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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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Instructions for Contributors

The *Journal of Psychological Inquiry* encourages undergraduate students to submit manuscripts for consideration. Manuscripts may include empirical studies, literature reviews, and historical articles; manuscripts may cover any topical area in the psychological sciences. Write the manuscript for a reading audience versus a listening or viewing audience.

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

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

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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Effects of Mental Imagery, Physical Practice, and Achievement Motivation on Sport Performance

Melissa J. Frahm
Wayne State College

Physical practice and mental imagery improved performance of a sporting task (Weinberg, 1982); high achievement motivation increased mental imagery success and improved sport performance (DeCharms, Morrison, Reitman, & McClelland, 1955). Participants in two experiments were tested for the effects of practice and mental imagery on putting golf balls. The effect of achievement motivation for the same task was tested in the second experiment. Results showed significant improvement in performance for all participants following practice. Participants with high achievement motivation showed the greatest improvement in performance. No significant difference in performance was found among participants with mental imagery training. The conclusion was that physical practice and high achievement motivation significantly improved performance.

Mental imagery or mental practice consisting solely of cognitive rehearsal of a task or skill prior to its performance can improve sport performance (Driskell, Copper, & Moran, 1994). Physical practice, however, is almost always found to be superior to mental imagery or no practice (Driskell et al.; Feltz & Landers, 1983; Kendall, Hrycaiko, Martin, & Kendall, 1990; Weinberg, 1982).

Driskell et al.'s (1994) narrative review examined the effects of mental rehearsal on playing tennis and volleyball and throwing darts. The typical mental practice condition involved participants sitting quietly and picturing themselves successfully performing the task. The authors concluded that mental practice sessions of approximately 20 min were most beneficial, positive effects of mental practice declined over time (e.g., improvement declined by approximately one-half after 14 days), and the benefit was stronger for tasks involving a greater cognitive element (e.g., maze-trecking). Novice participants benefited more from mental practice on cognitive tasks than on physical tasks. Driskell et al. (1994) and Suinn (1993) concluded that experienced athletes benefited more than novice athletes when mental practice was paired with a physical task because experienced athletes had already learned the required motor skills.

Kendall et al. (1990) suggested that coupling relaxation with mental practice positively affects performance because relaxation enhances the clarity of the mental image. They investigated the effects of a mental training package, including relaxation and imagery, on performance of a defensive skill among college basketball players. Four perimeter players were assessed for their defensive ability in the skill of "cutting off the baseline." This skill included getting in front of and stopping the dribble of an offensive player who planned to shoot the ball from the baseline. The intervention phase, which included imagery, relaxation, and self-talk, was introduced to each of four participants throughout several five-day periods preceding a subsequent assessment. Level of performance improved approximately 20% from the first assessment. Imagery was most effective when the four players reported that their images were very vivid (Kendall et al.).

Shick (1970) tested the effects of mental and physical preparation on volleyball serving and overhand wall volley (i. e., performed by putting both hands above the forehead with palms facing upwards and repeatedly bouncing the ball from hands to the wall) during college volleyball classes. One study compared no practice with 3-min mental practice of each skill daily for two weeks. Serving consistency increased significantly with daily mental practice. Two additional studies tested physical practice with 1-min or 3-min daily mental practice sessions. The studies lasted five weeks and three weeks, respectively. As with findings from the first study that lasted two weeks, serving consistency increased significantly with 3-min mental practice for three weeks. No significant differences were found for groups that performed 1-min mental imagery or for the overhand wall volley.

One factor influencing mental imagery is achievement behaviors (Driskell et al., 1994; Weinberg, 1982), such as conceptualizing successful performance of a task, adapting to situations, developing coping strategies, and showing persistence at a task (Mehrabian, 1994-1995; Weinberg, 1982). These achievement behaviors, in turn,

Gloria Lawrence from Wayne State College was faculty sponsor for this research project. Instructions and scripts used in Experiment 2 can be obtained by contacting the author. Correspondence concerning this article should be addressed to Melissa J. Frahm-Templar, Department of Kinesiology, Kansas State University, 8 Natatorium, Manhattan, KS, 66506. Electronic mail may be sent to melfrahmtemplar@yahoo.com.

are affected by an individual's motivation level (Roberts, 1993).

Investigators have conducted most achievement motivation research in academic settings where high achievement motivation is associated with internalized standards of excellence and superior performance in task situations (DeCharms et al., 1955). However, achievement motivation research could be applied to athletic situations because they, too, are based on internalized standards of excellence (Corbin, 1972; Duda, 1993; Richardson, 1967a, 1967b; Shelton & Mahoney, 1978; Suinn, 1972a, 1972b, 1976).

There are several measures for assessing achievement motivation, including the Thematic Apperception Test, Need-Achievement measure (McClelland, Atkinson, Clark, & Lowell, 1953) and the Test Anxiety Questionnaire (Mandler & Sarason, 1952). Mehrabian and Bank (as cited in Mehrabian, 1994-1995) reported that the Mehrabian Achieving Tendency Scale (Mehrabian, 1968) has also been used to measure achievement motivation.

Results of previous research (Driskell et al., 1994; Kelsey, 1961) support the conclusion that physical practice and mental imagery improve sport performance, but the effects of achievement motivation on sport performance are unclear (Corbin, 1972; Duda, 1993; Richardson, 1967a, 1967b; Shelton & Mahoney, 1978; Suinn, 1972a, 1972b, 1976). Thus, the purpose of the present study was to examine the effects of mental imagery, physical practice, and achievement motivation on performance of a golf putting task. Two experiments involving golf putting were conducted. The hypothesis for Experiment 1 was that participants who performed mental and physical practice would improve putting performance significantly more than those who performed physical practice alone. Experiment 2's hypotheses were that participants with high achievement motivation would outperform participants with low achievement motivation and those who mentally and physically practiced would outperform those who only physically practiced.

Experiment 1

Method

Participants. Participants were 34 undergraduate students, 15 men and 19 women, enrolled in general psychology courses at Wayne State College. Volunteer participants received extra credit points. Participants were novice golfers who rated their overall prior golfing experience as 3 on a scale from 1 (never played golf) to 10 (frequent golfer).

Materials. One golfing putter (Pro Only) and one golf ball (Titleist) were used. I designed a guided imagery script that instructed participants to close their eyes, relax, and picture themselves performing perfect putts (see Appendix A). The imagery script was based on a composite of instructions as cited in Weinberg (1982). I also designed a questionnaire rating the clearness, vividness, reality, intensity, and detailedness of the images, degree of focus during imagery, and degree of attention during imagery. The questionnaire included an open-ended question identifying the person or persons that participants envisioned in their images. The questionnaire was used to determine whether participants formed mental images according to the imagery script.

Procedure. Individual sessions lasted approximately 30 min. After signing an informed consent form, all participants attempted five, 6-ft golf putts, and the number of successful putts was recorded. Participants were then randomly assigned to one of two groups. The imagery group participated in 5 min of guided mental imagery, followed by 5 min of physical practice, and then 5 min of rest. The imagery script was read to participants for 5 min. The no-imagery group practiced putting for 5 min and then rested for 5 min. Each participant then attempted five additional 6-ft putts; the number of successful putts was again recorded. The independent variable was type of group (imagery/no imagery); the dependent variable was the number of successful putts.

Following the experiment, the imagery group completed a questionnaire evaluating the images they used. Participants were then debriefed.

Results

The total number of putts in the pre-test and post-test conditions were recorded for both groups. A 2 (pre/post-test) x 2 (imagery/No imagery) mixed design analysis of variance (ANOVA) was performed. Results showed a significant difference between the pre-test (M = .89, SD = .89) and post-test (M = 1.6, SD = 1.18) conditions, F (1, 32) = 9.14, $p < .01$. No significant differences were found between the imagery (M = 1.3) and no-imagery (M = 1.2) groups, F (1, 32) = .32, $p > .05$, nor for the interaction F (1, 32) = .13, $p > .05$. Imagery characteristics (e.g., clearness and vividness) rated by participants indicated moderate mean scores (M = 3.09, SD = .40).

Experiment 2

Experiment 2 addressed several questions. First, would putting performance improve after expanding the training sessions of mental imagery from one to six sessions? Second, would participants' level of achievement motivation affect the success of mental imagery training and performance? Finally, would improvements to mental imagery instructions (e.g., tape recording the instructions for consistency and more specific directions) increase vividness of images, hence, increasing the effectiveness of mental imagery training? Thus, a 2 (imagery/no imagery) x 2 (high/low achievement motivation) design was used in Experiment 2. The hypotheses were that participants who participated in mental imagery sessions and physical practice would outperform those who participated in physical practice alone, and that participants with high achievement motivation levels who participated in extended imagery training would outperform participants with low achievement motivation.

Method

Participants. Participants were 28 undergraduate students, 11 men and 17 women, enrolled in lower-level psychology courses at Wayne State College. Volunteer participants received extra credit for participating. Participants in Experiment 2 did not participate in Experiment 1. As in Experiment 1, only novice golfers were used.

Materials. The Mehrabian Achieving Tendency Scale (MATS) was used to measure achievement motivation. The MATS has a high internal reliability coefficient of .91 (Mehrabian & Banks as cited in Mehrabian, 1994).

Experimental work has validated the MATS with numerous behaviors (e.g., superior performance in testing, at work, or at school; higher levels of aspiration, leadership, initiative; lower scores on fear of success). Thus, the MATS is a valid test, relatively free of response bias, showing consistent and representative findings (Mehrabian, 1994). Sample questionnaire items include "I believe that if I try hard enough, I will be able to reach my goals in life," "I only work as hard as I have to, "and "Constant work towards goals is not my idea of a rewarding life" (Mehrabian). One-half of the 36 items on the MATS are positively scored items, the others negatively scored. Questionnaire items are rated by participants on a scale from +4 (very strong agreement) to -4 (very strong disagreement) (Mehrabian). The total MATS score is the sum of the negatively worded items subtracted from the sum of the positively worded items (Mehrabian).

A portable caddie mat, one golfing putter (Pro Only), and 20 golf balls (Titleist) were used in Experiment 2. Imagery instructions were presented on cassette tapes. During each practice session, participants listened to two different tapes twice. The imagery instructions were more detailed than in Experiment 1, per Whiteley's (as cited in Richardson, 1967b) format. The format focuses in depth on imagining sensations experienced when performing a physical task. During imagery sessions, participants were instructed to close their eyes and relax, to picture themselves performing perfect putts, and to feel themselves going through the putting motions. Physical practice instructions were then read to participants.

During the first four physical practice sessions, participants were instructed to begin putting from a shorter distance and progressively move back to 6 ft; additional practice was performed only from 6 ft (For more detailed instructions regarding imagery and physical practice instructions, please contact the author). A questionnaire was used to measure characteristics of the images used by participants. Imagery characteristics on the questionnaire were the same as in Experiment 1; however, no open-ended question identified the person in the images.

Procedure. There was a pre-test session before the practice sessions. At the pre-test, participants signed an informed consent form and completed the MATS. Participants then attempted 20, 6-ft putts; the number of successful putts was recorded.

Participants were assigned to low or high achievement motivation groups based on their MATS score. A score below 59 on the MATS was used to classify participants with low achievement motivation, a score of 59 or above was used to classify participants with high achievement motivation (Mehrabian, 1994).

Participants were randomly assigned to the imagery or no imagery group. They met two days per week for three weeks in individual sessions. Thus, a total of six training sessions were held for each participant. Individuals in the imagery group participated in 10 min of guided tape-recorded imagery (mental practice) and 10 min of guided physical practice. Students in the no-imagery group participated in 10 min of guided physical practice and 10 min of free study time. After six practice sessions, participants from both groups performed a post-test of 20, 6-ft putts; the number of successful putts was recorded.

Members of the imagery group also completed a questionnaire evaluating the images they used throughout the weeks of mental practice. Participants were debriefed. Independent variables in Experiment 2 were mental

imagery (imagery/no imagery) and achievement motivation score (high/low); the dependent variable was number of successful putts.

Results

Mean MATS score for the group designated as high achievement motivation was 77.60 (SD = 15.21). For the group with low achievement motivation, the mean MATS score was 36.80 (SD = 19.61). A dependent groups t-test showed that groups performed significantly better in the post-test, t (27) = 10.34, $p < .001$.

Difference scores between the pre-test and post-test conditions were analyzed using a 2 (imagery/no imagery) x 2 (high/low achievement motivation) between-groups ANOVA. The high achievement motivation group (M = 7.9) improved its putting performance significantly more than the low achievement motivation group (M = 5.2), F (1, 24) = 4.59, $p < .05$. No significant differences were found between imagery groups , F (1,24) = .01, $p > .05$, nor for the interaction, F (1, 24) = .67, $p > .05$. Participants rated all characteristics of the images as moderate to somewhat high (M = 3.82) except degree of attention, which was rated somewhat high to very high (M = 4.08).

An independent groups t-test was conducted on the ratings of the imagery characteristics in Experiments 1 and 2. Results showed no significant differences in ratings, t (28) = 4.84, $p > .05$.

Discussion

In both experiments, all groups performed a significantly greater number of successful putts in the post-test than in the pre-test. Thus, physical practice significantly improved putting golf balls, supporting previous findings (Driskell et al., 1994; Feltz & Landers, 1983; Kendall et al., 1990; Weinberg, 1982).

In Experiment 2, the group with high achievement motivation made significantly more successful putts than the group with low achievement motivation, regardless of imagery training, which supported Hypothesis 2 of the present study. Practice may be even more effective for highly motivated participants than for low-motivated ones. Perhaps this is because the internalized standards of excellence (DeCharms et al., 1955) contribute to greater effort, thus leading to superior performance. Achievement motivation can, and should, be applied to sport performance as suggested by other investigators (Corbin, 1972; Duda, 1993; Richardson, 1967a, 1967b; Shelton & Mahoney, 1978; Suinn, 1972a, 1972b, 1976).

In neither experiment did performance improve following mental imagery training. Despite repeating mental imagery instructions in six sessions in Experiment 2, uniformity in imagery script presentation, and a revised imagery script (Whiteley as cited in Richardson, 1967b), mental imagery did not improve performance nor did participants' ratings of imagery characteristics increase. This finding supported Shick's observations (1970) that performance of the overhand wall volley in volleyball did not significantly improve after mental imagery training.

Results of both experiments may be explained by Driskell et al. (1994) and Suinn (1993) who proposed that experienced athletes benefited more from mental imagery training paired with physical practice than did novice athletes. Participants in both experiments were novice golfers. In addition, inadequate imagery effects may have been because of the insufficient amount of time spent in each imagery session. Shick (1970) found that only 3 min of daily mental practice significantly improved volleyball serving consistency. Imagery was performed for 5 min in Experiment 1, slightly longer than the time used by Shick (1970). Because no significant difference in imagery was found in Experiment 1, 10 min of imagery was used in Experiment 2. However, Driskell et al. (1994) indicated that 20 min per imagery session was necessary to obtain beneficial results.

The hypothesis that individuals with high achievement motivation and imagery would outperform those with low achievement motivation was not supported. Even for participants with high achievement motivation, task experience may be a more important variable for predicting the effectiveness of mental imagery in novice subjects.

Future studies may need to test the effects of extended mental imagery and physical practice on experienced golfers. Such research may also test the effects of high achievement motivation on physical practice and performance alone. All participants in the present study were allowed to practice. The outcome of testing high motivation participants with and without practice and mental imagery would also be interesting.

In conclusion, physical practice improved performance of a sporting task; however, mental practice had no effect on performance. High versus low achievement motivation resulted in greater improvements in perfor-

mance following physical practice.

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Appendix A

Scripts Used in Experiment 1

Physical Practice

You are instructed to spend the next 5 min practicing putting. You may putt the ball from anywhere on the caddy mat. Take your time with each putt. It is not necessary to keep track of your successful putting attempts.

Imagery

For the next 5 min, you are instructed to close your eyes, relax, and form a vivid image of yourself putting the golf ball into the hole. Besides seeing yourself performing, also try to feel yourself going through the routine. First, picture yourself standing on the green. You line up the ball with the hole and then stand upright. Now you grip your club and stand centered beside the ball with

your feet shoulder-width apart and your weight evenly distributed. You bend your knees slightly and feel the muscles in your legs contract. You check the hole, then the ball. Now you pull your club back keeping your elbows locked. You swing forward with control and balance and putt the ball with a forceful tap. As it rolls, you focus only on the hole as if to guide the ball right in. The ball rolls up the ramp and into the hole. Great job, it was a perfect putt.

Note. Validity and reliability have not been established.

Student Perceptions and Stereotypes with Respect to Gender and Race

Kelsey Majors and Kumar Desai
Creighton University

This study measured gender and racial stereotypes among college students. Participants rated mock applicants on their likelihood of being accepted into medical school. Participants rated the traits of 1 of 6 fictional applicants who were either male or female and Caucasian, American East Indian, or African American. A univariate analysis showed a main effect for participant race; Caucasian participants rated all applicants more negatively than did other participants. The study found an interaction in which male participants rated male applicants more critically than they rated female applicants, and female participants rated male applicants higher than female applicants. This result may illustrate a shifting standards effect.

Discrimination can be an outcome of racial stereotyping (Stone, Perry, & Darley, 1997) as well as gender stereotyping. Perceptions of people may change if highly individualized information such as personal behavior and traits are known about the person, however, stereotypical beliefs are more likely when only surface information is known. A stereotype can be defined as a characteristic label given to members of a certain group (Allen, 1996). Allport (1954) stated that stereotypes are trite, imperfect thoughts about a certain social group.

Racial groups tend to rate other races more negatively than they rate themselves. For example, Allen (1996) found that Caucasians tended to describe themselves as "smart," and "greedy," whereas African Americans used more negative descriptions of Caucasians such as "corrupt" and "prejudice" (p. 895).

Zebrowitz, Montepare, and Lee (1993) found that people among in-groups are more likely to homogenize traits of those in out-groups. According to the ecological theory, perception of certain traits in people with a certain facial appearance may reflect similar appearances in others who show the same traits (Zebrowitz et al.). Therefore, when people of differing races judge one another, they are more likely to attribute qualities of some known individual of the same race to the person they are judging, even if they only have a picture and surface information to judge.

Similarly, Lee, Castella, and McCluney (1997) found that Caucasian men were more likely to view themselves as competent and more prone to be breadwinners than they did women, and men were more likely to accept men of other races than they were any woman. Interestingly, Offerman and Gowing (1990) stated that sexual and racial trends in U.S. occupations were changing. For instance, female and minority participation in the work force is steadily increasing. Shinar (1975) suggested that college students' perceptions of the proportions of men and women in an occupation affected gender stereotypes of students.

Related research about stereotypes involves stigmas, culture, and media effects. According to Rush (1998) raters tend to evaluate someone more negatively if that person's stigma was controllable, such as drug use, versus uncontrollable, such as having a physical handicap. Hence, in our study, because race and gender are genetically uncontrollable, participants may rate applicants more positively than they would other stereotypical groups with stigmas that are controllable such as abusers of drugs.

Biernat and Manis (1994) used the stereotypes that men are more competent than women and that women are better communicators than men to show the "shifting standards effect" (p. 5). Those researchers believe that "people implicitly accept the stereotypes" (p. 5), and this tendancy causes a shift in standards. Raters may judge two people of opposing sexes equally on a scale for a certain attribute, but the rater expects a higher level of the attribute for one of the sexes. For example, the rater may judge both sexes to be equally successful but expects the man to make much more money than the woman.

