death.

Parental notification laws do not benefit minors because the laws are unnecessary, they are inconsistent with the legal trend, and they subject minors to greater health risks. Contrary to the beliefs of proponents of such laws, parental notification laws may not be necessary for promoting communication between adolescents and their parents, and they may not be an effective means for reducing abortion rates. Also, the legal system affirms that minors are mature enough to make important decisions on their own and to prove their maturity to a judge. Furthermore, parental notification laws may force minors to face more serious health risks than they would incur if they were able to decide to terminate their pregnancies independently. One alternative to parental notification laws may be to require a minor who thinks she might be pregnant to receive counseling about her options. Just as minors need to be better educated about their choices and consequences, the public needs to become more educated about the issue of parental notification before the debate can be settled.

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Psychologically Speaking: An Interview with Margaret Matlin

Jerry Bockoven, Dee Dee Bowers, Merle Riepe, and Ashley Schellpeper

Nebraska Wesleyan University Lincoln Southeast High School Nebraska Wesleyan University Lincoln Southeast High School

Margaret W. Matlin received a bachelor's degree from Stanford University and a PhD from the University of Michigan. She currently holds the title of Distinguished Teaching Professor of Psychology at SUNY Geneseo, where she has taught courses such as introductory psychology, cognitive psychology, psychology of women, child psychology, sensation and perception, and experimental psychology for 29 years.

Dr. Matlin is the author of four current textbooks, Psychology (1999), The psychology of women (2000), Cognition (2001), and Sensation and perception (Matlin & Foley, 1997). She has also won a state-level teaching award, the State University of New York Chancellor's Award for Excellence in Teaching (1977), and two national awards, the American Psychological Association Teaching of Psychology Award for four-year institutions (1985), and the American Psychological Foundation's Distinguished Teaching in Psychology Award (1995). Under the auspices of the Educational Testing Service, she currently chairs the committee that develops the Psychology Graduate Record Examination.

Dr. Matlin visited Nebraska Wesleyan University (NWU) in Lincoln, NE during October of 2000. She was the keynote speaker for the Fawl Lecture Series in Psychology. Two Lincoln Southeast High School students, Ashley Schellpepper and DeeDee Bowers, coordinated with Merle Riepe, a Nebraska Wesleyan psychology major, to conduct the interview. Dr. Mark Ware, a professor of psychology at Creighton University in Omaha, NE was also in attendance. Dr. Jerry Bockoven, assistant professor of psychology at Nebraska Wesleyan University, hosted Dr. Matlin during her visit at NWU and coordinated the writing of the interview.

The Value of Undergraduate Research

Interviewer: The *Journal of Psychological Inquiry* (*JPI*) promotes the value of undergraduate research. What was your experience with research when you were an undergraduate?

Matlin: That's how I got started in psychology, with research. I was a confirmed biology major and that was all I was interested in. Then I took an introductory psychology class that required students to be participants in five different studies. After I was done, I thought it was the most fun I ever had. Then it occurred to me that it would be even more fun to design a study myself.

For me, research was a natural way to go. My father is a research geologist and actually fairly famous in the field of geology. When I was an undergraduate at Stanford, my professor and advisor, Dr. Leonard Horowitz, was interested in the area of memory. I can't remember how I did it, but I got up the courage to go to him and ask, "Do you have any research that I could do with you?" and he said that he did. So, we started working together on some of his research projects, and I was the co-author for two of these publications [Horowitz, Day, Light, & White, 1968; Horowitz, White, & Atwood, 1968]. What was exciting was that I could participate in *understanding* research.

There was a defining moment for me, after I had been doing research with him for about a year. He approached me and said "Come on in here and sit down. I just read an article I want to talk to you about." I thought, "Here's this famous professor talking to me about his research. Maybe I should be going to graduate school." The fact that he thought I was worth listening to really influenced me.