Allen (1996) has shown that African Americans were more likely to attribute similar traits to Caucasians than Caucasians attributed to themselves, but Caucasians did not attribute similar characteristics to African Americans according to African Americans' judgment of themselves. Allen suggested that this pattern shows that minorities

Amy Badura from Creighton University was the faculty sponsor for this research project.

may know Caucasians better than Caucasians know minorities, perhaps because of media and culture.

In our study, we analyzed gender and racial stereotyping among college students by implementing a novel procedure that used medical school applications to mask the measurement of stereotypes from the participants. Although we did not use live interviews in our study, we used pictures to convey the sex and race of the applicant to the participant. Although this study focused on gender and racial stereotypes among college students, it findings suggests that gender and race discrimination could occur toward medical students.

We anticipated that college students would have gender and racial stereotypes that could differ depending on the sex and race of the participant. Because participants in our study did not have individuating information, but only a picture and controlled resume, the effects of stereotyping would be apparent. We believed there would be a presence of stereotyping consistent with earlier studies and the overall social norms of college students. Second, we expected Caucasians would be classified with higher personality characteristics than American East Indians and African Americans. Third, when compared to women, we expected that men would be rated higher on personality characteristics. We predicted that women would rate men similarly to women but that men would select lower levels for women when compared to men. Finally, we expected participants to rate personality traits of their own race higher than the traits of different races.

Method

Participants

Participants were 27 male and 66 female psychology students from a mid-sized Jesuit university. Overall, 103 students participated in the study, however; only 93 students completed the critique form and were included in the final calculations. The study contained predominately freshman (*n* = 57) with 19 sophomores, 9 juniors, 7 seniors and 1 “other”. The majority of the participants were Caucasians (*n* = 66) with 14 American East Indians, 6 African Americans, 4 multi-racial students and 3 international students. Students received extra credit points in psychology courses for their participation in the study.

Materials

The participants received an American Medical College Admissions Service (AMCAS) form, which consisted of an itemized list of classes taken by a student, calculated cumulative grade point average, math/science grade point average and general information form. The general information form contained the student’s name, parent’s name, parent’s birth location, honors/awards, extracurricular/community activities, volunteer, and part and full time employment. Participants also received a professional, high quality, black and white photocopy of the applicant, a Medical School College Admissions Test (MCAT) score, and a Creighton University Medical School acceptance standard criteria sheet for 1999.

There was one male and one female fictitious student for each race (American East Indian, African American, and Caucasian); the names were Samir Vikram Patel, Rupal Vikram Shah, Jamal Tyrone Walker, Brandi Whitney Douglas, Jonathan William Smith, and Lyndsey Ann Larsen, respectively. Pictures representing these fictitious students were chosen to achieve the greatest control possible for the experiment.

Individuals were chosen from the senior class portraits of a collegiate yearbook to ensure proper representation of age. Students were also chosen to control for attractiveness; there was rater agreement by 2 faculty members and 2 students. Thus, fictitious students were smiling, without facial hair, eyeglasses, or other atypical features.

Participants received an AMCAS form containing a controlled resume including qualitative grade point average (QPA), math/science grade point average, MCAT score and activities. Each of the six fictitious applicants had the same scores with an overall QPA of 3.66/4.0, math/science QPA of 3.44/4.0 and MCAT score of 27 (9-physical, 9-biological, 9-verbal). These scores were slightly higher than the required overall QPA, lower than the required math/sciences QPA, and average for the MCAT.

The AMCAS application also included the applicant’s extracurricular activities, which demonstrated leadership abilities. All applicants had equivalent activities such as Psi Chi, Omnicron Delta Kappa (leadership honor society), Freshman Leadership Executive Social Chair, psychology tutor, researcher at the Cardiac Center, Salvation Army volunteer, bookstore desk worker, and assistant manager at Red Lobster.

In order to assess the scores of the applicant, participants judged qualifications of the candidate using the Creighton University Medical School admissions standards. Admissions standards at Creighton in 1999 were

3.6 overall QPA, 3.5 math/science QPA, and a 27.6 MCAT score (9.2-physical, 9.8-biological, 9.6-verbal).

Finally participants received a questionnaire and ranked the applicant on each of 12 personality traits: work ethic, intelligence, leadership, likeability, trust, approachability, common sense, discipline, compassion, family values, laziness, and corruptness. Participants rated the applicant with the use of a five point Likert scale ranging from 1 (*extremely low*) to 3 (*neutral*) to 5 (*extremely high*). Finally, participants rated the probability that they would admit the applicant to medical school using a Likert scale (1-5). Finally, participants responded to an open-ended question, "Should the applicant be admitted to medical school, why or why not?"

Procedure

This study followed the ethical standards of the American Psychological Association including obtaining informed consent. Students who chose to participate were required to sign a participation consent form prior to the experiment.

Participants were required to read the AMCAS form and MCAT scores and compare their applicant's records with the standards of the Creighton University Medical School before completing response forms. Once students completed the forms, we debriefed them about the purpose of the study.

Results

Because of the disparity in numbers of students' racial backgrounds, we formed two groups for the variable of participants' race (Caucasian and non-Caucasian). A 2 (participant gender) x 2 (applicant gender) x 2 (participant race) x 3 (applicant race) between-subjects factorial ANOVA revealed a significant interaction between participant gender and applicant gender, F (23, 69) = 4.28, $p < .05$. Male participants rated traits for male applicants lower (M = 3.86, SD = .41) than they rated female applicants' traits (M = 4.19, SD = .34). Female participants rated male applicants higher (M = 4.19, SD = .41) than they rated female applicants (M = 4.03, SD = .33).

This study revealed a main effect for participant race, F (23, 69) = 8.92, $p < .01$. Caucasians tended to rate all races more negatively (M = 4.01, SD = .35) than non-Caucasians rated all races (M = 4.31, SD = .38).

Discussion

Consistent with the original hypothesis, we found race and gender stereotypes among participants' ratings of applicants to medical school. A two-way interaction existed between participant gender and applicant gender. In addition, Caucasians tended to rate all races, including themselves, more negatively than non-Caucasians rated all races.

Although the interaction between participant gender and applicant gender was different than previous research, there are several possibilities for why this occurred. The "shifting standards effect" may explain why male participants tended to rate the traits of females higher then they rated male applicants, and why female participants rated male characteristics higher than they rated the characteristics of female applicants. Biernat and Manis (1994) found that although raters judged both sexes equally on a certain attribute, in reality the raters expected one sex to have a higher level of that attribute. "People implicitly accept stereotypes" (Biernat & Manis, p. 5), which causes a shift in standards. Although this study does not provide data that explain what the rater expected, the shifting standards effect should be noted as a possible reason for explaining why males rated females more positively and females rated males more positively.

Furthermore, college students' perceptions of the proportions of men and women in an occupation affect their sexual stereotypes (Shinar, 1975), and the sexual and racial trends in American occupations are changing (Offerman and Gowing, 1990, 1993). Male students may observe more women being admitted to medical school and not hold the same stereotypes against women that they may have held in previous research (by Lee et al., 1997). Also, in one study involving employer discrimination, Davison and Burke (2000) found that providing all possible job-related information about the applicant deemphasizes superficial factors such as gender and race, therefore, reducing discrimination. Because medical school applications describe the applicant thoroughly, Davison and Burke's finding may be applied to medical school admissions and could be an explanation for men and women rating the opposite sex more positively.

Although this study does not show why Caucasians rated all races lower than non-Caucasians rated all races, there are several suggestions for why we found the main effect of race. Although explaining Caucasians' low self-ratings is difficult, aversive racism could be one explanation for Caucasians' lower scores for non-Caucasians.

Aversive racism asserts that some Caucasians see themselves as non-prejudiced but actually discriminate in subtle, rationalizable ways (Dovidio & Gaertner, 2000). Furthermore, Dovidio and Gaertner found that biases against African Americans involving employment were more likely when the applicant's application was ambiguous, similar to our medical school application. This finding shows that when qualifications are neither highly positive nor highly negative, discrimination is more likely. Although this principle does not explain non-Caucasians rating all races more positively, including Caucasians, non-Caucasians may be more willing to accept the applicant that provides diversity when faced with many applicants with average scores.

Finally, according to Zebrowitz and colleagues (1993), people tend to judge other races by some known individual in that race. Further supporting evidence found by Jussim, Coleman, and Lerch (1987) showed that people of the same group tended to rate their qualities more positively than they rated outsiders. In addition, because of media and small minority populations at the private university in which we conducted this study, Caucasians may perceive non-Caucasians according to acquaintances they have within the same race. Because Caucasians may not personally know a large number of people in a particular non-Caucasian race, their views may be biased, which could be a basis for the negative ratings Caucasian participants produced.

The finding that men rated women more positively than they rated themselves has a major implication. Previous research has suggested that men do not see women as qualified for certain careers, and in the past, men were likely to rate themselves higher than they would rate women. Men might underestimate the attributes of women and see themselves as more competent, accepting men of other races before accepting women (Lee, et al., 1997). Although these findings do not support our results, the above explanations, such as the shifting standards effect, provide useful information that address possible factors underlying our findings.

One limitations in the study was the failure to control for students' pre-medical status. This condition might have contributed to some bias because those who are not familiar with the pre-medical school course of study and the medical school application process may be more lenient in rating the applicant's characteristics. Those who are not pursuing medical school may hold societal stereotypes about the intelligence of physicians and rate all applicants highly. Pre-medical students understand the competitiveness of medical school admissions and are probably more critical of the applicant, resulting in lower ratings for the applicant. To control for this situation in future studies, researchers should ask students to identify whether or not they are pursuing medical school admission.

This study did not support one of the hypothesis, which predicted the admission order of each race and gender. Significant findings supported other predictions about stereotypes and race. For example, Caucasians tended to be more negative in judgment than any other race. The results on gender stereotypes differed from predictions and the hypothesis, but other research findings offer explanations for our finding. Overall, evidence from this study supported the prediction that gender and race stereotypes occured among college students.

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Variance in Children's Perceptions of Aggression as a Function of Gender

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Forty-two kindergarten-age children (22 boys, 20 girls) viewed a clip of a young, gender-ambiguous character involved in aggressive acts against a peer. Participants were split into two gender-equivalent groups. One group was told that the aggressor was a boy, and the other group was told that the aggressor was a girl. Results suggested that the evaluations of the aggression differed as a function of the aggressor's designated gender; participants evaluated female aggression more negatively than male aggression. Also, girls were more likely to expect the victim to suffer as a consequence of the aggressor's acts. Finally, participants indicated that boys were more likely to be involved in aggression on their playgrounds.

To discover explanations for why boys may be more aggressive than girls, researchers have investigated how socially constructed gender roles may affect parents' and children's perceptions and behaviors. Gender roles are defined as patterns of behaviors considered appropriate for boys or girls within a particular culture.

In American society, boys are socialized to be masculine, independent, and assertive, but girls are socialized to be nurturing, dependent, and submissive (Vasta, Haith, & Miller, 1999). Studies have indicated that these definitions of gender roles influence the manner in which parents, family members, and others react to a child even at birth. Shaffer (1994) stated that male babies are oftentimes described in terms of their potential for physical prowess, but female babies are mostly described in terms of their outward appearance. Also, male infants are treated more vigorously and encouraged to be independent, whereas female infants are held more carefully and are generally sheltered (Kelly, 1998). As children grow up, boys are encouraged to take part in more aggressive activities than are girls (Elkin & Handel, 1989). Seavy, Katz, and Salk (1975), and Turner and Goldsmith (1976) maintained that differences in toy purchases as a function of the gender of a child encourages aggressive behavior in boys and nurturing behavior in girls.

Although these studies serve merely as indicators of the variance in adult perceptions and behaviors that corroborates the aforementioned gender role definitions, other studies suggested that some of these perceptions and behaviors may indirectly or directly facilitate aggressive behavior in boys. Elkin and Handel (1989) stated that both male and female parents believe fathers should and do play rougher and more physically with their sons as opposed to their daughters, and both male and female parents tend to physically punish their sons more than they do their daughters. The question of how these treatments might affect a male child's proclivity to aggress may be answered best by Bandura, Ross, and Ross (1961), who demonstrated that children who had observed an adult aggressing against a blow-up doll were significantly more likely to aggress against the doll during experimental sessions than children who had not observed an adult aggressing against the doll. Bandura et al. reported no significant differences in the aggressive behaviors exhibited by boys and girls because of vicarious learning; however, if boys experience adults aggressing with or against them more so than do girls, then boys may be more likely to imitate aggressive behaviors in subsequent situations.

Because of the direct and indirect effects of gender roles, society might stereotype boys as more aggressive than girls. Aggressiveness may be a predominant characteristic of the male gender role. Perry, Perry, and Weiss (1989) indicated that male children feel less threatened by the disapproval of aggressive acts from parents than do female children. In addition, research findings by Mills and Rubin (1990) and Ross, Tesla, Kenyon, and Lollis (1990) suggest that parents perceive aggression exhibited by boys as more appropriate than aggression exhibited by girls and are likely to punish female aggression more frequently than male aggression. The affects of gender roles on aggression also may influence adults to evaluate male aggression more positively than female aggression. Condry and Ross (1985) had adults view a film of two gender-ambiguous children aggressing against each other. Beforehand, the researchers separated the participants into four groups and labeled the children

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as being two boys, two girls, a boy and a girl, or a girl and a boy. Results indicated that participants in the boy-boy group rated the children's actions as less aggressive than participants had rated the children's actions in all of the other groups.

The affects of gender roles and stereotypes on adults' perceptions and behaviors are of tremendous concern. Also of concern are the affects of gender roles and stereotypes on children's perceptions and behaviors. A considerable amount of research indicates the affects of gender-based stereotypes on various age groups of children. Studies demonstrated that these stereotypes affect the behavior of pre-schoolers as young as three years of age (Haugh, Hoffman, & Cowan, 1980; Huston, 1983; Weinraub et al., 1984; Williams & Best, 1982). Others have found the affects of gender-based stereotypes in children from 5 to 12 years of age (Best et al., 1977; Martin, 1989). Although a slight recession in the affects of these stereotypes has been found among children during middle childhood (Katz & Ksansnak, 1994; Ruble, 1994), these affects become evident once again during adolescence (Alfieri, Ruble, & Higgins, 1996).

The present study sought to examine whether stereotypes and gender roles, which implicate boys as being more aggressive than girls, have an affect on kindergarten-age children's perceptions of aggression. The medium of television was used to depict a gender-ambiguous child involved in aggressive acts toward a peer. The hypothesis was that there would be differences in children's responses to an interviewer's questions that would vary as a function of the assigned gender of the child in the movie clip and, in some cases, would also vary as a function of the participants' gender. The questions dealt with the issues of recall memory, evaluation of aggressor, outcome expectancies, and perception of experiences.

Recall Memory

According to Martin and Halverson (1983), a child's ability to demonstrate recall memory for others is influenced primarily by his or her cognitive schemas for the type of individual recalled. In Bukowski (1990), data revealed that children in the second grade recalled significantly more information about a hypothetical male peer who was described as "aggressive" than they did about a female peer who was similarly described.

The present study sought to test for variance in children's recall memory for an aggressive, gender-ambiguous character by comparing the number of items recalled correctly about the appearance of the aggressor in the movie clip as a function of whether the aggressor was labeled as a boy or a girl. The hypothesis was that those who viewed the male aggressor would recall more items than those who viewed the female aggressor. The reason for this expectation was because children's gender schemas, delineated by Bem (1981), are influenced by the stereotype that boys are more aggressive than girls and because children's recall memory for individuals is facilitated when an individual exhibits behaviors that are consistent with such gender schemas.

Evaluation of Aggressor

Condry and Ross (1985) found that adults evaluated gender-ambiguous children aggressing against each other differently as a function of their designated gender. The hypothesis was that younger children would also evaluate a gender-ambiguous aggressor differently as a function of the aggressor's designated gender. If the aggressor was labeled a girl, then the expectation would be that child participants would evaluate the aggression they observed more negatively compared to a male aggressor. This outcome would be consistent with discussion offered in Condry and Ross, which asserted that aggression observed in boys is evaluated less negatively because the behavior may be perceived as acceptable and normal. In contrast, aggression observed in girls is evaluated more negatively because the behavior may be perceived as less acceptable and abnormal.

Outcome Expectancies

Boldizar, Perry, and Perry, (1989); Perry, Perry, and Rasmussen, (1986); and Perry et al. (1989) found the outcome values and expectancies children hold regarding aggression vary significantly as a function of a child's gender. These studies indicated that boys expect more positive outcomes from aggression than do girls and that girls expect more negative outcomes from aggression than do boys. The present study sought to confirm these observations by asking participants questions assessing the positive and negative expectations each would attach to hypothetical outcomes to the movie clip. The hypothesis was that those viewing the male aggressor would conclude that the aggressor would not be punished for his actions and would feel less guilt for his actions than would those viewing the female aggressor.

An additional expectation was that boys would be less likely to conclude that the aggressor would be punished or experience guilt for his or her actions than would girls. The final hypothesis was that boys would indicate

that the aggressor should have hit his or her peer more than would girls and that girls would more likely conclude that the victim experienced suffering as a result of the aggressor's actions than would boys.

Perception of Experiences

The present study also sought to assess children's opinions regarding aggression exhibited by their male and female peers during their everyday experiences. The hypothesis was that participants would indicate boys aggress "on the playground" more so than girls. The explanation for this outcome was based on the belief that the socialization process encourages aggressive behavior in boys and discourages the same behavior in girls. There was also an expectation that the gender roles and stereotypes that portray boys as more aggressive than girls would generate variance in participants' responses to this question.

Method

Participants

Participants were 22 male and 20 female children of kindergarten age (5-6 year olds) drawn from the populations of two public schools that serve working- to middle-class families in their respective communities. Only those with signed parental consent were considered for participation in the study, and approximately 28% of the parents of kindergarteners enrolled at the two schools gave such consent. Children were asked before each experimental session if they wanted to participate and were given the option to deny answering any questions asked of them. They were also told that they could discontinue participation at any time during the study. Parents who wanted to receive an abridged report of the study's results could indicate their wish on the consent forms.

Apparatus and Materials

Study sessions were held in a vacant classroom or library at the participants' school. Each location contained a television and videocassette recorder and a table and chairs arranged in front of the television monitor. The movie clip presented to the children was from the 1976 family film, *The Bad News Bears* (Jaffe & Ritchie, 1976), which depicts the exploits of a sardonic boozehound pool cleaner (played by Walter Matthau) who, for extra cash, attempts to lead a derelict little league team to a city championship. The clip for the study was a scene in which one of Matthau's pugnacious misfits (played by Chris Barnes) is engaged in a short-lived tussle with a member of a rival squad. The conflict consisted of wrestling between the two children, along with a few punches. Barnes, who was designated the aggressor, wore his blond hair shoulder length to conform to the styles of the day. His hair length allowed him to appear gender-ambiguous to the children.

After the participant was shown the clip, he or she was asked a series of questions (see the Appendix). The six recall memory questions, derived from Bukowski (1990), were scored as right or wrong. The one evaluation of aggressor question was scored as "mean" or "playing around", and the four outcome expectancies questions, derived from Boldizar et al. (1989) and Perry et al. (1989), along with the perception of experiences question, were scored as "yes" or "no". The interviewer recorded answers on a data sheet.