Backing up a little bit, I had actually done research in biology as well. My high school biology teacher—Dr. Harry K. Wong—had been enthusiastic about student research, and he encouraged me to apply for a job at Stanford Research Institute in biopsychology. Although I was basically a rat runner, the research we did was on the interface

Author names are listed alphabetically. Additions by the authors appear in brackets. We would like to thank Dr. Margaret Matlin for her comments on a previous draft of the article. We also thank Dr. Mary Beth Ahlum and Dr. Mark Ware for editorial comments.

between biology and psychology. We would inject the rats with psychotropic drugs, and see how far they could run, or swim, or whatever we were studying at the time. It was fun, although it was a little more biological than I really preferred. Then I got into memory research, and I thought, "This is it, I'm there, all right!"

Interviewer: What is the value of becoming involved in research as an undergraduate?

Matlin: I think it's a great way to help students understand whether they want to go in the direction of psychology, just as some of the people who have been interviewed in previous issues of *JPI* have noted [Littrell, Schmidt, & Ahlum, 2000; Miller & Ware, 1999]. I also think it's important because students can say, "Oh, the things we read about in our textbook aren't just something that someone made up. Somebody actually had to design a study, collect the data, interpret the data, write the article, and send it in for review." Students who have involved themselves in research can understand this process so much more clearly. The problem is that we don't always have an adequate supply of time and resources to allow all the qualified students to have this experience, and some don't get to do research as much as they perhaps should.

I think it's absolutely essential, however, that students have some exposure to doing research …

I think it's absolutely essential, however, that students have some exposure to doing research—perhaps in a research methods course—to get a sense of the process. Then they are better able to ask if this is something they like, or something they don't like. Is it something where, after they have done their research during the day, they lie awake at night and say "Now, why isn't this working out according to the hypothesis?" That gives them a sense of curiosity and a way of evaluating whether or not this is how they want to spend their life. Research is looking at psychology and trying to figure out the answers.

Research is also a great way to receive guidance from faculty members. At most schools, undergraduates might be included by their professors as research participants, perhaps as one of the testers, or as a junior member of the research team. Usually the research would be on the professor's choice of a topic, rather than the student's. Still, it gives students a sense for what they will be doing if they go on to psychology graduate programs. So, an ideal situation is where you've got an energetic faculty member who can incorporate a student's help and views in a research situation.

Interviewer: Many undergraduates who study psychology move on to the world of work after they graduate, rather than pursuing an advanced degree. How would you respond to those who say research isn't important unless you're going to graduate school?

Matlin: I just wrote a letter of recommendation for a student who was hired to do research with farm workers. After she graduated, she took a job with one of those domestic groups—AmeriCorps—which is like a U.S.-based version of the Peace Corps. She didn't want to go to graduate school right after college. However, she ended up doing survey research to answer important questions about the farmworkers with whom she was working. Hey, that's research she's doing and it isn't in graduate school!

Or, take the example of a student who is interested in biopsychology but doesn't immediately go to graduate school. This person might find a job working for some insurance company and say, "I wonder if the people here are really happy with their jobs, or if an incentive plan would improve the organization." With a background in research, that person would have a good idea about how to conduct a study of these questions and how to understand the results.

Another example would be teaching in elementary school. If a supervisor says to a teacher, "Large classes will help kids learn better," the teacher who understands research would have something effective to fight with. He or she could search for the relevant research and say to the supervisor, "But these three studies say that students do worse in large classes." So to me, research is an important skill no matter what you do after graduation.

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Matlin's Personal Journey

Interviewer: How did you go from doing research to teaching and writing textbooks?

Matlin: I did the first two years of my doctoral work in Michigan during the Vietnam era. In those two years, I never taught a course, never took a class in teaching, and never even thought that I might want to be a teacher. I wanted to do research. Then my husband was drafted, and we were sent to New York City, so I had to leave Michigan. We ultimately settled in the Rochester area where I got a job at SUNY Geneseo as a professor with an interest in memory research.

Initially I disliked teaching. It was not fun, and I was not good at it.