Procedure

After receiving the signed parental consent forms, the children allowed to participate (n = 23 from school A; n = 19 from school B) were split randomly and approximately evenly, by school and by gender, into two groups. Participants came to the interviews one-by-one and were asked to sit beside the interviewer. The interviewer, who was aware of the hypotheses of the study, spoke briefly with the child about his or her experiences in watching television and informed the child that he or she could refuse participation at any time during the session. Afterwards, the interviewer asked the participant if he or she wanted to watch a bit of a movie. When the child answered yes (none refused), the interviewer pointed out the aggressor and designated the aggressor as being either a boy or a girl. Participants were then shown a 30-s movie clip, which included the aforementioned aggressive sequence. One group was told that the aggressor in the clip was a boy and the other group was told that the aggressor in the clip was a girl. The interviewer then asked the child if he or she would answer questions about the clip and were told that he or she could refuse to answer any question. Upon completion of the interview, the interviewer thanked the participant and asked him or her to return to class.

Results

Recall Memory

The recall memory score consisted of the total number of correct responses to the six recall memory questions (see Appendix). The scores for participants were examined using a between-subjects 2 x 2 x 2 analysis of

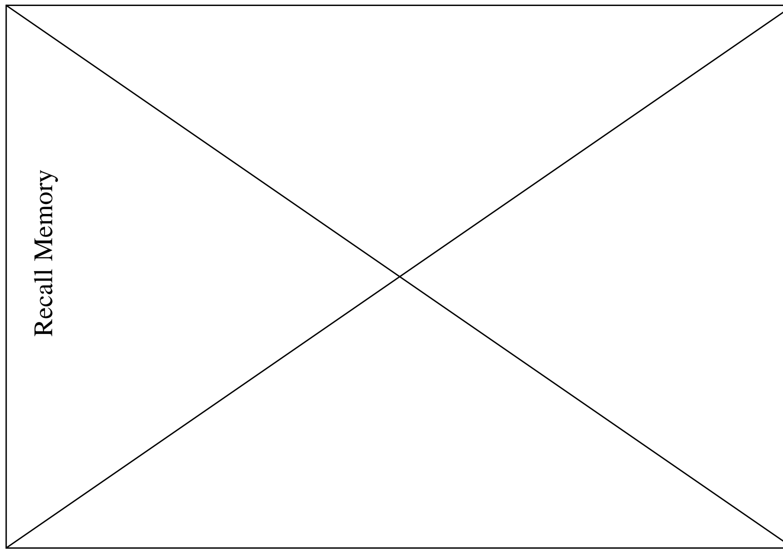

Figure 1. Number of participatns' "mean" and "playing around" responses across aggressor groups.

variance. Results failed to reveal the hypothesized main effect for aggressor gender, $F(1, 34) = 1.842$, $p > .05$.

Evaluation of Aggressor

A summary of the evaluation of aggressor question (i.e., "Was the boy/girl I told you to watch really being mean to that other kid or was he/she just playing around?") is illustrated in Figure 1. A two-way chi-square test was used to examine the data. Results showed a significant relationship between aggressor gender and evaluation of aggressor, $\chi 2$ (1) = 4.725, $p < .03$. These data supported the hypothesis that children would evaluate a female aggressor more negatively (i.e., mean) than a male aggressor.

Outcome Expectancies

Chi-square analyses of responses (i.e., yes or no) to the first two questions about outcome expectations (i.e., getting in trouble and feeling bad for hitting) found no significant relationship between either the responses and the aggressor's gender or the responses and the participants' gender. Because only one child reported that hitting the other child was appropriate, no statistical analysis was performed for the relationship between the participants' gender and the repose to the question.

Figure 2 illustrates the responses to the question, "Do you think the other kid is hurt because the boy/girl I told you to watch hit him?" A two-way chi-square test revealed a relationship between participants' gender and participants' yes or no responses, $\chi 2$ (1) = 4.014, p < .05. This finding supported the hypothesis that boys would be less apt to perceive victim suffering than girls.

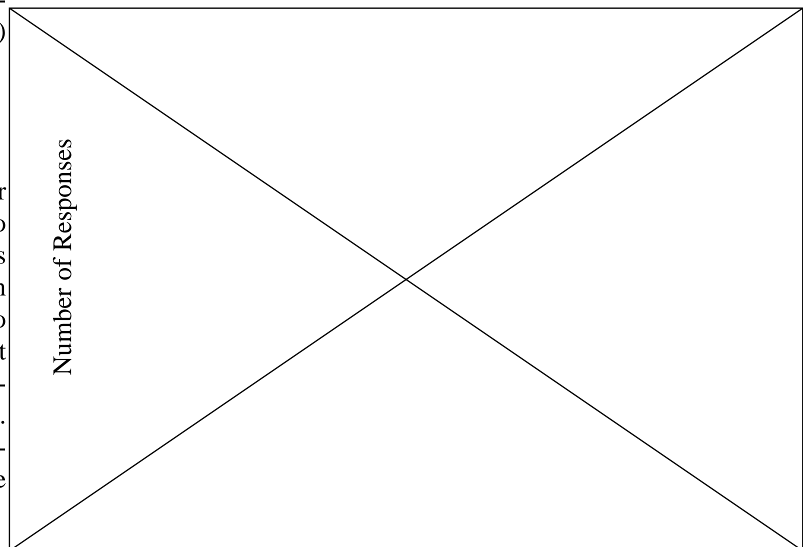

Figure 2. Number of participants' responses to the question about whether the aggressor's victim was hurt.

Perceptions of Experiences

There was also a relationship between participants' reported experience of seeing boys or girls hitting each other on the playground and (a) aggressor's gender and (b) participants' gender. Figure 3 illustrates the significant relationship between responses and aggressor's gender, $\chi 2$ (1) = 16.701, $p < .001$. Figure 4 depicts the significant relationship between particpants' gender and reports of aggression on the playground, $\chi 2$ (1) = 3.796, $p < .05$. This outcome substantiated no previous hypotheses and was wholly unexpected.

Discussion

The lack of evidence for differences in recall memory for participants, who viewed a male or female aggressor, did not support a hypothesis generated from Bukowski's (1990) results that children would exhibit significantly greater recall memory after viewing a male versus female aggressor. The differences between the present study's findings and those of Bukowski's might have been because of the age differences among each study's participants. The kindergarten-age children used

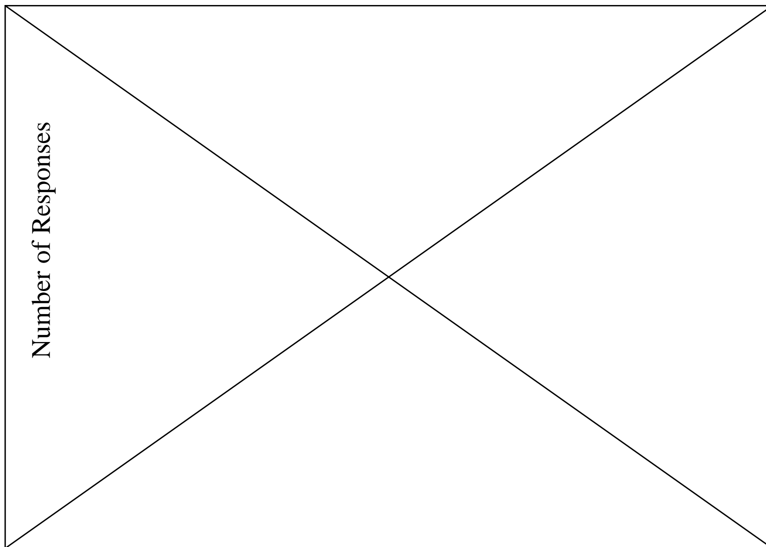

Figure 3. Number of participants' responses across aggressor groups when asked whether boys or girls were involved in aggressive acts on their playground.

in this study (vs. the second-graders in Bukowski's study) may not have fully developed the cognitive skills to process the complex gender schemas needed to facilitate their recall memory.

The present study's results did indicate a significant difference in children's evaluations of aggression, consistent with the results outlined in Condry and Ross (1985), which reported significant differences in adults' evaluations of aggression when the gender of child varied. The hypothesis that participants would evaluate aggression in girls more negatively than aggression in boys was confirmed by results from this study. This finding may be because of the socialization processes that facilitate increased aggression in boys and discourage the same behavior in girls. Furthermore, if children observe and/or experience boys aggressing more than they do girls, then they may perceive male aggression as normal and less negative than female aggression. Finally, the affects of gender roles and stereotypes might influence children to denigrate aggression observed in girls more so than in boys.

The failure to find relationships between responses to the first two questions about outcome expectancies and (a) aggressor's gender and (b) participants' gender were inconsistent with hypotheses derived from results by Perry et al. (1989) and Boldizar et al. (1989). Reasons for those failures may because of the age differences of the populations investigated. Perry et al. and Boldizar et al. reported that the participants were of predominately middle-school ages (average age = 10.6 years), whereas the present study selected children from kindergarten-age populations. Children from 5 to 6 years of age may not have experienced a sufficient amount of the reinforcement contingencies. Bussey and Perry (1976), and Perry and Bussey (1979) believed such conditions facilitated the process by which adult models socialize boys to perceive aggression as an acceptable response to particular situations.

That data showed only one participant advocating violence as an acceptable choice for the aggressor in the clip is optimistic. That finding may indicate that parents' and educators' emphasis on teaching children what they should and should not do has been effective; however, this conclusion does not necessarily indicate what children will do in situations outside of adult supervision.

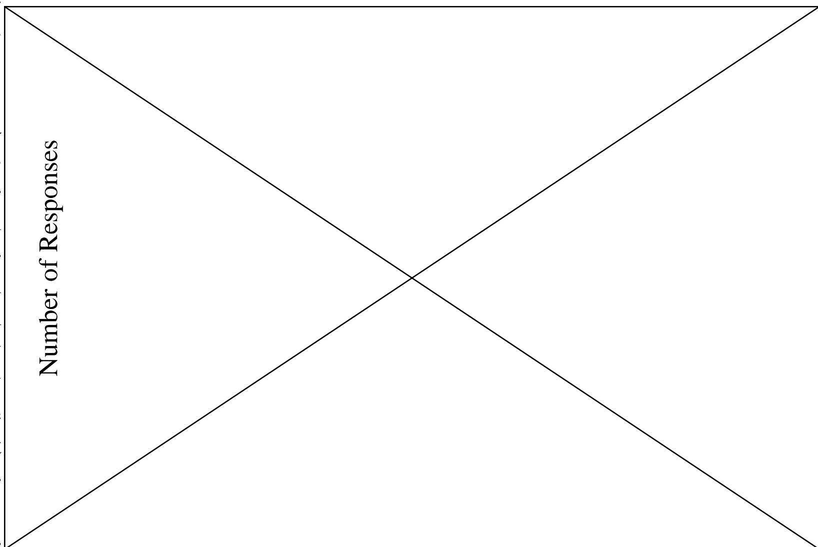

Figure 4. Number of participants' responses when asked whether boys or girls were involved in aggressive acts on their playground.

The results of the present study indicate that male (vs. female) children were less likely to perceive the victim of the aggressor's acts as being "hurt". This finding supported the hypothesis that boys would perceive less suffering experienced by victims of aggression than girls would, which may help elucidate why male children are more likely to be involved in aggression. If boys have more difficulty understanding the negative consequences of aggressive behavior against others, then they may be

more likely to choose violence as an acceptable response to particular situations.

The perception of experiences question was developed to assess whether participants observe boys aggressing more than girls during their everyday experiences. It was hypothesized that children would indicate that boys were more likely than girls to be involved in the type of aggression presented in the clip. The finding that those in the male (vs. female) aggressor group were more likely to report aggression on the playground may be because of the previously mentioned social variables that facilitate aggressive tendencies in boys. In addition, the socially constructed gender roles and stereotypes that influence children's as well as parents' behavior may compel children to confirm the conception that boys should be more aggressive than girls.

The results also showed that boys (vs. girls) were significantly more likely to respond that they observed aggression on their respective playgrounds. Perhaps boys are more cognizant of aggression than girls because they experience aggression more than girls do, and therefore they are more likely to be aware of or involved in occurrences of aggression.

Because of the evidence that children evaluate male aggression as less negative than female aggression, and because boys are less aware of a victim's negative experiences of aggressive acts, and finally, because male and female children report observing more aggressive behavior in boys than in girls, a reasonable conclusion is that young children perceive aggression differently as a function of gender. Many of the present study's findings are consistent with previous studies that demonstrate boys are more aggressive or are perceived as being more aggressive than girls (Maccoby & Jacklin, 1974; Parke & Slaby, 1983; Tieger, 1980).

Future research should focus on developing methods for preventing the propagation of gender roles and stereotypes within the school system and the family. Investigations similar to the present one might use a blind interviewer to interact with participants. Finally, there are other variables that may influence variation in children's perceptions of aggression that could be studied. Those variables may include ethnicity of the aggressor and/or victim, age of the aggressor and/or victim, and the medium in which participants observe the aggression.

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Appendix

Questions Asked Participants

Recall Memory Questions

What color shirt was the boy/girl I told you to watch wearing?

What color pants was the boy/girl I told you to watch wearing?

Was the boy/girl I told you to watch wearing a hat?

What color was the hat? (Asked if the previous question answered correctly)

Was the boy/girl I told you to watch wearing glasses?

Was the boy/girl I told you to watch wearing a coat?

Evaluation of Aggressor

Was the boy/girl I told you to watch really being mean to that other kid or was he/she just playing around?

Outcomes Expectancies

Do you think the boy/girl I told you to watch is going to get in trouble for hitting that other kid?

Do you think the boy/girl I told you to watch is going to feel bad for hitting that other kid?

Do you think that the boy/girl I told you to watch should have hit that other kid?

Do you think the other kid is hurt because the boy/girl I told you to watch hit him?

Perception of Expereince

On the playground, do you see boys/girls hitting each other all the time like the boy/girl did in this film?

Gender and Sport Differences in the Emphasis on the Physical and Mental Aspects of Athletics

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The Colorado College

Research findings suggest that men are similar to team athletes and women are similar to individual athletes in the emphasis they place on mental and physical aspects of athletics. Male and female collegiate basketball players (team sport) and cross-country runners (individual sport) completed questionnaires concerning their athletic participation. Analysis revealed a main effect for sport. Runners showed greater emphasis on mental aspects than did basketball players. There were no gender differences, but there was a Gender x Sport interaction. The scores of men in both groups were similar, but the scores of female runners indicated greater emphasis on mental aspects than scores of basketball players. The interaction may have been because team sport characteristics superseded gender differences among basketball players.

Just as there are a myriad of differences in the behavior of men and women, there are also gender differences for why (Finkenberg & Moode, 1996) and how individuals participate in athletics (Campbell, 1999; Reinisch & Sanders, 1986). The sport psychology literature has reported differences between two categories of sports, one that requires a team effort, such as basketball, and another that emphasizes individual effort, such as cross-country running (Martin & Hall, 1997; Vallerand, Deshaies & Cuerrier, 1997).

There is no direct evidence for whether there are gender and/or sport differences in the way in which athletes think about athletics; that is, whether certain groups of athletes place more importance on the physical or the mental aspects of athletics. Related research results suggests that men are similar to team-sport athletes (Finkenberg & Moode, 1996; Vallerand et al., 1997) and women are similar to individual-sport athletes (Martin & Hall, 1997; Russell, Robb & Cox, 1998) in the emphasis they place on the mental and physical aspects of athletics.

Gender Differences

Men are more likely than women to be physically aggressive in a variety of settings, including athletics (Campbell, 1999; Reinisch & Sanders, 1986). Some investigators (Lenzi, Ilaria, Milazzo, Placidi, & Castrogiovanni, 1997) consider athletic competitiveness merely a less negatively connoted term than aggression. When researchers asked college athletes what they believed to be important reasons for engaging in athletics, their responses revealed significant gender differences. The main motive for participating in sport for men was for the competition (Finkenberg & Moode, 1996; Flood & Hellstedt, 1990; Koivula, 1999), whereas the main motives for women were based on appearance and being social (Flood & Hellstedt; Koivula).

Men and women have different ways of dealing with stressors in athletic situations; stressors include making a physical error, making a mental error, and observing an opponent cheating. Anshel, Porter, and Quek (1998) found that male athletes were more apt to use problem-focused coping strategies (i.e., physical actions, such as immediately resuming physical activity or attempting to injure an opponent in revenge) in response to stressors. Women were more apt to use emotion-focused strategies (i.e., mental activity, such as feeling more nervous about the competition or accepting sympathy).

The mental aspects of athletics have become the domain of sport psychologists. Martin, Wrisberg, Beitel and Lounsbury (1997) developed a questionnaire that explored athletes' attitudes toward the field of sport psychology and sport psychology consultants (SPCs). Martin et al. found that male (vs. female) athletes were more likely to stigmatize people who saw SPCs, as well as the SPCs themselves.

That men would stigmatize the use of a sport psychologist is an indication of a negative attitude toward receiving help in the mental aspect of athletics. The finding also suggests a lack of respect for the mental aspect of athletics itself. Investigators (Wiechman & Williams, 1997; Russell et al., 1998) have found that male (vs. female) athletes score higher on measures of athletic identity and confidence in their own athletic abilities.

Team- versus Individual-Sport Differences

Vallerand et al. (1997) found that individual-sport athletes showed greater sportsmanship than team-sport

Kristi Erdal from The Colorado College was the faculty sponsor for this research project.

athletes when given hypothetical situations. Vallerand et al. indicated that these differences were, in part, because of the difference in social contexts for team and individual sports. Team-sport athletes generally spend more time with the coach and their teammates than do individual-sport athletes, who often train on their own after initial interactions with their coaches. During a competition, an individual-sport athlete usually has only himself or herself to rely on for decisions. Pressure from teammates and coaches has a greater influence on team-sport athletes' actions toward an opponent than it does on individual-sport athletes. In team sports, the emphasis is usually on doing what is necessary for the team, even if it means going against what an athlete would do as an individual.

Possibly related to the pressure of more "isolated" responsibility, individual-sport athletes have been found to experience more cognitive and somatic anxiety before competition than athletes competing in team events (Martin & Hall, 1997). Similarly, Seggar, Pederson, Hawkes and McGown (1997) found that stress scores for individual-sport athletes tested four days before a competition were significantly correlated with their performance, but no correlation was found between stress scores and performance for team-sport athletes.

Gender and Sport Commonalities

Madden, Kirkby, and McDonald (1989) studied how middle distance runners coped with negative athletic experiences. Whereas Anshel et al. (1998) found that men were more likely to cope with stressors using problem-focused strategies and that women were more likely to use emotion-focused strategies, Madden et al. found that runners were more likely to use emotion-focused strategies than problem-focused strategies.

Female athletes and individual-sport athletes have similar characteristics. Both female athletes and individual-sport athletes experience more anxiety than male athletes and team-sport athletes (Martin & Hall, 1997; Russell et al., 1998), and female and individual-sport athletes use emotion-focused coping strategies (Anshel et al., 1998; Madden et al., 1989). A similar condition exists between male athletes and team-sport athletes; that is, male athletes and team-sport athletes are less likely to show concern for the opponent than female athletes and individual-sport athletes (Finkenberg & Moode, 1996; Vallerand et al., 1997).

Hypotheses

Physical aspects of sport involve direct acts of physicality, such as stretching muscles or attempting to deliberately hurt an opponent in response to a stressor (Anshel et al., 1998). Mental aspects of sport involve the thought processes and emotional facets of athletics, including an athlete's self-confidence and anxiety levels in anticipation of competition (Martin & Hall, 1997; Russell at al., 1998). Because men emphasize the competitive reasons for engaging in athletics (Finkenberg & Moode, 1996), have less anxiety related to athletics (Russell et al.), stigmatize the use of SPCs (Martin et al., 1997), and have a greater propensity than women to use problem-focused strategies to resolve issues within athletics (Anshel et al.), we hypothesized that male (vs. female) athletes have tendencies to emphasize the physical aspects of athletics as more important than the mental aspects.

The differences between team-sport athletes and individual-sport athletes follow a similar pattern. Individual-sport athletes show more concern for an opponent (Vallerand et al., 1997), have higher anxiety scores than team-sport athletes (Martin & Hall, 1997), and use emotion-focused strategies when experiencing athletis stress (Madden et al., 1989). Thus, we hypothesized that individual-sport (vs. team-sport) athletes have tendencies to emphasize the mental aspects of athletics as more important than the physical aspects.

Method

Participants

The participants were 42 student-athletes from a liberal arts college, ranging in age from 17 to 22 years old. There were 20 women, 10 of whom were basketball players and 10 of whom were cross-country runners. There were 22 men, 12 of whom were basketball players and 10 of whom were cross-country runners. The intercollegiate athletic program at the college is part of the National Collegiate Athletic Association, Division III. Participants were asked to serve in the study during a practice session of their respective sports.

Materials

A questionnaire contained 18 questions and was based on previous questionnaires by Anshel et al. (1998), Hall, Mack, Paivio, and Hausenblas (1998), and Martin et al. (1997) (see Appendix). Initially, 25 questions were selected and handed out to a convenience sample of 30 college athletes, 15 men and 15 women, who would not participate in the study. Their data was analyzed to determine the questionnaire's internal consistency. Based on the initial Cronbach alpha coefficients, seven questions were eliminated.

The first of the three subsets consisted of questions related to how a person would feel about the use of a "sport psychology consultant" (questions 5, 7, 10, 13, 14, 17). The second of the subsets pertained to an athlete's general "routine" prior to practice or competition (questions 1, 2, 6, 8, 9, 12, 15). The third subset referred to an athlete's focus after participating in practice or competition, labeled "post-competition" (questions 3, 4, 11, 16). The resulting coefficients were .79, .70, and .63, respectively, for each of three subsets of questions.

The statements either emphasized the mental or physical component of athletics. In response to 17 of the items, participants were asked to circle one of six possible responses using a Likert-type scale (*strongly agree, agree, partially agree, partially disagree, disagree, or strongly disagree*). Each response was equated with a score from one to six, respectively, with questions 4, 7, 8, 10, and 16 scored in reverse. A *strongly agree* response indicated that the participant strongly emphasized the mental (vs. physical) aspect of athletics.

Procedure

The two sports studied were selected because there were male and female atheletics at the collge; one was a team-sport (basketball), and the other was an individual sport (cross-country). Members of the four teams who agreed to complete the questionnaire first signed an informed consent form. Members of the male basketball team filled out the questionnaire at the end of a practice. The remaining participants completed the questionnaires at the beginning of a practice. One of the female basketball players filled out the questionnaire at a later date, as well as five of the male cross-country runners, because they had missed practices at which the questionnaires were distributed.

Results

The study used a 2 x 2 factorial design. The independent variables were gender and sport. The three dependent variables were the three subsets of questions ("sport psychology consultant," "routine," and "post-competition"). Three separate ANOVAs were used to analyze results for each dependent variable. Table 1 reports means and standard deviations for all of the dependent variables.

Results of the ANOVA of the dependent variable "sport psychology consultant" indicated a main effect for sport, F (1, 38) = 8.72, $p < .05$. The mean score of the individual-sport athletes was lower than the mean score of the team-sport athletes, indicating that individual-sport athletes expressed a greater emphasis on the mental aspects of sport. There was no main effect for gender. There was an interaction between gender and sport, F (1, 38) = 4.80, $p <.05$ (see Figure 1). The male athletes of both the basketball and cross-country teams had similar scores, but the scores of the female cross-country runners were significantly lower, indicating greater emphasis on the mental aspect, than the scores of the female basketball players. The scores of the male athletes were between the scores of the two female groups.

Results of the ANOVA for the dependent variable "routine" indicated a main effect for sport, F (1, 38) = 5.08, $p <. 05$. The mean score for the individual-sport athletes was lower than the mean score of the team-sport athletes, indicating that individual-sport athletes expressed a greater emphasis on the mental aspects of sport. No main effect was found for gender. There was an interaction between gender and sport, F (1, 38) = 5.88, $p <.05$ (see Figure 2). The male athletes for both the basketball and cross-country teams had similar scores, but the scores for the female cross-country runners were significantly lower, indicating greater emphasis on the mental aspect, than the scores of the female basketball players. The scores for the male athletes were between the scores of the two female groups. Results of the ANOVA for the dependent variable "post-competition" failed to indicate main effects or an interaction.

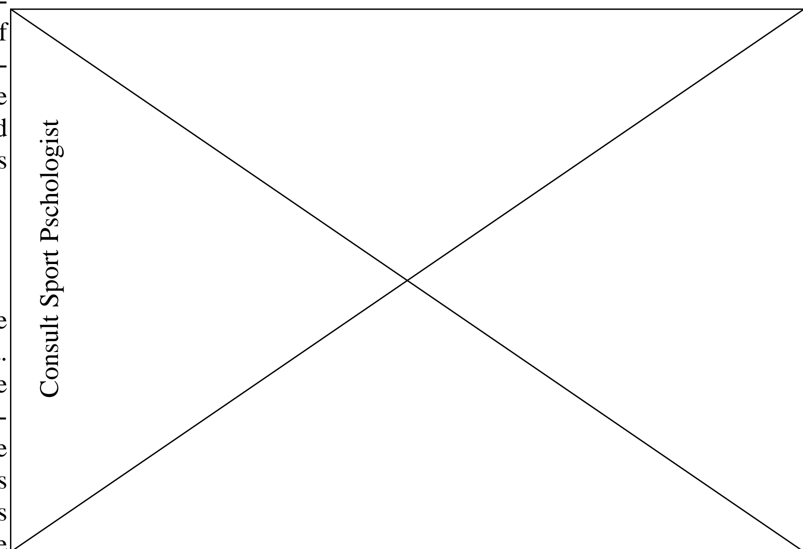

Figure 1. Interaction between sport and gender for "sport psychology consultant."

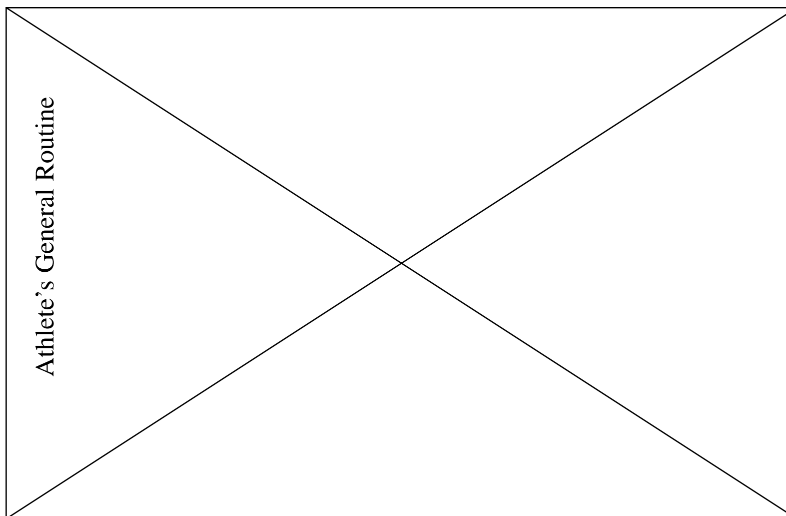

Figure 2. Interaction between sport and gender for “routine.”

Discussion

The main effect for type of sport may be related to previous research findings on individual-sport athletes' higher levels of anxiety (Martin & Hall, 1997) and greater use of emotion-focused coping strategies (Madden et al., 1989) than team-sport athletes. Because of higher anxiety, individual-sport athletes may focus more on the mental aspect of athletics to cope. Another possibility is that higher anxiety levels may be because of the individual-sport athlete's focus on the mental aspect of athletics. We do not know the direction of the relationship.

Issues arise concerning the self-selection process associated with choosing to participate in one sport or another. Are people who are more concerned or focused on the mental aspects of athletics more inclined to participate in individual sports, or do those people who choose to participate in individual sports end up emphasizing the mental aspects of athletics? Although the current study shows a relationship between individual-sport participation and a more mental focus, it does not reveal the impact, if any, of self-selection.

Previous research had suggested that female athletes and individual-sport athletes are similar in characteristics that emphasize the mental aspects of athletics (i.e., level of anxiety, types of coping strategies used) (Martin & Hall, 1997; Russel et al., 1998). Regarding the interaction, one possibility is that these similarities had a multiplying effect when the data from female athletes and individual-sport athletes were analyzed together. Not surprisingly, female cross-country runners emphasized the mental aspects of athletics more than any of the other groups. However, the interaction was not consistent with findings suggested from previous research.

Although previous research suggested gender differences in what components of athletics would be emphasized, the present study did not find any significant differences. Although gender differences have been found in the areas of aggression, motivation for athletic participation, and coping during athletic events, these differences may not be because of a difference in the way men and women conceptualize athletics.

The key to why there were no gender differences in how the athletes conceptualized athletics was the unusually higher scores of the female basketball players compared with the lower scores of the female cross-country runners. Possibly in the sport of basketball, the nature of the team sport supersedes the influence of being a woman. As suggested earlier, female athletes, who chose to play basketball, may be less likely to emphasize the mental aspects of sport. Another possibility is that, because of their participation in a high level of basketball, over time the female athletes became less focused on the mental aspects of athletics. In addition, there was an unusual context surrounding the female basketball players in this study. The team consisted primarily of younger, first-year student-athletes, who had just recently begun their season when the questionnaires were distributed. Those athletes may have still felt the need to prove themselves as physically capable and therefore were less focused on the mental aspects of their sport.

Also contributing to a lack of a gender difference were the similarities between the male and female cross-country teams in terms of the way the practices were organized. The male and female basketball team practices were separate events with separate coaching staffs that had no interaction between the players of one team and the players of the other. All the cross-country runners, however, met prior to practice and had the same coaching staff. Also, the head coach of the cross-country teams relied on suggestions from individual athletes that were shared with all members of both teams, indicating interactions between the men and women. The shared experiences of the male and female cross-country runners may have created more of a sense of them being one team, rather than two.

The failure to find differences for the third dependent variable, “post-competition,” may have been because of the nature of the questions. All four of the questions

asked about an athlete's focus, whether his or her focus was on the mental abilities or errors, or the physical abilities or errors post-competition. The mere use of the word "focus" may have been inherently mental activity, thereby negating any possibility of discerning significant differences between groups.

An interesting point about the findings as a whole was that all four groups showed that the athletes emphasized the mental aspects of sport. None of the groups' means were higher than a 2.92, indicating at least partial agreement with an emphasis on the mental aspect of athletics. These results have important implications for the field of sport psychology. Although the cross-country runners emphasized the mental aspects more than the basketball players, all four of the groups, including both men and women, emphasized the mental aspects more than the physical.

That the athletes emphasized the mental aspects of athletics more than the physical aspects indicates for coaches that they may need to pay more attention to the mental portion of athletics. Coaches might try to make adjustments in their coaching styles and techniques, emphasizing mental abilities, that may improve their athletes' performances. Many athletes may not be aware of their tendency to emphasize the mental aspects of their sport. Therefore, when their performance is not meeting their expectation, they may try to correct a physical component of their performance that may not need to be adjusted. Instead, if athletes were more aware of the thought processes involved in the performance of their sport, there would be other options for them to try to modify.

Further research in this area needs to explore different contexts for gender and sport differences in the emphasis on the mental and physical aspects of athletics. Future studies could investigate different participants, including athletes from various ability levels. Athletes, who have just begun to play a sport, could focus more on learning the rules and the skills of the sport and, therefore, more likely emphasize the physical aspects. In contrast, highly skilled athletes, who already know how to participate physically, might be more concerned with the mental nuances of the sport.

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Appendix

Instructions and Questions

Please focus on the current collegiate sport in which you are competing and answer the following honestly as to how they apply to your perception of yourself within this specific sport or to athletes in general. Please circle only one answer following each statement. Many of the statements have similar wording. Please avoid second-guessing previous responses.

1. Before a competition, I mentally picture myself going through the perfect motions.
2. It is acceptable for an athlete to take time off from his/her sport because he/she feels mentally weary.
3. After a competition, I focus on the mental errors that I made during the competition more than the physical errors.
4. If a coach criticizes both my physical performance and my mental toughness, I find myself focusing on the critique of my physical abilities more.
5. I would not question the ability of a teammate who used the services of a sport psychologist.
6. I find it necessary to develop a mental plan prior to competition.
7. An athlete who uses a sport psychologist must not be competitive enough.
8. It is more important to stretch my muscles before practice or competition than to mentally prepare.
9. It is important to prepare for athletic participation mentally.
10. Seeing a sport psychologist is bad for an athlete?s reputation.
11. If a coach criticizes both my physical performance and my mental toughness, I find myself focusing on the critique of my mental abilities more.
12. Before a competition, I would rather spend the last ten minutes mentally, rather than physically, warming up.
13. I am ashamed when I have a mental letdown during a competition.
14. I would use a sport psychologist without hesitation, if available.
15. It is important to spend time making myself more mentally tough.
16. After a competition, I focus on the physical errors that I made during the competition more than the mental errors.
17. If needed, I would get help from a sport psychologist, no matter who knew about it.
18. Please fill in the blanks based on your personal opinion: Playing a sport is ____% physical and ____% mental.

A Modified Presubmission Checklist

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Mesa State University

Kirsten L. Rewey — *University of Minnesota*

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Alyson Weiser and Stephen F. Davis

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The following checklist was adapted from the article "'Is This REALLY APA Format?': A Presubmission Checklist for the Psi Chi Journal of Undergraduate Research," *which appeared in the Fall 2000 issue (Vol. 5, pp. 87-89) of this journal. We hope that this updated version, which incorporates changes found in the fifth edition of the* Publication Manual of the American Psychological Association *(American Psychological Association, 2001), will assist authors, faculty advisors, and reviewers with the APA format aspect of the publication 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	5.04
____	the typeface is the correct size (12 points on a word processor) and the correct style (serif typefaces such as Courier or Times Roman)	5.02
____	the manuscript is double-spaced throughout, including title page, references, tables, figure captions, author notes, and appendixes	5.03
____	the page header is the first two or three words of the title	5.06
____	the page number appears (a) on the same line with the page header and is five spaces to the right of the page header, or (b) immediately below the page header	5.06
____	the page header and page number are typed at the top of each page of the manuscript (except pages containing figures)	5.06
____	the page header and figure number are handwritten on the back of figures (or on the front, outside the image area of the figure)	5.22
____	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 References section	5.11
____	lowercase letters in parentheses have been used to indicate a series of events or items within a paragraph	5.12

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General Formatting and Typing

I have read the manuscript and I know that:	Manual Section
___ words are not broken (hyphenated) at the end of a line	5.04
___ 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 equal to or less than 50 characters and spaces long	5.15, 1.06
___ the author note *does not* appear on the title page; instead the author note appears on a separate page after tables, figures, and appendixes (if included)	3.89, 5.20

Abstract

I have read the manuscript and I know that:	
___ the word *Abstract* is typed at the top of the page	5.16
___ the first line of the Abstract is even with the left margin	5.16
___ the Abstract is not more than 120 words	1.07, 5.16

Body of the Manuscript

I have read the manuscript and I know that:	
___ there are *no* one-sentence paragraphs	2.03
___ gender-inclusive language is used through plural pronouns (e.g., *they, their*), by using nouns (e.g., *one, an individual, participant's*), sparse use of *he or she* or *she or he,* or by sparse use of alternating between gendered pronouns (e.g., *he…she…*)	2.13

Body of the Manuscript

I have read the manuscript and I know that: **Manual Section**

		Manual Section
___	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	Table 2.1
___	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 the same order they appear in the References section	3.99
___	each and every citation used in the manuscript is correctly typed in the References section	4.01, 4.02
___	the phrase *et al.* is used with each citation that lists six or more authors, and with each citation that lists three to five authors *after* the first instance of that citation	3.95
___	in the Method section the word *participants* is consistently used (do *not* use *subjects*)	1.09, 2.12
___	in the Results section all test statistics (e.g., *F, t, p*) are italicized	3.19, 3.58

References Section

I have read the manuscript and I know that:

___	all entries are typed in alphabetical order	4.04
___	each and every entry occurs in the body of the manuscript	4.01
___	authors' names are separated by commas	4.08
___	the volume numbers of journal are italicized	4.11
___	each entry is typed in a "hanging indent" format, meaning that the first line of each reference is typed flush left and every line after the first line of each entry is indented	5.18, 4.07
___	the names of journals, book chapters, and books are correctly capitalized	4.11

Reference

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.

Special Features

Richard L. Miller
University of Nebraska at Kearney

In this Special Features section, students have critically analyzed contemporary movies from a variety of psychological perspectives. Sarah Greene suggests that Angelina Jolie's character in the movie Girl Interrupted *provides a good example of narcissistic personality disorder. Tamina Eshleman uses concepts from cross-cultural psychology, including familialism and ethnocentrism, to illuminate events in the movie* Fools Rush In. *Samantha Kaura describes Robert De Niro's behavior in* Analyze This *as indicative of panic disorder. Brent Pavel uses the movie* Dark City *as a mechanism for exploring such basic philosophical and psychological questions as free will versus determinism. In their review of* Dirty Rotten Scoundrels, *William Owens and Brian Stepp describe how the protagonists use a variety of socio-psychological techniques to support their con game. Conformity and social influence techniques are examined in Preeti Prasad's review of* Clueless. *Katie Weatherl provides a critique of biological determinism in her review of* Gattaca. *In her review of the movie* The Breakfast Club, *Trisha Koga examines group dynamics and the effects of parenting style on adolescent behavior. Daniel Judge discusses the rationalist philosophies of Plato and Pythagoras in the context of the movie* Pi. *Finally, Samih Elchahal invited contrasting interpretations of the character David Helfgott in* Shine.

There are a variety of issues that students can address for the next issues of the Journal's Special Features sections. At the end of this issue (pp. 70-72), three topical issues are described; Evaluating Controversial Issues, Conducting Psychological Analyses – Dramatic, and Conducting Psychological Analyses – Current Events.

Narcissistic Personality Disorder on the Big Screen

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The movie *Girl Interrupted,* starring Winona Ryder and Angelina Jolie, takes place during the 1960s and 1970s a transitional social period in U.S. history. At that time, diagnoses, treatments, and mental facilities for abnormal behavior were not as advanced and humane as they are now. Claymore, a home for teenage girls diagnosed as mentally disturbed, provided residents with psychiatric treatment. Some treatments were as mundane as daily medications and others as extreme as electroshock therapy. In addition, 24-hr nurses, therapists, and a stable environment were provided. This therapeutic environment provided the girls with a small, family-like community and daily schedules to which the girls had to adhere.