Initially I disliked teaching. It was not fun, and I was not good at it. I still thought of myself as a researcher, and eventually I co-authored a book (not a textbook) called *The Pollyanna Principle* [Matlin & Stang, 1978]. Through that experience, I learned that I loved to write. Around the same time, I was feeling more comfortable with teaching and actually found myself beginning to think it was fun. Then teaching and writing came together in my mind, and I realized that I could write for the students in my classes.

Then I realized that I could teach students—with a textbook—I had never met. That idea was what really got me into thinking about textbooks. I could write a textbook on, for example, cognitive psychology [Matlin, 2001] or an introduction to psychology [Matlin, 1999], and someone would come up to me in California and say, "Oh, I used your textbook." For me, having experiences like that is the real fun of writing.

So how did research get me into writing textbooks? In an indirect way, it got me into an institution where I could continue to do research and at the same time discover that I really like to teach. It's not the way everybody ends up getting there, but it was an effective way of leading me into something that I really feel passionate about.

Interviewer: What motivated you to do research on gender issues?

Matlin: As a teacher, I began to develop an interest in gender issues after teaching classes on the psychology of women. Because of time constraints, I was able to do a bit of research on gender stereotypes [Rabe & Matlin, 1978; Matlin, 1989]. However, I've mostly been involved in writing about other people's research in this area [Matlin, 2000].

Gender Polarization

Interviewer: How did you come to use the concept of gender polarization?

Matlin: Gender polarization is the idea that people tend to think of the female and male genders as being different from each other, when in reality they're fairly similar. For example, research suggests that men are generally better than women on mental rotation tasks. (On these tasks, you look at a sketch of a 3-dimensional geometric figure, and you try to mentally rotate this figure, maybe rotate it 180 degrees.) When you look at the actual raw data on gender comparisons in mental rotation, you see there is really a huge overlap. In other words, men and women get very similar scores on tests that measure this ability. This overlap is true for most gender comparisons. Much of the time, however, we say "That can't be," so we push men over to this highly talented corner and women over to this highly untalented corner. But if you look around, you find considerable evidence for great overlap in test scores.

When people engage in gender polarization, they tend to ignore the overlaps of abilities displayed by men and women.

As a personal example, I happen to be better at mental rotation than my husband. He had trouble in organic chemistry because of this difficulty, whereas I can rotate things in my head quite well. When people engage in gender polarization, they tend to ignore the overlaps of abilities displayed by men and women. So they conclude that—because women aren't as good as men at spatial tasks—then women really wouldn't be good in architecture. It occurred to me that people represent something to themselves, in their mind, that is different than in reality. That kind of difference is what made me interested in gender polarization.

Interviewer: Does gender polarization effect how we think about and treat men as well?

Matlin: Oh yes! There are people in industries who say, "I would never let a man answer my phone because he just wouldn't have warmth in his voice." That's about stereotypes. In truth, there may be a small overall difference in the warmth with which people answer the phone. Women might be a little warmer in that area, but there is such an overlap that I would bet that the warmest of men would be much more successful answering the telephone than would the coldest of women.

The nursing profession is another example. If we measured the ability to provide good, hands-on, nursing care, we would most likely find that there is a tiny gender difference. Yet in our minds, we tend to focus on women who are really good at that skill and on men who are not. The most sensitive men, however, could do a very good job as a nurse. For example, I recently had minor surgery and was taken care of by a male nurse who was absolutely wonderful.

These stereotypes can change. In the state of New York, for example, half of all current medical students are women. With more women becoming physicians, our old ways of thinking will eventually give way under the weight of increasing examples that challenge them. I can't say that half of the nursing students in New York are men, but if our ideas about women can change, so can our ideas about men. That, however, may take another century.

Encounters With Gender Prejudice

Interviewer: Have you ever had personal encounters with gender prejudice related to the fact that you are a woman and to the fact that you have written in the area of gender differences?

Matlin: That's a very good question. One of the ironies about prejudice against women—or in fact minority groups of any sort—is that prejudice doesn't operate for people who are already reasonably successful.