This film's analysis focuses on Angelina Jolie's character, Lisa, who had spent five years at Claymore prior to the movie's beginning. Lisa repeatedly escaped the facility, desiring her freedom, yet returning in worse shape with pale, thin, saggy bags under her eyes, and frequently intoxicated. As an older resident of Claymore, Lisa knew Claymore's doctors, escape routes, and how to access the files. Possessing this valuable information supported her feelings of being special in the hospital setting and her perception of her fellow patients' envy.

Throughout the film, Lisa displayed a pervasive pattern of self-serving behavior, which caused distress and impairment in her life. Many people recognized her inflexibility as stubbornness; she always appeared to want her way, steadfastly believing that she was right. Her deviance was related to why she was initially placed at Claymore and was a factor in why she chose to jeopardize her treatment by running away. Lisa showed her deviance by pretending to take her medicine and showing Susanna (Winona Ryder) that she had not. Because this pattern of deviance and stubbornness was implied to have existed for many years, affecting Lisa's cognitive abilities, emotions, and interpersonal relations, a professional might diagnose Lisa as suffering from a personality disorder according to the American Psychiatric Association (APA) (1994). A personality disorder is "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture" (APA, p. 629). Symptoms include impulse control, interpersonal functioning, cognition, and the impact of these behaviors.

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

As the movie progressed, the type of personality disorder, narcissistic personality disorder, emerged. Symptoms that support this diagnosis were Lisa's frequent acts of arrogance and need for the admiration of her peers, who were emotionally disturbed girls who almost never fought back. In addition she wanted recognition as superior or better than the other girls. Lisa also lacked empathy, another symptom, and bluntly told people her opinion. An example of this lack of empathy appeared at a turning point during the movie, when another Claymore resident, a girl named Daisy, committed suicide.

Daisy had just been discharged, according to her doctors, she was ready to interact with everyday society. Lisa predicted that Daisy would soon return to Claymore, a sure sign of Lisa's envy of Daisy's newfound freedom. Lisa and Susanna ran from Claymore shortly after Daisy's release, based on Lisa's idealistic fantasies of finding success at the recently opened Disney World in Florida. Uninvited, they stayed overnight at Daisy's new apartment. After seeing the self-inflicted wounds on Daisy's anterior forearm and despite having received a roof over her head and some money for food, Lisa teased, "Tell me that you don't take that blade and drag it across your skin and pray for the courage to press down?" In addition, Lisa brutally and callously teased Daisy that everyone knew of the incestuous relationship Daisy had with her father. Daisy eyed Lisa saying, "My father loves me." Lisa went as far as to say, "I bet. With every inch of his manhood." Lisa's lack of empathy was predominant throughout the movie as reflected in her insensitivity to and carelessness about the manner in which her words affected those around her.

After Lisa's taunting, Daisy did not fight back. Instead, she said "Goodnight," went upstairs, and hung herself. Lisa's words seemed to drive Daisy to re-evaluate why she was still living, and then she took her life. Susanna found Daisy in the morning and fell to her knees crying, while Lisa merely shook her head, stole cash from the pocket of the hanging corpse, and continued on her impulsive journey toward success at Disney World. Taking advantage of Daisy's suicide to steal the money was interpersonally exploitative—another characteristic of the narcissistic personality (APA, 1994). Lisa also displayed an inappropriate response to the situation because she did not cry, did not attempt to help Daisy or Susanna, and did not outwardly display feelings of guilt or remorse for her behavior. In turn, Lisa's lack of empathy impaired her interpersonal relationship with Susanna, especially considering Susanna's need for Lisa's support at such a crucial time. In direct contrast to Lisa, Susanna called the police and voluntarily allowed her doctor to retrieve and return her to treatment.

Lisa eventually returned to Claymore appearing intoxicated and malnourished. Narcissistic personality disorder is often associated with eating disorders and substance abuse (APA, 1994), both of which seem to be present each time Lisa returned from running away. By this stage in the story, Susanna had made considerable progress while absent from Lisa's negative influence, provoking envy from Lisa upon the possibility of Susanna's eventual discharge. Authorities view people diagnosed with narcissistic personality disorder are sensitive to judgment and defeat, and their excessive use of criticism towards others as a defense mechanism (APA).

Lisa disregards people's feelings and violates the rights of others in order to be heard and obtain the desired attention. Lisa's anger and jealousy drove her to steal Susanna's journal, which contained personal thoughts about many of her fellow residents, and Lisa divulged this material publicly while the "named" girls listened. Susanna was so upset that she exploded at Lisa, describing her as being "cold" and "already dead." Lisa fell to her knees in tears, grabbed a knife, and attempted to slit her own wrists. She looked up to meet the tearful, pleading eyes of her fellow residents as they shook their heads in protest. This display of respect from the other girls, coupled with Susanna's bluntness and chiding judgments, appeared to have driven Lisa to catharsis and to react in a self-harming rage. After Lisa put down the knife and curled into a fetal position, tears pouring, she seemed to be expressing a range of emotions that had been repressed for a long time. Susanna's friendship with Lisa was a catalyst to Lisa's emotional emergence, which showed Lisa some potential benefits of trust and empathy. Although narcissistic personality disorder is often considered a chronic condition, perhaps Lisa launched herself on the road to improvement by using the help of other patients.

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A Cross-Cultural Analysis of *Fools Rush In*

Tamina Eshleman

University of Nebraska at Kearney

Fools Rush In (Tennant, 1997) is a romantic comedy about an Hispanic woman, Isabel, who married a White man, Alex, and how they learned to live together. This plot was ideal for using the principles of cross-cultural psychology because it portrayed two people of different cultures and provided several examples of basic psychological principles.

Filial Piety

In his book, *Culture and Psychology,* Matsumoto (2000) describes filial piety as "a sense of duty and obligation to family members … [that] is especially strong in … collectivistic cultures" (p. 73). This concept is closely related to familialism. In the movie, when Alex attended one of Isabel's "small family dinners" that the family held each week, he encountered several relatives. In contrast, Alex claimed he only saw his parents on holidays and was therefore surprised by this family gathering. Lonner and Malpass (1994) state that, "Familialism is another central value of Hispanics … . Hispanics show a particular level of familialism that differentiates them from other cultural groups" (p. 25). Matsumoto claims that Hispanics see the use of extended families for child rearing as often necessary because of their poor economic conditions in America. However, such a child-rearing technique is a vital, valuable resource regardless of economic conditions exist.

When the marriage between Alex and Isabel became difficult, Isabel explained to Alex that family was a blessing, not an obligation. That statement illustrated her view of the importance of her family, which she had learned from her culture. The difference between the cultures of Alex and Isabel also created problems later in the movie; Alex neglected to tell his parents that he had married Isabel. Isabel, who had risked breaking ties with her family to marry Alex, informed them of her marriage and pregnancy, whereas Alex, who was not as close to his family, nor as comfortable with them, did not tell. At the end of the movie, Isabel ran away to her great grandmother's house, knowing that her grandmother would accept and care for her because she was family. Isabel may have felt obligated to tell her family about her situation because her culture had taught her to rely on them for support.

Stereotypes

In one scene, Alex's parents decided to pay a surprise visit to their son, who had been married to Isabel without their knowledge. When his parents met Isabel, they assumed she was the housekeeper because of their stereotypical image of Hispanics. They did not assume that she was their daughter-in-law and declared that "It must be easy to find good help around here." Alex's mother held a hetero-stereotype — a stereotype about other groups — about Mexicans. The stereotype Alex's mother held may be considered a sociotype because it was based on some degree of observation, however this particular stereotype did not generalize beyond those observed. In other words, she made an inference that because many people hire Mexican women as maids, and because there is a young Mexican woman in her son's house, she must be his maid. The mother made a false generalization based on her stereotype of Mexicans. Once a stereotype develops, reinforcement of it is easy. When Isabel discovered that Alex had not told his parents, they engaged in a heated argument. His parents assumed that the commotion meant that the housekeeper would be fired. Again, they perceived the situation according to their stereotypical view of Hispanics. They used selective attention and only noticed the things they wanted to see and hear — those things that fit the view they possessed instead of reconsidering their old view.

Ethnocentrism

Because of Isabel's place of origin, Alex's parents assumed that she was Alex's housekeeper. From that observation, viewers might deduce that the parents had a limited source of knowledge and information about Isabel's culture. One characteristic of ethnocentrism is the tendency to judge as inferior people not belonging to one's own group. When his parents discovered Isabel was Alex's wife, they were shocked and dismayed. However, they scheduled a meeting with Isabel's family. Both sets of parents were highly ethnocentric, meaning they tended to "view and interpret the behavior of others through [their] own cultural filter" (Matsumoto, 2000, p. 38). At the meeting, the parents entered into an argument about religion. The conversation ended with Isabel's father saying that the children's baby would, of course, be Catholic. Alex's father claimed that the baby should be Lutheran. Isabel's father ended the conversation by stating, "Lutheran isn't even a religion." Although humorous, this conversation demonstrated ethnocentrism because

both fathers were looking at the world through their own cultural filters, and based on their own biases, they argued using their ethnocentric beliefs. The fathers did not share the same views and beliefs, and therefore, the conversation was not constructive. Meanwhile, both fathers were certain that they were right and that their way of handling the child's religion was superior to the other's. Later in the movie, Alex and Isabel also demonstrate ethnocentrism when they continued the argument about the baby's religion.

To overcome the disadvantages of ethnocentrism, a person should strive to become flexibly ethnocentric, just as Alex and Isabel did at the end of the movie. Being flexibly ethnocentric means that although a person may still see the world through the eyes of his or her own culture, that person would be open to other cultures and try to understand people from cultures different than their own. In this sense, ethnocentrism does not always have to be a negative factor. At the end of the movie, the couple reconciled their differences. They were gradually acculturated into the other's culture and life. For example, Alex had an adventurous trek across Mexico to find Isabel at her great-grandmother's home. In addition, Isabel decided to go with Alex and live with him in New York City where he lived and worked. The couple slowly became flexible and adjusted their attitudes to be able to live together harmoniously.

Through the movie *Fools Rush In,* viewers may see the importance in understanding some of the basic principles of cross-cultural psychology. Because technology can link together people from around the world, we should stop looking at the world only through our own cultural filters, and we should try to understand people from other cultures whose customs differ from our own.

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Panic Disorder: As Seen in *Analyze This*

Samantha H. Kaura

Creighton University

Imagine a Mafia boss experiencing a panic attack in the middle of a shoot-out. This scene was one of many difficult situations faced by the character Paul Vitti, played by Robert De Niro, in the movie *Analyze This* (Ramis, 1999). At first Vitti was reluctant to admit he had a psychological problem, but later he accepted the diagnosis of panic disorder without agoraphobia and slowly cooperated with a psychiatrist named Ben Sobel, played by Billy Crystal. Viewers might think that Vitti could handle the stress and fear that accompanied his "job" as a Mafia boss because he had been raised in a mob family. However, evidence in the film revealed that Mafia life had taken a heavy toll, and Vitti was no longer able to function as a mob boss. The film revealed how Sobel and Vitti discovered that the underlying cause of Vitti's anxiety and panic attacks stemmed from his childhood experiences in a Mafia family and showed the use of insight therapy to help the disorder.

One of the early scenes introduces Vitti to the audience. The scene depicted a shoot-out in which an unknown Mafia member shot Vitti's close friend, Dominic. Vitti's reaction revealed his distress and feelings of helplessness. Following the shooting, Vitti discussed a top-secret meeting of mob bosses that he would attend. During this conversation, he experiences a panic attack characterized by shortness of breath, choking sensations, heart palpitations, and excessive sweating. Just as many people with a panic disorder, Vitti believed he was having a heart attack; however, when he visited the doctor, he was told that he had a panic attack. After this panic attack Vitti decided to see a "shrink" because he had been feeling very anxious and distraught, and that this incident was not his first one.

Panic disorder is a type of anxiety disorder in which a person experiences recurrent unexpected panic attacks. Panic attacks are periodic, extreme forms of panic in which a person experiences at least four of the following symptoms: "palpitations or pounding of the heart, sweating, trembling or shaking, shortness of breath, tingling in the hands or feet, chest pains, nausea, dizziness, hot and cold flashes, choking sensations, faintness, a fear of dying, and a feeling of unreality" (American

Psychological Association (APA) as reported in Comer, 1998, p. 6). In addition to these symptoms, a person with a panic disorder must also experience at least one of the following symptoms for a month or more: constant worry about having additional attacks, concern about the implications of the attack, or a significant change in behavior related to the attacks (APA as reported in Comer). Because panic symptoms are frightening, some people begin to worry constantly about having another attack, and other people worry that they may be going crazy (Comer, 1998). In cases of panic disorder with agoraphobia, people worry about going out in public because they fear having an attack and not being able to get help. Vitti did not exhibit a fear of going into public places as indicated by his willingness to go to restaurants and a hotel. Because he experienced panic attacks and because his behavior was changed by the attacks, the diagnosis of panic disorder without agoraphobia seems appropriate.

Soon after Vitti had his first panic attack, he reluctantly visited Sobel and pretended that he had a friend with a problem. However, Sobel knew that Vitti had the problem and that Vitti was very upset at Dominic's death. Because Vitti was not willing to engage in free association, which is a process necessary for insight therapy, Sobel was unable to treat him. Free association involves a patient describing any feeling, thought, or image that comes to mind and is a process that helps the therapist unearth conflicts within the person (Comer, 1998).

From events in this first session, as well as others in the movie, viewers can determine that Sobel tried to use insight therapy in which the therapist's goal is to help clients resolve or settle their inner conflicts, which may have resulted from past traumatic events. Professionals use insight therapy to help clients continue their "interrupted personal development" (Comer, 1998). Insight therapy was appropriate because subsequent scenes revealed evidence for the cause of Vitti's anxiety — inner conflicts developed from his childhood experience of witnessing his father's murder and other experiences as a member of the Mafia. Furthermore Sobel used techniques associated with insight therapy such as free association, therapist interpretation, catharsis, and working through (Comer).

Insight oriented therapy is only one of many approaches to treat panic disorder. For example, other therapists may favor cognitive therapy, use of medications such as anti-depressants, or some combination.

After the first session, Vitti and Sobel traveled to Florida. During a brief therapy session, Vitti told Sobel that his father had died because of a heart attack. Sobel tried to convince Vitti to use free association to discover the cause of his anxiety. However, Vitti displayed resistance, which is a common phenomenon that patients often demonstrate during free association to avoid painful discussion. There was evidence of resistance when Vitti lied about the cause of his father's death to end the conversation.

The next day during Sobel's wedding another mobster made an attempt to end Vitti's life. The film illustrated Vitti's ability to function as a mobster had declined because he panicked and could not shoot the man who tried to kill him. Vitti stood frozen while holding a gun, forcing his assistant to shoot the assassin. Though Vitti survived, he exhibited anger and fear because his life was in great danger. While in Florida, Vitti told Sobel the FBI was pursuing him and wanted to arrest him.

Sobel met with Vitti after this incident and tried to help him relieve his anger, although somewhat unsuccessfully because Vitti continued to display resistance by avoiding the topic of his father. He was also distrusting of his therapist, which prevented him from revealing his true thoughts during the sessions.

Subsequently, Sobel was able to understand that Vitti's anxiety came from his fear of being killed or discovered by the FBI, especially because Vitti wanted to spend more time with his family. As Vitti prepared to return to New York City with Sobel, he saw a commercial showing a father with his family and abruptly broke down and started crying, which indicated that Vitti was constantly experiencing anxiety.

In New York City, Sobel met Vitti in a restaurant and while there found out that this was the restaurant where Vitti's father was shot. Before Sobel was able to confront Vitti about the truth of his father's death, Vitti almost shot Sobel, again demonstrating his dysfunctional behavior.

That Sobel convinced Vitti not to kill him indicated that Vitti had come to trust Sobel as a friend and a therapist. Because of this trust, there was a successful therapy session using free association, despite being ambushed by mobsters. Vitti experienced catharsis during this session and while crying told Sobel that he blamed himself for his father's death. Shortly before his father was shot, Vitti realized the waiter was going to shoot his father, but he failed to say anything. About the time of the death, Vitti had been fighting with his father.

During the catharsis, Vitti revealed that he viewed his failure to warn his father as a sign that he wanted his father dead — a belief that he had repressed as a child.

Sobel concluded that Vitti's panic disorder resulted from emotional and psychological problems that began during his childhood. He knew Vitti felt guilty about his father's death and had developed his own fear of dying, which was made even more salient after his recent brushes with death.

As part of the process of therapeutic interpretation, Sobel explained to Vitti his conclusions that Vitti's guilt about his father's death and fear of his own death were the causes of his anxiety. He concluded that Vitti was finally ready to hear the truth. In a brief discussion, Sobel helped Vitti resolve his feelings of guilt by convincing him that he was not responsible for his father's death and that he felt responsible because he felt guilty about not being on good terms with his father at the time of his death. Sobel explained to his client that he could not have prevented his father's murder because there had not been enough time for him to warn his father.

After this therapeutic revelation, Vitti cried and was unable to protect himself; he refused to shoot at other mobsters who were trying to kill him. Vitti easily panicked, and he was no longer able to perform his job as a Mafia boss.

Vitti attended the mobsters' meeting, and he announced his resignation to the Mafia bosses and his therapist, which helped him bring closure to his Mafia lifestyle. This response was a climactic decision for Vitti because he realized that to eliminate his fear of dying and to lead a normal life without panic, he needed to quit the Mafia. Sobel was also able to use the process of "working through" because Vitti agreed to continue his therapy sessions while he was in jail. Working through is a process in which a patient and therapist examine issues over and over and is used to help patients gain a deep and lasting insight into their problem. This process also allows patients to change fully and continue their personal growth (Comer, 1998).

Vitti's constant turmoil in *Analyze This* portrayed the effects of panic disorder and the behavior altering effects it has on its victims. In Vitti's case, psychodynamic and insight therapy were successful in helping him uncover the root of his anxiety problems. In Vitti's case, however, uncovering causes was not enough because they were deeply rooted in his Mafia lifestyle, and his treatment required a change in his entire self and environment. One of the most important aspects of Vitti's therapy was the trusting relationship he developed with Sobel because this trust allowed the two to use insight therapy successfully.

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Dark City: Strange Empiricism Opposed

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What would be the perfect psychology experiment? Many people might argue that the perfect experimental conditions would consist of altering a person's environment and genetics. The movie, *Dark City* (Mason & Proyas, 1998), depicted such an experiment. However, the plot had much more to do with psychology than just the experimental component. The theme portrayed many of the philosophical questions and theories with which psychologists have struggled, including but not limited to determinism versus free will, monism versus dualism, mechanism versus vitalism, and reductionism versus holism (Hergenhahn, 2001).

Dark City started with John Murdock waking up in a hotel bathtub and having no memory of his life. He discovered that officials suspected him of committing several brutal murders. Throughout the movie, police and mysterious beings referred to as "the strangers" chased him. Each day, at the stroke of midnight, the strangers stopped time to change the city's landscape, gave people new identities by implanting memories, and placed appropriate props. Murdock sought his true identity while sifting through an ever-changing environment. Ultimately, Murdock learned that the strangers were experimenting with humans, attempting to determine what made them unique. At the movie's climax, Murdock used his newfound telepathic "tuning" abilities to overcome the strangers.