When I was starting out, as a beginning professor, I remember sitting at a department meeting and expressing an idea. The guy next to me would say the same idea, and then everyone would say, "As George said…" Back then, because I was shy, I wouldn't speak up, but I would say to myself, "Wait, that was my idea. George just paraphrased what I said." Another time I was being interviewed for a job and was asked if salary mattered. Even though I had two small children at the time, I said no, because my husband was a doctor. I wouldn't say that now. The fact is, they wouldn't have asked that question of a man.

Gender prejudice is less likely to happen once people get to know you, or if you have a solid reputation, but it still operates. Sales representatives tell me they have heard male professors say they would not use my introductory psychology textbook (Matlin, 1999) because it was written by a woman. And that was in 1999!

Another place I have experienced some resistance is from some predominantly male institutions like The Citadel. If you recall, that was a school that recently became coeducational. For a couple of years, they used my introductory psychology textbook [Matlin, 1999] at The Citadel, which I thought was impressive. However, they complained that most of my examples were about women. I've got two daughters, and my pediatrician husband is in an essentially female-oriented profession. So I told the professors at The Citadel, "You know, I don't have any football examples because I don't know anything about it."

Although some people are still quite resistant, they are usually good about hiding their thoughts. In academia, I don't face gender prejudice that often. In other places, it is more prevalent. For example, an insurance salesman will call me by my first name, which I don't think is appropriate without my permission. For the most part, however, I personally encounter gender prejudice occasionally, but nothing too bad. When I do encounter it, I know I've got a good example to talk about in my psychology of women classes!

Interviewer: So how do you address these stereotypes when you see them now?

Matlin: I assess the situation and say, "Am I going to try to educate, or is this going to be antagonistic?" I try not to be confrontational, because that will give people another stereotype. A stereotype about certain kinds of women can be very strong. So if I were to somehow shriek about something, they would see me as an angry feminist, which would undo the cause. So I tell myself, "That really would not be diplomatic, and people would not learn from the experience."

At other times, however, you have to take a stand. You can't just let a remark pass. I think that's important for students as well. One time when I was teaching psychology of women, I had the students write a quick paragraph on what they did that was different after taking my course. There was one male student in the class, who wrote something so poignant that I remember it very clearly. He said, "Well, here's what I do differently. When I'm with my fraternity brothers, and someone mentions a joke about rape, I say, 'Rape hurts women and we really shouldn't be joking about it.' " I got tears in my eyes when I read that and thought, "Here's someone who's learned, and his fraternity brothers will learn something from that as well."

The Normative Male

Interviewer: In your writings, you talk about the "normative male" [Matlin, 2000]. What is this concept about, and how does it develop?

Matlin: If you think about when you went through school, many of your teachers probably said "he" to refer to both men and women. When psychologists do research, they see a problem with this type of language. When we use the word "he," we construct the image of a man, rather than a woman. The same thing happens in history classes. There are many good things women were doing along the pioneer trail, but it's not in the books. When you took high school English, you probably did not read many books by women. I had a student do a project on that topic in English classes in New York State. She found that there were only two female authors who were commonly read, compared to the majority of assigned readings, which were written by men. These experiences make us think that men are the norm and women are somehow less important. That's the concept of the normative male.

These experiences make us think that men are the norm and women are somehow less important.

There are many other places where the normative male appears. For example, the recent data suggest that 90% of voiceovers in television commercials are male voices. This experience creates the tendency for us to think of experts as men, not women, because those are the voices we most frequently hear in that role.

Interviewer: Does that type of bias extend to other aspects of our thinking?

Matlin: It really does! One of the benefits of gender research is that it can encourage us to think about other characteristics that are prone to the same kind of biased thinking. When we hear the word "student," we tend to think of an American student, not a non-American one. When we think about love relationships, we tend to think about heterosexual relationships, not gay and lesbian ones. Those biased tendencies contribute to our ideas about what is standard and what "counts." If we examine our biases more closely, however, we can adjust for them. For example, a friend of mine is an editor for medical journals. One of the articles she was reading on newborns referred to "the normal pink skin of a newborn." And she thought, "Whoa, that's not true for everybody. How about African American newborns?" So sometimes thinking about gender bias also encourages us to think about other kinds of bias.