Determinism assumes that the origin of all behavior results from antecedent causes. Psychologists are concerned with two types of determinism — biological and environmental. Biological determinism states that the antecedent causes for behavior lie in heredity. Environmental determinism declares that the antecedent

causes for behavior lie in environmental influences. By contrast, indeterminism (free will) asserts that the causes of behavior are not rooted in biology or the environment but rather initiated by conscious will.

One scene in *Dark City* showed a poor couple in an apartment crouching over a small table eating soup. The man wore a white undershirt and slacks while the woman worn hair curlers and a bathrobe. When the clock struck midnight, the strangers began their manipulation. Telepathically, the strangers put the couple to sleep and began to stretch and morph the couple's apartment. The table stretched to more than five times its original size, the food multiplied, and fancy candlestick holders with lit candles materialized. Several floors were added to the apartment. The strangers emerged from their underground lair and redressed the couple with an expensive-looking suit and a fancy dress as they put other new paraphernalia into place. Dr. Schreber, who worked for the strangers, took a syringe from a handbag and placed the syringe to each person's forehead and injected a solution of new memories. Afterward, Dr. Schreber and the strangers retreated through a door that materialized from a wall and proceeded to their underground lair. Shortly thereafter, the city awakened and life resumed its routines.

The strangers' environmental deterministic beliefs pushed them into manipulating the environment and people's memories. The strangers believed that if they manipulated the hypothesized antecedent causes, they would discover the origin of human behavior. The strangers also believed that if they found the origin of behavior, they would reveal what made humans unique.

Murdock possessed free will to control his behavior beyond the impact of the stranger's manipulations. At the beginning of the film, he resisted Dr. Schreber's attempts at implanting new memories. In addition, Murdock resisted the strangers' influence during the tuning. Everyone in the city "sleeps" during the tuning, however Murdock remained conscious. Finally, he was the only person capable of tuning. For example, Murdock wished for a way to escape during a chase, and he made a door materialize out of a brick wall.

Murdock's tuning ability and free will stemmed from his soul. He recognized that his soul separated him from the strangers. He expressed this view in a discussion with a stranger at the movie's end. Murdock stated, "You know how I was supposed to feel. That person isn't me. It never was. You wanted to know what about us made us human. Well, you're not gonna find it here, pointing to his forehead. You went looking in the wrong place." Murdock expressed a dualistic view in that the soul was separate from the physical body.

In his statement, Murdock implied that the strangers took a monistic point of view. Monism is the belief that there is only one reality. Materialism, a form of monism, was exemplified in the strangers' quest for what made humans unique. The strangers only altered the material world, such as the environment, and people's memories. The strangers reduced memories, an abstract concept, into fluids, a physical entity (i.e., matter).

Reductionism asserts that psychological concepts, such as memories and personalities, can be represented in simpler terms (e.g., fluids). Dr. Schreber mixed separate memories with the assumption that they would combine to form a personality. In one scene, Dr. Schreber said, "A touch of unhappy childhood, a dash of teenage rebellion, and last but not least … a tragic death in the family," to create a murderer. With the strangers' materialistic view, they failed to consider the possibility of finding what made the humans unique was something other than what was present in the physical body or the physical world.

The strangers' materialism was intertwined with their mechanism. Mechanism asserts that human bodies can be viewed as consisting of separate parts that work together like the parts of a machine. The strangers' mechanism was represented in the following scene. In preparation for a manipulation, the strangers organized personal paraphernalia in an assembly line. As midnight approached, the lead stranger (Mr. Book) organized each stranger into a central room and shouted "Shut it down!" A metallic sculpture of a human face split and a clock emerged. (Note: Descartes used the clock to represent his mechanical view of the human body). At midnight, all activity in the city stopped — including the people. If people were having a conversation, they stopped, and their heads fell forward. If people were driving, the car stopped, and they slouched into a sleep-like position. Also during the tuning, buildings twisted and turned into new shapes, and new buildings arose from the ground. This scene depicted how the strangers, the clock, the humans, and the city were all components of a machine. They were simultaneously switched on and off during the tuning. Finally, the appearance of the strangers was also mechanistic; they wore black, vinyl clothing, and they did not show signs of emotion with their pale lifeless faces.

On the other hand, Murdock's appearance was much more vitalistic. He wore natural colors on his clothes while showing a wide range of emotions throughout the movie. Murdock was not part of the strangers' machine; he was not affected by the strangers' tuning; he did not fall asleep during the tuning. In contrast to the strangers' reductionism, Murdock represented holism. Once, while referring to Murdock, Dr. Schreber rhetorically asked, "Are we, in fact, more than the mere sum of our memories?"

In summary, the strangers represented an interrelated set of beliefs; determinism, reductionism, mechanism, and materialism. These beliefs are components of an empiricist view. To emphasize this point further, the movie contained two scenes that illustrated the stereotypical view of the experimental psychologist at work. At the beginning of the film, Dr. Schreber was studying the behavior of a rat in a spiral maze. Later, the strangers strategized over a model of the city in the same spiral shape. These scenes considered together suggested that humans were the rats in the strangers' experiment.

The movie's depiction of the battle between the strangers and Murdock represented a historical conflict between alternative views to approaching psychology. *Dark City* suggested that an empirical paradigm for finding the underlying causes of human behavior is incomplete. The strangers, who held empirical assumptions, were unsuccessful in discovering what made humans unique and were overthrown by Murdock, who represented an alternative approach, which included dualism, free will, and vitalism. Although *Dark City* represented a preference toward the latter approach, psychology's resolution of this conflict has been historically elusive and will likely be unresolved for many years.

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Review of *Dirty Rotten Scoundrels*

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The comedy, *Dirty Rotten Scoundrels,* depicts several con artists trying to outsmart each other (Oz,1988). The movie focused on Lawrence Jamison played by Michael Caine, Freddy played by Steve Martin, and Janet Colgate played by Glenn Headly. The movie displayed many different behaviors and psychological principles, including social comparison, collectivism, exemplification, the foot in the door technique, principlism, the similarity–attraction hypothesis, egoism, and social leadership.

We need others with whom to compare ourselves to learn our strengths and weaknesses (Festinger, 1954). After Lawrence agreed to help Freddy, he said, "I suppose I get pleasure out of helping people like you out." This statement is an example of downward social comparison or the tendency to compare ourselves to those whom we believe to be worse off than we are. Lawrence made this downward social comparison because he felt that Freddy was beneath him. Lawrence was living in the limelight at his estate while Freddy moved from town to town struggling to survive. Freddy even conned people into buying his meals.

Although Freddy and Lawrence were both con men, Lawrence was more successful and had more experience. As a result, Lawrence was able to benefit more from his scams than Freddy. Thus Freddy said, "I want to learn from the best," so he too could be as successful as Lawrence. Freddy's statement illustrated upward social comparison. Upward social comparison is the tendency to compare ourselves to those people who are better off than we are. In particular, Freddy compared himself to Lawrence by saying that one day he wanted to be able to have all the luxuries that Lawrence had.

When Freddy asked Lawrence to teach him what he knew, Lawrence's partners in crime had a conversation that was very revealing about Lawrence's motives for helping Freddy. Lawrence said, "I'm taking him in gracefully in order to get him out gracefully." Lawrence was upset with the prospect that his collaboration in his group of thieves might be threatened. His motive for helping Freddy can be classified as collectivism or a motivation with the ultimate goal of increasing the welfare of a

group or collective (Batson, 1994). What matters about collectivist helping behavior is the ultimate goal of seeing that the group is better off as the result of an action, not whether the helped individual is even in the group. Lawrence helped Freddy so that he would not stick around and become a thorn in the side of Lawrence's group of thieves.

When Freddy presented himself to Janet, the woman he and Lawrence planned to con, he entered the casino in a wheelchair. He used that approach to make himself appear helpless. He said to Janet, "Pardon me Miss, can you make a bet for me? As you can see it is terribly hard for me to reach the table." This self-presentational strategy is called supplication (Schlenker, 1980). Supplication consists of creating an impression that one is weak and dependent on others. Freddy used this strategy to get Janet's attention and sympathy. By so doing he hoped that he would win a bet with Lawrence about who would first separate Janet from her money.

When Freddy left the casino, Janet rushed to see if she could help him. Freddy replied that he did not want to place his burdens on her. After Janet insisted on knowing what his problem was, Freddy told her, using another self-presentational strategy, exemplification. Freddy used exemplification by telling her that he needed money for his grandmother's operation, and if the doctors did not operate soon, she would die. Janet asked him about his problems using a compliance strategy known as the foot-in-the-door technique (Freedman & Fraser, 1966), in which a small request is used to prepare the mark for a later request. By getting Freddy to agree to a small request, he was more likely to agree to a larger request, and in that manner, Janet was able to execute a con against both Freddy and Lawrence. Freddy may have also been using a foot-in-the-door technique against Janet when he first asked her to help him at the gambling table. By having her agree to a small request of placing a bet for him, he lured her into his plan to ask for $50,000, but she was better at playing the con game than he.

After Janet followed Freddy away from the roulette table and started talking to him, she gave him some money. Each said something that was very revealing about her motivation. Freddy pointed out that the flattering things she said about him in a letter made him sound like a hero. Her answer was, "Well, they are true, aren't they?" Janet's internal motivation may have been based on wanting to know Freddy's game, or on her curiosity about where it would lead. Either way, she was using ingratiation as a self-presentational strategy. Ingratiation is excessive flattery or praise of someone who is usually of a higher status (Lowe & Goldstein, 1970). If she were 100% certain that Freddy was conning her, she might be helping him because of genuine empathy for a con man she viewed as pathetic. If she were in doubt about his intentions, she could have given him the money out of curiosity to test her beliefs (if Freddy's money request were anything more than a foot-in-the-door tactic). No matter what considerations were on Janet's mind, giving Freddy $2,000 and writing the letter were both intended as ingratiating so that Freddy could not question her sincerity. Either way, as Freddy told his scripted life story, Janet paid many compliments so that she would seem sincere. Although in most cases losing credibility may be a risk of this self-presentational strategy, ingratiation made it appear to Freddy as though his con was being particularly successful.

When Janet revealed to Lawrence that she won a contest as a soap queen and that she was raising money for Freddy's legs, Lawrence wanted to call off the bet. The reason he gave was that he never stole from the poor or the virtuous. This reason for helping is known as principlism. Principlism is motivation to help someone with the ultimate goal of upholding some moral principle (Batson, 1994). Determining when this motivation is operating is difficult because it is difficult to demonstrate consistently. In this instance, principlism governed Lawrence's behavior. Although Lawrence may hold his principles for intrinsic reasons, this behavior may be how Lawrence made himself respectable to himself. When Freddy made statements about living off women, Lawrence did not overtly disagree with what he said. Likewise, he diverted much of his income toward what he perceived as noble pursuits, much like churchgoers often make tithes, or people donate to organizations that they think are worthwhile. Only stealing from those who can afford to lose their money is a simple extension of the same type of standards. Thus, he can say that he is better and more responsible than other thieves.

After Freddy and Lawrence were conned, Lawrence said, "Yes, isn't she beautiful?" This statement is a good example of how similarity leads to liking. Lawrence and Freddy liked people who were similar to them, so if those people were good people, that meant that they (Lawrence & Freddy) were good people as well. Like most people, Freddy and Lawrence liked people with whom they had something in common (Sprecher & Duck, 1994). Although Freddy and Lawrence did not necessarily like each other, they tended to associate with people who were like themselves (con artists).

At the end of the movie, Janet offered to help Freddy and Lawrence. Janet used a form of egoism, because helping Lawrence and Freddy was good for her sense of accomplishment. Egoism is any action that is motivated by a desire to increase one's own welfare (Batson, 1994). She invited them to reach beyond their wildest dreams by following her and accepting her as their social leader. A social leader is a leader who leads by focusing on the individuals within the organization more than on the task they have to do (Spector, 1986).

Lastly, what began as a friendly competition grew into a partnership with several examples of helping behaviors throughout the movie. The reasons for and techniques used by Freddy, Lawrence, and Janet in "appealing to people's better nature" was the theme of the movie and provided many examples of social psychological phenomena.

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Clueless About Group Influence And Pressure

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According to the hit movie, *Clueless* (Schroeder & Heckerling, 1995), high school is all about popularity, clothes, and falling in love. Actress Alicia Silverstone played glitzy and glamorous Cher, who along with her friend Dee, were the most popular girls at their prestigious Beverly Hills high school. They were the envy of their female classmates, as well as the desire of the cool and not so cool boys. In spite of being in this social limelight, Cher had time to monitor her father's eating habits, quarrel with her stepbrother, play matchmaker for her teachers, and lead a clothing drive for hurricane victims. In the midst of these countless "endeavors," she found time to take a new student, Tai Fraiser, under her wing. In the scenes involving Tai, social influence and peer pressure were prominent phenomena.

Cher spotted the helpless and susceptible new student during second hour Physical Education and immediately realized that her purpose in life was to use her popularity for a good cause. Cher and Dee began their mission by showing Tai the ropes at Bronson Alcott High School. This task included pointing out to Tai the acceptable and unacceptable students with whom to associate. Along with instructing and informing her about the social atmosphere of their school, Cher and Dee offered Tai a complete, full-body makeover. As Jill Sobuel's hit song, "I Want to be a Supermodel," played in the background, Dee applied Tai's makeup, and Cher dyed her hair a hue of auburn red. They finished by lending Tai a trendy new outfit and affirmed that she was a "Bettie" or female babe (Schroeder & Heckerling, 1995).

The following morning, Cher selected a book, *Men are from Mars: Women are from Venus,* and a workout video, *Buns of Steel,* to nurture Tai's mind and body. Cher also encouraged her to do something good for mankind or the planet. As Cher instilled these words of wisdom, her brother disagreed and remarked that she was acting as though Tai was her very own Barbie doll. Cher responded by saying that she would make Tai well dressed and popular, and that Tai's life would be better because of her (Schroeder & Heckerling, 1995).

After developing a close bond with her new-found friends, Tai disclosed her attraction for Travis, a boy she met at lunch. When Cher and Dee heard this comment, they immediately tried to dissuade Tai from encouraging Travis. They advised, "Don't sell yourself short now," and "If you strike while the iron is hot, you can have any guy that you want" (Schroeder & Heckerling, 1995). After all, Travis was a mere pothead who hung with fellow druggies, and according to Cher, "No respectable girl actually dates them" (Schroeder & Heckerling, 1995). As a result of this advice, Tai set her feelings for Travis aside and pursued Elton, the most popular guy at school, which reflected Cher and Dee's influence and impact on Tai's judgments, choices, and impression. Tai's behavior reflected social influence.

Social influence refers to the control that people have on the beliefs and behaviors of others (Huffman, Vernoy, & Vernoy, 2000). Typically, social influence occurs within a group, a collection of people who have a mutually recognized relationship. One type of social influence has to do with who is allowed membership in certain groups. Everyone is a member of at least one group, and a person may join a group for several reasons. For instance, an individual may like the task or activity of the group, or a person may join because he or she enjoys the members of the group. Lastly, the group can be a means for satisfying an individual's needs. (Gershenfeld & Napier, 1989).

Social influence within a group frequently results in conformity (Huffman et al., 2000). The best definition of conformity is the alteration of an individual's beliefs and behaviors to correspond with a group standard (Myers, 2000). The onlooker, as well as the conformer, may have difficulty understanding when and why conformity occurs. Examining three factors (i.e., normative social influence, informational social influence, and the role of reference groups) can help understand conformity.

Normative social influence refers to conformity that occurs out of a need to gain approval and avoid disapproval from the group (Huffman et al., 2000). Individuals want to be popular and need acceptance, appreciation, and liking from their peers (Cooney, 2000). To gain this acceptance, members of the group adhere to expected patterns of behavior called norms. Basically, norms are definitions concerning how one should behave — they are sometimes explicit but more often implicit.

Cher's and Dee's social influence caused Tai to adjust her behavior to the group standard, or in other words, conform as a result of normative social influence. Tai wanted to gain approval from Cher and Dee. She gained approval by adhering to expected patterns of behavior or norms that existed within their group. While walking through campus, Cher informed Tai about the norms she and Dee followed: "There's the Persian Mafia. You can't hang with them … ." and "There's Elton and all the most popular boys in the school. If you make the decision to date a high school boy, they are the only acceptable ones" (Schroeder & Heckerling, 1995).

However, showing consideration for norms is not the only reason individuals conform. In addition to conforming for approval, individuals conform because they assume that the group has more knowledge than the individual (Huffman et al., 2000). When one accepts another's opinion concerning what is real, he or she is acting in response to what is called informational social influence (Myers, 2000).

During the movie, Tai also conformed because of informational social influence. She was in need of information and direction, and she accepted Cher's and Dee's knowledge concerning what was right and proper at her new school. Informational social influence took place, for example, when Tai inquired, "Cher, I have a question. What should I do with this sweater? Should I tie it around my waist, or put it over my shoulder?" (Schroeder & Heckerling, 1995). Tai questioned her own judgment and assumed that Cher would make the correct judgment because she had more information and experience. Another instance showed that Tai thought Cher and Dee had more information: "Wow! You guys talk like grownups" (Schroeder & Heckerling, 1995).

The last factor for explaining conformity has to do with the power of reference groups. A reference group is a person or persons an individual holds in high regard and wants to resemble (Huffman et al., 2000). Professional athletes, Hollywood actors, and supermodels are examples. Likewise, parents, siblings, friends, teachers, religious leaders, and other respected individuals can serve as reference groups. Reference groups have a direct influence on an individual's life (Huffman et al.).

In the motion picture, *Clueless* (Schroeder & Heckerling, 1995), Tai encountered Cher and Dee, and the three of them were a collection of individuals with a recognized relationship. Thus, they formed a group; more specifically, Cher and Dee made up Tai's reference group. Tai sought information and direction from her reference group and followed their example.

Many scholars have attempted to decide about whether social influence and peer pressure are positive or negative factors in adolescent development. Previously, researchers maintained that when adolescents conformed to their peer groups, they ended up engaging in negative behaviors. The viewpoint was that negative behavior resulted because peer groups opposed adults' values and traditions. However, other scholars (Meece & Schunk, 1992) have challenged this negative view of peer influence and pressure as overrated.

In some cases, Cher's and Dee's social influence and peer pressure was negative, but throughout the film, their influence had a positive impact. During the first lunchroom scene, for instance, Cher firmly stated her opposition to drug use when she asserted, "Tai, it is one thing to spark up a doogie and get laced at parties, but it is another to be fried all day. Do you see the distinction" (Schroeder & Heckerling, 1995)? Likewise, they suggested that Tai keep her mind "fit" by reading one non-school book each week and advised that Tai keep her body fit by "working out every day, not just sporadically" (Schroeder & Heckerling). Lastly, Cher and Dee were both virgins and said that they were not interested in "doing it" until they found the right person (Schroeder & Heckerling). Therefore, Tai's peer group offered words of wisdom and good judgment consistent with traditional adult values.

On the whole, *Clueless* provided many examples of social influence in a high school setting. Moreover, the movie depicted social influence and peer pressure as having positive affects. Although the movie was, to some extent, exaggerated and uncharacteristic of high school life, I found it an insightful and ingenious creation!

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Gattaca: A Portrait of the Limitations of Biological Determinism

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Throughout its history, one of psychology's most fundamental questions has been, "What are the origins of human behavior?" Numerous theorists have attempted to answer that question, and it remains a difficult question. Are humans steered by their environment, as environmental determinism suggests, their genetics, as biological determinism asserts, or by their free will, as nondeterminism contends? Discovery of the exact origins of human behavior would undoubtedly have a profound effect on society. The film, *Gattaca,* tells the story about what happens in a futuristic society that has concluded that biological determinism is the answer (Niccol, DeVito, Shamberg, & Sher, 1997).

The film depicts the struggle of Vincent Freeman, labeled as a "natural birth," in a society preferring genetically engineered individuals. Vincent's dream was to enter an elite space program called Gattaca, which had strict hiring guidelines based on genetic perfection. Because Vincent was born with a debilitating heart defect that would disqualify him, he purchased the genetic identity of Jerome Marrow, an engineered individual, who had no dreams of success. As a condition of this purchase, Jerome supplied Vincent with samples of his genetic material such as urine, eyelashes, and blood, which Vincent carried for the many on-the-spot genetic tests that occurred in the society. Posing as Jerome, Vincent entered Gattaca and moved through its genetically discriminatory ranks to fulfill his dreams of space travel.

Gattaca takes a critical look at what happens to a society governed by a paradigm centered on biological determinism. A paradigm (Kuhn, 1970) is a widely accepted viewpoint, which is held by a majority of scientists in a particular discipline. Once accepted, the truthfulness of the paradigm is not questioned, and all scientific study occurs according to the paradigm. Kuhn proposed that the paradigm consists of three components. First, the discipline determines the questions that it attempts to answer. Second, the acceptable methodologies used to answer the question are described. Finally, the paradigm governs the recognition of acceptable answers (Hergenhahn, 2001).

In *Gattaca,* the dominant scientific paradigm (i.e. biological determinism) was the modus operandus for the

entire society. The paradigm consisted of two components: the genetic engineering of unborn children; and the assumption that such engineering would bring the individual success in all aspects of life, including social, psychological and occupational well-being, making them able to aid in the goal of furthering society as a whole.

The presence of naturally birthed individuals in the society portrayed in *Gattaca,* where the genetically engineered were preferred, suggested that the paradigm was instituted somewhat recently, and the society had undergone a transition from a time when natural birth was acceptable.

At the time of Vincent's birth, his parents decided to allow him to develop naturally. However, after witnessing the transition to the accepted paradigm of biological determinism and realizing that Vincent's physical deficiencies left him ill-suited for success in the new society, they made the decision to have their next child, Anton, genetically engineered. At the doctor's office, there were four viable fertilized eggs. The doctor skimmed over their choices for brown hair, hazel eyes, and fair skin and stated, "I have taken the liberty of eradicating any potentially prejudicial conditions; premature baldness, myopia, alcoholism, addictive susceptibility, tendency toward violence, obesity, etcetera … ." Vincent's mother, who seemed rather distressed, looked at her husband who stated, "We were just wondering if it's good to just leave a few things to chance." The doctor replied, "You want to give your child the best possible start. Believe me, we have enough imperfection built in already. Your child doesn't need any additional burdens." The parents' wish was based on the previous paradigm, but they were herded swiftly into the method that had become "the natural way" of giving birth in this biologically deterministic society.

Biological determinism centers on the belief that the biological predispositions laid down in an organism's genetic code ultimately determines future behavior (Hergenhahn, 2001). The society in *Gattaca* illustrated a paradigm based on that belief. The opinions of employers, the government, and even family members was that the genetics of a human determines how far he or she can go in society. Vincent stated that because of his disheartening genetic pattern at birth, he was viewed as chronically ill throughout his childhood and adolescent years. Although he had a persistent drive to enter the elite space program at Gattaca, his parents discouraged him, assuming that he would enter a low scale occupation because of his physical drawbacks. His mother told him, "You have to be realistic with a heart condition like yours." His father added, "The only way that you'll see the inside of a spaceship is if you are cleaning it." Vincent was not daunted by his parent's discouragements, but when he left home he found their concerns true. Before adopting the identity of Jerome, Vincent was unable to find work outside of the janitorial industry. Once he assumed Jerome's identity, however, he was not questioned beyond what appeared in biological tests. The extreme importance placed on genetics was demonstrated when Vincent went for his interview at Gattaca. His urine analysis brought up Jerome Marrow's genetic code, and the doctor said, "Congratulations." Vincent looked stunned and asked, "What about the interview?" The doctor replied, "That was it."

One goal of *Gattaca's* producers appeared to be to illustrate a society impacted by a biologically deterministic paradigm. The film also appeared to have an additional goal, divulging the negative implications and shortcomings of a biologically deterministic paradigm.

A primary negative implication of such a paradigm, as illustrated in *Gattaca,* was that of genetic discrimination. Referred to as "genoism" in this instance, the society in its transition operated around two classifications, "valid" and "in-valid". The members of the "valid" class were those who had been genetically engineered prior to birth and were viewed as best suited for future success. Individuals with an "in-valid" classification were the products of the previous paradigm that promoted natural birth and were considered flawed because of their physical deficiencies. Members of the valid class, or the genetic elite, were given access to the best job opportunities, whereas the in-valid class was left to manual labor occupations. Vincent noted that lying on a resume was of no use because "your real resume lies in your cells." The "validity" of every individual entering Gattaca was checked on a daily basis when they came to work, passing through turn-styles where their finger was pricked and their genetic code was tested. Random urinalysis was also common in the workplace to assure the employees' validity. Even the potential for dating was contingent upon validity — a sample of hair or saliva could be taken to a booth within Gattaca, and a complete genetic readout could be rendered. "Genetic quotient" determined desirable mates.

The film also illustrated factors that a biologically determinism paradigm ignored when answering the question, "What are the origins of behavior?" Ignored were factors associated with environmental determinism and nondeterminism. Environmental determinism proposes that an organism's behavior is influenced by environmen-

tal stimuli (Hergenhahn, 2001). Jerome, whose identity was purchased by Vincent, was genetically engineered for perfection, however, because he carried the "burden of perfection" his less-than-perfect performance in a swimming event led to feelings of inadequacy and shame, resulting in a failed suicide attempt. In this way, society's expectations served as environmental feedback contributing to Jerome's depression.

Nondeterminism, on the other hand, centers on the belief that the behavior of an organism is influenced by self-motivation or free will (Hergenhahn, 2001). Vincent's strong motivation, which guided him toward success, was illustrated in two portions of the film — his childhood and his assumption of Jerome's identity. During his childhood, Vincent was very aware of his "in-valid" status whereas his brother Anton was in the "valid" classification. They frequently challenged each other in a game of "chicken" by swimming into the ocean and seeing who would turn back first. Although Anton had always won, one day Vincent was able to defeat his brother. The triumph was a turning point for Vincent's motivation. "It was the one moment in our lives when my brother was not as strong as he believed, and I was not as weak. It was the one moment that made everything else possible." After mastering his brother, Vincent left his home and family, more resolute than ever on fulfilling his goal of entering Gattaca.

By assuming Jerome's identity, Vincent's strong free will was also evident. He was willing to undergo an extremely painful surgical procedure to lengthen his legs, making him as tall as Jerome. Daily, he meticulously cleaned any loose hair and skin off himself to avoid leaving any of his "in-valid self in the valid world." To maintain the façade, Vincent carried bags of Jerome's urine in case of random tests. By harnessing his free will in these instances, Vincent outwitted the biases of society's attitude favoring biological determinism.

Because of the environmentally deterministic decline of Jerome, a "valid," and the success of Vincent, an "in-valid," fueled by free will and non-determinism, the biologically deterministic paradigm used in *Gattaca* proved inadequate to explain human behavior. The film depicts a view that no theory of human behavior can stand alone and that elevating one theory as true can have detrimental consequences for society. In the case of Gattaca, the shortcomings of the paradigm left the society vulnerable to genetic thievery and prejudice, as well as to extreme social casting of its citizens.

Where is our society headed with studies into genetically geared topics such as cloning and the human genome project? Are we developing these biological methods to prevent problematic diseases, or are we unknowingly laying the groundwork for genetic discrimination and the construction of a prejudicial social system as portrayed in *Gattaca*? Science and society might avoid such a fate by closely considering the role of environment and free will on one's behavior. As *Gattaca* demonstrated, an overemphasis on a deterministic view is incomplete. An intricate intermingling of the impacts of biology, environment, and one's free will may be the key to the origins of understanding human behavior.

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Social Themes in *The Breakfast Club*

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The psychological, emotional, and physical changes that adolescents experience can be positive or negative (Steinberg, 1999). Some adolescents seek advice and companionship from cliques and crowds, whereas others remain separate from social groups. Furthermore, adolescents spend almost a third of their time with friends, which can contribute to their overall welfare (Hartup & Stevens, 1999). Therefore, adolescent affiliation, or lack thereof, with a peer group is instrumental to their development. The movie, *The Breakfast Club* (Hughes, 1985), depicts cliques, crowds, and isolates, as peers interact with each other during a Saturday detention.

The Breakfast Club characters form peer group associations in part because of different backgrounds, and in particular, because of the parenting style they experienced. Parenting styles guide social groups and functioning of their children (Brown, Mounts, Lamborn, & Steinberg, 1993). The behavior and decisions of the characters,

Alison and Bender, illustrate how neglectful parenting can influence the social group affiliation of adolescents and the behaviors resulting from that parenting style.

The movie opened with five students getting dropped off at school by each of their parents for Saturday detention. The students were placed in the library where Vice-Principal Vernon informed them that they were required to write an essay about who they perceived themselves to be. The purpose of the essay was to help the students understand their mistakes and why they received detention.

The group consisted of Claire, a rich, popular girl; Andrew, a popular wrestler; Brian, an unnoticed scholar; Alison, a forgotten nobody; and Bender, a controversial delinquent. Although each of the characters had violated school rules, the audience did not know what they had done. Only two of the five students knew each other even casually. Yet, each of them had a particular peer association in the school that originated in part from his or her family experiences or the parenting style to which they were exposed. Other factors that contribute to the formation of adolescent peer groups include cliques and crowds.

Cliques and Crowds

Cliques are small clusters of individuals who are similar in age, gender, race, and social status, as well as who have common interests and activities. The majority of adolescents belonging to cliques spend enough time with each other that authorities believe these groups are the most important friendship structures during the teen years (Ennett & Bauman, 1996). Another prevalent group during adolescence is a crowd. A crowd is a large group of students, usually made up of several small cliques.

Professionals differentiate crowds from cliques on the basis of stereotypes or reputation rather than actual friendships that require social interaction (Dunphy, 1963; Steinberg, 1999). Cliques and crowds gain importance during adolescence because of the occurrence of social, cognitive, and biological transformations that require adolescents to make adjustments. For example, adolescents spend more time with peers, change their thinking patterns, and have various peer relations because of changes associated with puberty (Dunphy; Steinberg).

In *The Breakfast Club,* the characters were classified into social groups on the basis of the company they kept. The movie alluded to four different groups — the popular crowd, the "brainy" clique, the delinquent clique, and the outcasts. These groups had one thing in common; they consisted of peers rather than adults.

Teenagers spend more time with peers and less time with adults, especially parents, because of the social transition they experience during adolescence (Dunphy, 1963; Steinberg, 1999). Social changes may cause an individual to search for comfort and familiarity in smaller groups. A clique, or even a crowd, can provide adolescents with reassurance when faced with the larger, more impersonal setting of high school (Steinberg). The increased ability of students to sort others into various cliques or crowds and to form new peer relations is partially the result of cognitive changes in adolescence. This newfound skill is because of a better understanding of the social network. Additionally, the biological changes during puberty increase adolescents' opportunities and desire to spend time with members of the opposite sex. In turn, social groups are composed of both opposite and same sex members. Cliques are usually composed of adolescents sharing similar orientations towards school, peers, and antisocial behaviors, which are then combined to form crowds (Cooney, 1999).

Although cliques and crowds are widespread and common, not everyone belongs to one. Isolates are adolescents who are not integrated, nor do they have ties to a particular peer group (Ennett & Bauman, 1996). Adolescents of neglectful parents may be more susceptible to becoming isolates. For instance, Lamborn, Mounts, Steinberg, & Dornbusch (1991) reported that neglected adolescents performed poorest on measures of self-reliance, perceived social competence, and perceived academic competence in comparison to adolescents from homes with authoritative, authoritarian, or indulgent parents.

In *The Breakfast Club,* Alison and Bender exhibited signs of being from neglectful homes. Alison's exposure to neglectful parenting could be one explanation for her status as an isolate. Bender's neglectful parents might have contributed to his association with other delinquents.

Neglectful Parenting

Researchers have identified four predominant parenting styles that differ in degree of parental warmth/responsiveness and parental control/demandingness (Lamborn et al., 1991; Steinberg, 1999). Neglectful parents exhibit low levels of parental responsiveness and parental demandingness. These parents fail to meet the needs of their children in a positive manner, and they do

not demand mature, responsible behavior of their children. Neglectful parents are not concerned with their adolescents' thoughts or what happens in school or with friends. Furthermore, they refrain from involving themselves in their children's actions (Steinberg).

Alison's character had neglectful parents. She attended Saturday detention because she had nothing better to do. Her parents dropped her off without even questioning what she did to deserve detention. Had they questioned her, they would have discovered that she did not have a reason to be there. Unfortunately, adolescents with neglectful parents have the greatest risk of exhibiting psychological distress, negative self-perceptions, and low levels of social and academic competence (Lamborn et al., 1991).

Neglected adolescents are more susceptible to delinquent behavior involving sex, drugs, and alcohol (Steinberg, 1999). During the movie, Alison confessed to Andrew that she enjoys drinking vodka anytime during the day. According to Steinberg, neglected adolescents have a greater likelihood of being involved in delinquent acts. Alison's drinking problem might be attributed to neglectful parenting.

Another consequence of neglectful parenting is that adolescents do not acquire social skills from their parents because of an emphasis on a "parent-centered" approach rather than on a "child-centered" one (Steinberg, 1999). Alison's lack of social skills may contribute to her status as a neglected isolate. Fortunately, when neglected isolates are placed in a new situation, they do not necessarily continue to be neglected (Cooney, 1999). An illustration of this phenomenon occurred when Claire gave Alison a makeover, and during the day, Alison was more accepted by the others, thereby becoming less isolated.

Not all adolescents from neglected homes become isolates. Many neglected adolescents risk becoming associated with a clique that engages in deviant behaviors because they lack adequate adult supervision (Steinberg, 1999). Bender's parents did not care enough about his welfare to drop him off for detention, so he arrived by himself. Bender's lack of parental supervision may have contributed to his interest in delinquent acts and drug use, which affiliated him with the "druggie" clique. Parents of those involved in the "druggie" clique are usually neglectful and do not care about their adolescents' academic achievement (Brown et al., 1993). Adolescents exposed to neglectful parenting also exhibit signs of impulsiveness (Steinberg, 1999). Bender impulsively pulled a fire alarm to earn detention in the first place. Even while in detention, he could not suppress his impulsive tendencies. Bender decided to sneak out of the library during detention to retrieve marijuana from his locker. Leaving the library during detention was strictly forbidden, but Bender convinced the others to go to his locker where he successfully removed the drugs. When they tried unsuccessfully to return to the library without getting caught by Vernon, Bender acted impulsively and sacrificed himself. Viewers could hypothesize that he saved the others to gain their acceptance and to compensate for the lack of acceptance by his neglectful parents.

Throughout the movie, the characters learned about themselves in addition to learning about the others. By the end of the movie, they realized that there was more to each other than their stigmatized labels of "athlete, princess, criminal, brain, and basket case" (Hughes, 1985). These labels appear in adolescence because of the inevitable development of cliques, crowds, and isolates. Prior to adolescence, parents play a significant role in their children's lives when it comes to peer selection. Even though parents do not exert as much direct influence as their children grow older, their parenting styles affect peer group affiliation in adolescence (Brown et al., 1993). Alison and Bender were products of neglectful parenting in the movie, *The Breakfast Club.* Their behavior and peer group affiliations reflected the negative consequences that neglectful parents can have on adolescents.

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Rationalistic Philosophy/Psychology Modernized in *Pi*

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In the history of psychology, there have been debates regarding the origins of behavior (e.g., nature versus nurture, mind versus body, etc.). Other scholars debate the structure of reality and our ability to perceive it (i.e., objective versus subjective reality). Hergenhahn (2001) notes that because there are physical worlds and psychological worlds, the important question is how are the two related? Similarly, how do we come to know about the physical world because all we can ever experience directly is our own subjective reality? Rationalism is one perspective in response to the latter question. The rationalist view is dedicated to reason and logic, convinced that the attainment of knowledge is preceded by the active engagement of the mind (Hergenhahn). For rationalists, there is a fine distinction between knowledge, which is a pure product of mental operations, and that which people attain through the senses. The troubled mathematician in the film, *Pi,* is such a rationalist and illustrates the powerful, but often taken for granted influence that ancient philosophy and its conception of reality have had over psychology and its debate about how humans attain knowledge (Watson & Aronofsky, 1998).

The troubled mathematician is Maximillian Cohen, a "number whiz," who is committed to discovering a pattern in the stock market (and the world itself) via number theory and his computer, which he dubbed Euclid. Cohen began with three assumptions. "One, that mathematics is the language of the universe. Two, that everything around us can be represented and understood through numbers, and finally, three, if you graph the numbers of any system, patterns emerge; thus there are patterns everywhere in nature" (Watson & Aronofsky, 1998). He cataloged evidence that supported his hypothesis. As he approached an answer, two groups, one a financial firm interested in the key to the stock market for its personal gain and the other a group of religious Jews interested in deciphering a divine code found in the Torah, pressured Cohen. However, the pursuit for a pattern was a personal one for Max, and the intensity with which he obsessed about the possibility of a pattern began to torture his sense of reality; severe headaches and hallucinations became more and more common. The answer finally emerged with Max's eventual true understanding of a cryptic 216-digit number that seems to be mysteriously applicable to all systems, whether they were concrete or abstract.

The majority of the parallels between rationalist philosophy and more contemporary rationalism came via the teachings of Pythagoras and his eventual supporter, Plato. The 216-digit breakthrough came in response to the ancient theories of Pythagoras, a mathematician who viewed the universe as a composition of numbers. As a rationalist, an individual conjectures assumptions and then applies those assumptions to systems to check their validity — a process called deductive reasoning. In his assumptions about the universe, which were comparable to those of Pythagoras and his consequent review of the evidence, Max employed deductive reasoning. To Pythagoras and his followers, mathematics was an abstract representation of an otherwise material world. Further, he asserted that numbers could only be fully understood via the mind, which according to Hergenhahn (2001) is a rationalist perspective, valuing mind over matter. From that perspective, the empirical world, derived from the senses, is flawed, whereas perfection is a conception of the mind in the form of numbers. Because of these conditions, true knowledge is only accessible by employing reason (Hergenhahn). Max succinctly summarized the value placed on knowledge of the mind over physical experience when he yelled to a woman from the financial company, "I'm not interested in your money! I'm trying to understand our world! I'm not interested in your materialism!" (Watson & Aronofsky, 1998).