Media Influence and Bias

Interviewer: Do you believe that the media have played a part in these biased perceptions and expectations?

Matlin: The influence of the media interacts with the way we think and bias can be formed out of that combination. The media set up our ideas of what is standard. Then our cognitive processes go to work creating simple, separate categories. We like our categories to be simple. We like women to be on this side and men to be on that side. We like to have two categories. This phenomenon also applies to other categories, such as colors. We like to call things "blue" or "green" but not bluish-green. We like to push concepts apart and make categories that are really strong. That's perhaps more true with gender than with color, because gender is so social.

Our cognitive processes also create a tendency to focus on things that match with our stereotypes. When the media shows something that doesn't match, we get upset. In my state (New York), Hillary Clinton's bid for the Senate was a good example. Because she didn't match people's expectations for what a person running for Senate should be, she was given quite a hard time.

So the media have a role in the creation of bias.

However, our cognitive tendencies to keep concepts simple—and to prefer things consistent with our stereotypes—also play a large part. These tendencies are hard to change. However, once you know about them, you can work to adjust for them in your own thinking. That process can provide a buffer against negative media influences.

Interviewer: Why do the media tend to overrepresent some types of people (e.g. slim female models, Whites, etc.) and underrepresent others?

Matlin: Media research is based on what sells, but I'm not sure it's very good research. For instance, they say "The one time we tried an ad with an overweight woman, it didn't work." This supports an idea that is a common theme in advertising. The theory is that viewers like to see slim, beautiful people because they can then see themselves as slim and beautiful. In other words, media researchers believe we are more influenced by attractive-looking people.

Personally, I like seeing people who look like real folks. If I see an ad with a real-looking person using Bisquick, I think I could use Bisquick, too. In contrast, if I see a thin looking model using Bisquick, I say "She doesn't look anything like someone with whom I would have much in common." So the theory that suggests people are influenced by attractive models is at odds with research suggesting we are more influenced by people most like ourselves. But the advertising world thinks, "Let's go with the data about anorexic models." So, the advertisers end up representing a skewed view of reality.

Occasionally, however, advertisers pick up on a more realistic approach. *Seventeen* magazine once said they would never have a Black woman on their cover. When they tried it one time, however, that issue sold more copies than any previous issues did. Looking at the media as a whole, ethnicity has come to be rather well represented. Blacks are portrayed in media ads in accordance with their presence in the U.S. population. Other ethnic groups, such as Hispanics, are not proportionately represented. Clearly we have progressed, but we still have a way to go.

Toward The Future

Interviewer: As a final question, I'd like to ask whether you see negative stereotypes improving in the future?

Matlin: I think stereotypes are changing and will continue to change, but the process is a slow one. I sometimes see an ad on television or in the newspaper that encourages me, which is something we all need. If all we say is, "Stereotypes are awful, and they are never going to get better," then we stop working for change. But if we keep encouraged, the process of change, which includes all of us, continues to move forward.

In my lectures, I show an ad of a wonderful elderly man and woman sitting in a meadow and looking very much in love. It's a "Kodak moment," which is great, because it reminds us to go past our stereotypes and tell ourselves that elderly men and women can be in love and enjoy each other's company. Some college students courageously work against attitudes that say improving the world is somehow a bad thing. We are all a part of the process of change in our own way, whether personally or politically.

So I think stereotypes are changing. It's quiet at times and awfully slow, but it's changing. If you asked me, "When are we going to get a woman president?" I would say, "Probably not in my lifetime, but someday." Change moves a lot slower than we might like but we've got to have hope. We need to say, "We've all got some work to do."

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Notes:

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 current issue (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 this Special Features section is August 1, 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. R. L. Miller
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. 40-52) 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 this Special Features section is August 1, 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. R. L. Miller
Department of Psychology
University of Nebraska at Kearney
Kearney, NE 68849