From this scene, viewers can detect the emergence of psychology's age-old interest in a mind-body dualism. This film seems to argue that the body serves as a hindrance to the mind's ability to perceive reality in its purest form. Max's condition illustrates a rationalistic grasp of the relationship between mind and body. As Max approached the key to the pattern, his headaches and hallucinations escalated in number and intensity. One interpretation of this observation is that his body is violently attacking his reasoning by distressing his mind, blocking the move toward knowledge.

Max studied a phrenologist's diagram of the brain followed by a scene in which Max drew a Pythagorean golden rectangle on his shaved head, centered on a particular region. Max literally used a power drill to sink a shaft into the region of the brain on which he had drawn

the golden rectangle and lobotomizes himself. Consulting a Spurzheim phrenology chart (Hergenhahn, 2001) similar to the one used in the movie, Max appeared to have destroyed his "ideality" region. Ideality is defined as "existence in idea only" (Morris, 1970, p. 653). Ideality is strongly suggestive of the rationalist ideal of abstract perfection as opposed to flawed physicality. Pythagoras saw the natural world as imperfect. Perfection for Pythagoras was limited to the abstract world of mathematics, which could only be understood by reason (Hergenhahn). Max's mind eventually understood this view in the purest way, but his body rejected this knowledge. To save himself, Max was forced to destroy the point of interaction between his body and mind, exemplifying a form of dualism called psychophysical interactionism (Hergenhahn).

The presence of Plato's philosophical argument regarding reality and knowledge extends that of Pythagoras and even more strongly parallels the undertones of *Pi.* Plato's theory of forms, which is indebted to the work of Pythagoras, corresponds with the earlier mathematician's two-sided vision of the world in which there is empirical matter and a pure abstraction — called a "form" — that transcends this matter (Hergenhahn, 2001). What is phenomenally experienced originates from an interplay between these forms or ideas, which Plato believed were pure and absolute, and the essentially imperfect matter.

The rationalistic perspective asserts that the natural world is in constant flux. At the same time, the flawed senses are experiencing that world. The result is that the pure form is inherently superior to any knowledge attained from experience with the world (Hergenhahn). *Pi*'s depiction of this relationship came in the guise of the 216-digit number. The number itself was flawed because it was merely a representation of something immaterial and of the mind. As Max described the digits to the group of Jews, "It's just a number … the number is nothing. It's the meaning." (Watson & Aronofsky, 1998).

Max believed the physical world could be described using the 216-digit number. At another level, the number represented a spiral pattern Max observed. With further abstraction, the spiral represented a pattern that provided meaning to the universe, representing the essence or form underlying everything in the universe, including the stock market.

Max's eventual grasp of all of reality was not gained easily, and his movement from ignorance to knowledge could be described using Plato's "allegory of the cave" (Hergenhahn, 2001). This allegory describes humans as prisoners in a cave unable to see anything but shadows of the true world, signifying their limited understanding of reality. The financial group and religious Jews were examples of these chained humans, and the 216-digit number was their shadow. Their shackles (i.e., senses) prevented them from perceiving its true significance.

Plato's allegory described an individual escaping from his shackles and leaving the cave where he would be blinded by the sunlight. But after adjusting, he would realize the true nature of reality versus the deceiving shadows on a wall. This view is a concrete depiction of the rationalist's journey toward knowledge — one that Max seemed destined to undertake. Repeatedly in *Pi,* Max provided a "personal note" from his childhood. When he was six years old, his mother told him not to stare at the sun to avoid going blind. One day he stared, going blind initially, but, as Max described it, "Slowly light crept in … and I could see; but something else had changed inside of me; everything came into focus and for a moment I understood." (Watson & Aronofsky, 1998). These simple words predicted Max's final achievement of a pure perception of reality. But as noted before, the brightness overcame Max, and he rejected his state of awareness.

Pythagoras and Plato held a conception of reality that had little room for alternative epistemological approaches, except for that of rationalism. *Pi* and its protagonist are equally focused on rationalism as the singular, accurate epistemology. Most contemporary psychologists would criticize both the philosophers and the film for their lack of scientific methodology. Though psychology leaves room for rationalism as an influence, the discipline assigns much greater weight to empiricism as the appropriate path for obtaining knowledge. We cannot deny philosophers' influence over how we understand our minds and realities; the film bears witness to this viewpoint. *Pi* and its protagonist are deeply grounded in modernity. But as a philosophical and psychological study of knowledge and the process of attaining it, both Max and psychology are deeply rooted in the philosophy of Pythagoras and Plato.

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Psychological Analysis of *Shine*'s David Helfgott

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David Helfgott, the primary character in the film *Shine,* exhibits characteristics indicative of a psychological disorder. Although Helfgott may be merely an eccentric person who regresses into abnormal behavior in times of increased stress, a professional might argue that he demonstrates disorganized type schizophrenia. Schizophrenia is characterized by a loss of contact with reality, usually manifested through hallucinations or delusions. According to the American Psychiatric Association's (APA) Diagnostic and Statistical Manual of Mental Disorders (APA, 2000), the primary positive symptoms required to classify a person as disorganized type schizophrenia include confusion and incoherent thought or speech patterns. A negative symptom found in persons with this type of schizophrenia is flat or inappropriate affect, reflecting dulled or distorted emotions visible through unusual facial expressions or a lack thereof (APA). In addition, disorganized type schizophrenics exhibit deterioration in personal functioning, usually manifested as a degradation of physical hygiene and appearance, and an inability to maintain jobs and social relationships (APA). Common characteristics that are not required for this classification include significant social withdrawal, and constant and unexplainable giggling (APA). As with other types of schizophrenia, these symptoms must persist for six months or more to meet a DSM-IV classification.

Shine traces world class pianist David Helfgott's life from his years as a childhood virtuoso controlled by an overbearing father, through the negative effects of this relationship, to his return to the musical limelight. The film places significant emphasis on Helfgott's mastery of Rachmaninoff's Concerto No. 3, commonly considered one of the most difficult piano pieces.

There are several characteristics of Helfgott's lifestyle that hint at mental instability, including his atypical childhood, eccentric appearance, the time he spent in several mental institutions while taking prescription medication, and his temporary comatose-like state after his performance of Rachmaninoff's Concerto No. 3. If Helfgott had disorganized type schizophrenia, events in his childhood may have triggered the onset of this disease. Specifically, Helfgott's relationship with his father was a one-way dictatorship in which his father verbally and sometimes physically abused him. To the father, Helfgott's musical success was a threat to the family, and the father regularly told Helfgott that he was "lucky to have a family!" (Scott & Hicks, 1996). This abusive relationship culminated in Helfgott's near-permanent excommunication from his entire family as a result of his decision to accept a scholarship to the Royal College of Music in London.

While attending the Royal College of Music, Helfgott's physical appearance became more disheveled, his hair was long and unkempt, and his choice of clothing included wrinkled, uncoordinated wardrobe items. This chaotic motif overlapped into Helfgott's living environment, illustrated by an extremely untidy room with sheet music and many other objects scattered throughout his dorm room. In one instance, Helfgott retrieved his mail in public while not wearing any clothing on the lower half of his body, shocking a fellow resident.

Although some people would note these superficial characteristics of Helfgott's lifestyle as indications of psychological imbalance, there are two observations that suggest that these behaviors are simply eccentricity. First, most college students know at least one "slob" whose room parallels surrealist paintings in its lack of order and whose attire is less than presentable. Even Helfgott was aware of the appropriate times when he needed to appear suitable, as indicated by his black tie dress during his performances. Second, and more significant, was the likelihood that Helfgott's outward appearance was simply not something he considered important. After all, Helfgott was a world-class pianist, utterly devoted to his musical education. Because of his incredible natural ability, a viewer could presume that he simply did not care about his superficial appearance.

Strengthening the argument for the presence of a psychological disorder was Helfgott's admission to two mental institutions during his life. The first of the two residential treatment arrangements was a restricted group community that was in a closed compound and had nurses present at all times. During this confinement, Susan, David's sister, visited him, but he did not recognize her and relied on the nurse to explain who his visitor was:

[Helfgott] “Susan, do we know Susan?” [Nurse] “It’s your sister, David!” (Scott & Hicks, 1996).

In Helfgott’s subsequent institutionalization, the film did not explicitly state the type of treatment facility, but the portrayal best fits a less restricted group home in which Helfgott was permitted to leave the building as he pleased, although he was required to return by evening curfew. This restriction was evident when a worker for the home became distraught when Helfgott did not arrive at home until quite late. The lady who eventually brought home a giggling Helfgott commented that Helfgott “looked a bit lost,” which suggested why Helfgott’s mild supervision was necessary. Helfgott’s incoherent speech interrupted by inexplicable and incessant giggling and his apparent confusion were both indications of disorganized type schizophrenia. Additionally, during the institutionally monitored portion of his life, Helfgott was on prescription medication for no other apparent reason than that of his previous psychological disturbances.

With the culmination of Helfgott’s first successful performance of Rachmaninoff’s Concerto No. 3, he physically collapsed on the floor of the stage. Some viewers might argue that this fainting spell was indicative of another mental breakdown, from which Helfgott never fully recovered. However, an alternative explanation for his collapse might be that Helfgott’s mere performance of the piece was intense in its physical, mental, and emotional demands, as would be the case with anyone performing musical scores with nearly the same degree of complexity. The personal significance of the piece had also weighed heavily on Helfgott since he was a child, when his father told him “one day you will play the Rachmaninoff Concerto No. 3, and make me very proud” (Scott & Hicks, 1996). Further, Helfgott’s months, if not years, of devotion to this singular piece, in addition to the presence of thousands of onlookers at the performance, might have created an extremely taxing combination of conditions. Helfgott’s collapse might have been a profound catharsis, indicative of reaching the pinnacle of his career as a musician, but more significantly, of his entire existence.

Examining the film’s portrayal of an actual person’s life, the pianist David Helfgott, made the psychological analysis of the film both interesting and significant. Helfgott exhibited several behaviors that might have indicated psychological instability. However, a more conservative judgment suggests that the movie depicted a man whose relationship with his father had a negative effect on his personal growth. This explanation was strengthened by Helfgott’s lack of disorganized speech after his father passed away and he married a woman who had faith in him. As a final analysis of Helfgott’s mental state, I believe that “psychologically disordered” and “eccentric” are both valid and arguable positions. Personally, I am of the opinion that there was sufficient evidence supporting the diagnosis of a mental disorder, but I would encourage others to consider both possibilities when viewing David Helfgott as presented in *Shine.*

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Psychologically Speaking: An Interview with Robert J. Sternberg

Alisa R. Ramaekers, Nikki Wells, Jessica Caouette, Andrea Colwell, and Mary Beth Ahlum

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Robert J. Sternberg received his bachelor's degree from Yale University (advisor Endel Tulving) and his Ph.D. in cognitive psychology from Stanford University (advisor Gordon Bower). He is currently an IBM Professor of Psychology and Education at Yale University and Director of the Yale Center for the Psychology of Abilities, Competencies, and Expertise (PACE Center). Most psychologists and students know Dr. Sternberg for his triarchic theory of successful intelligence (Sternberg, 1996), his balance theory of wisdom (Sternberg, 1998a), and his triangular theory of love (Sternberg, 1986; 1998b). He has over 800-refereed publications and is one of the most highly cited authors (living or dead) in introductory psychology textbooks. In December, 2001 Dr. Sternberg was voted president-elect of the American Psychological Association (APA).

Dr. Sternberg visited Nebraska Wesleyan University in Lincoln, NE during October, 2001. He was keynote speaker for the annual Fawl Lecture Series in Psychology. Four Nebraska Wesleyan students: Alisa Ramaekers, Nikki Wells, Jessica Caouette, and Andrea Colwell conducted the interview. Psychology professors Mary Beth Ahlum and Jerry Bockoven were also in attendance. Ahlum coordinated preparation for the interview and writing of the manuscript.

Advice for Undergraduates

Caouette: What suggestions would you give undergraduate students?

Sternberg: As an undergraduate, you are trying to figure out what you really love to do, what you do well, and what you don't do well. I think it is also important for an undergraduate to decide what values he or she holds. Some people become lawyers because the money is better; some people do what their parents want them to do; what's important to me is knowing that there is a way to make a difference in the world.

Ramaekers: What advice do you have for students who are majoring in psychology?

Sternberg: Well, I think psychology is the greatest field in which to major. When you get worried about yourself or concerned about other people, psychology is really useful. Almost anything you learn in psychology has some kind of practical use. The best advice is to have a good attitude because then you are most likely to enjoy your major and do something with it. I became a psychologist because it's what I enjoy doing, and I still do. The challenge is to never become uninterested. The good point about this field is you can structure it so you just never get bored.

Personal Challenges

Wells: We read that your mother originally wanted you to go to law school (Morgeson, Seligman, Sternberg, Taylor, & Manning, 1999), and we were wondering how you dealt with that. Has your mother changed her outlook on you becoming an attorney?

Sternberg: She's 81 years old and probably would still view it as a viable option. There will always be people throughout your whole life, whether it's your parents, spouse, or friends, who have certain goals they want you to fulfill. It never stops. So one of the decisions you have to make in your life is what really matters to you. What do you want to accomplish? Do you want to spend your time making other people happy or making yourself happy?

What I discovered is that if you try to please others you usually don't succeed, and you end up not being very happy yourself. There have been a lot of people with different goals for me that I've encountered in my life. I listen to them, but ultimately I take responsibility for myself.

Caouette: How did you discover your research niche?

We extend thanks to Robert Sternberg for his time and pre-publication comments. We also appreciate Rachel Ahlum's editorial comments and Virginia Hartshorn's transcription of the interview.

Sternberg: I became interested in intelligence when I did poorly on IQ tests, and as a result of poor scores, my teachers in early elementary school treated me like I was behind.

Colwell: How did you get the opportunity to work with the Educational Testing Service (ETS) at 16 years of age (Morgeson et al., 1999)?

Sternberg: When I was 16 I wrote a letter to The Psychological Corporation expressing my interest in testing. I explained that I had done some work on tests of cognitive abilities when I was 13 years old. I don't think they had received a letter from someone who was 16 before, so they invited me to come to New York for an interview. Oddly enough, in the interview, they gave me a test, then hired me as a research assistant for the summer; the next summer they hired me again. I was paid $100 per week the first summer I was at The Psychological Corporation, which I thought was great. The second summer the person who hired me said, "Well, we're paying you $100 a week again," and I felt hurt that I got a zero percent raise. I finally got them up to a big $105 per week but realized that it's not productive to quibble over small things like that. So, feeling slightly rejected, I went to work with ETS in 1971. This string of events started with a seventh grade science project.

Colwell: Why did you get a C+ in your Introductory Psychology course, and how did you deal with getting that C+?

Sternberg: I didn't get a C+; I got a C that year. You thought I did much better than I actually did! I just didn't do well; it wasn't that I deserved a better grade, I just did poorly in the course. I wasn't, and I still am not very good at memorizing books and lectures. It was a strain to try and memorize the full course. When I later started teaching Introductory Psychology I tried to teach in a way that was more embracing of the different ways students learn. One problem with educational systems is they tend to value one kind of student. This student's strengths lie in memorization and the ability to repeat what the book says, or what the lecturer says, and I wasn't that way.

I tend to do research on topics I have had problems with, and so one of the areas our research [at the PACE Center] focuses on is the development of teaching methods that accommodate the learning styles of many students, not just the ones who have good memory.

Ramaekers: What challenges have you experienced throughout your career?

Sternberg: There are always challenges. The first challenge was when I did the science project [in seventh grade]. I gave IQ tests to some of the students. The school found out about it, and I was severely chastised. I was told if I ever brought the booklet and test to school again, the psychologist would burn it. That was a discouraging challenge but I decided that testing was what I wanted to do, and I was going to do it anyway.

Another challenge was when I was coming up for tenure and some referees commented that my research wasn't very good because I was working in the field of intelligence which was not considered a prestigious field in psychology. I said to a senior faculty member that I should have done the same work but called it something more prestigious like "thinking" or "problem solving." He said the more important matter was to be true to what was really important to me. I realized that you have to decide what is important to you in your life, and then stick up for those decisions. It's not a story about when you are 22 or 25 or 50 or 70, but rather throughout your whole life, there will be challenges to your principles, and you will have to make a decision about what is or is not important.

Mind in Context

Colwell: You've written about the interaction between the person and the context in which one finds oneself (Sternberg, 1994). In terms of fostering human potential, do the factors that apply to business success also apply to college success?

> *An important characteristic of people who achieve their goals in life is that they take failures and turn them into successes.*

Sternberg: The most determinant success in your life is commitment. You must decide what is important to you and work hard to achieve it. A lot of people

don't succeed simply because they don't tend to work to accomplish their goals. In life sometimes your luck is bad but when you're in college you feel as though "the world is your oyster." As you get older you realize how many factors you're unable to control. An important characteristic of people who achieve their goals in life is that they take failures and turn them into successes. The philosophy of "turning lemons into lemonade" allows them to learn from their failures and somehow transform the experience into something they can learn from and improve their life. That's what I've tried to do.

Advice to Educators

Colwell: How do you help students when they think that they have failed?

Sternberg: What I try to do first is minimize the number of students who think they failed. I do this by trying to teach in a way that consistently recognizes different kinds of skill. Part of what I do is analytical, part is creative, and part of it is practical.

I try very hard to talk about how the subject matter is useful because a lot of students are practical learners, or they have to be presented with the practical use of the information before they can be interested enough to learn it. An approach I take, when conducting assessments in my Intro Psych course, is to include not only a multiple-choice test but to also incorporate an array of essay topics from which students can pick. Some topics are analytical, some are creative, and still others are focused on practical implementation of concepts. From these topics, students are able to capitalize on their strengths but are also challenged to explore their weaknesses.

I also have an independent project in my Intro Psych course for which students can do whatever they want; they can compose a piece of music, create a piece of art, or conduct an experiment. The only limit to the project is their imagination and finding a way to connect it to the course. If they still are not doing as well as they could, we try to figure out what the problem is. Some of them are able to solve the puzzle; some aren't, but what I tell them is that in the long run it doesn't make that much difference. I got a C in Psychology and I'm a psychologist. Phil Zimbardo, the current president of the APA, also got a C in Introductory Psychology, and he's still a world-class psychologist and a really interesting guy.

When you are in college, you tend to overestimate how important grades are. In the long run, grades don't make that much difference. I tell students there is usually very little connection between what you do in an occupation and a grade in a course. Getting an A in an Introductory Psychology course, for example, won't do much to predict your research skill or affect your ability to get grants, let alone comment on your ability to get along with people. You do need a knowledge base, you can't succeed without one, but I don't think it matters whether you know every detail or fact. Most of the Introductory Psychology I've learned, I learned when I taught the course.

> *... very little connection between what you do in an occupation and a grade in a course.*

Wells: If you could offer some general advice to any educator what would that be?

Sternberg: There are many elements of being a good teacher, and I would give an educator the same advice I would give a student, that is, figure out who you are. If you ask yourself, who was the best teacher you had, in college or in high school, you realize they're not all cloned with each other. There's no cookie cutter mold of a good teacher. Good teachers are not all the same, and each one of us has to figure out our individual strengths. This is true in everything you do in your life whether it's teaching, being a parent, or being a spouse. You have to decide how you can do things in the way that works for you.

Wells: Do you feel that your mentors were positive models for you?

Sternberg: They were both wonderful. I had fantastic mentors [Endel Tulving and Gordon Bower]. I've dedicated a lot of books to them because I feel they positively affected my work. In terms of the kind of scholarly person I wanted to be, they were great examples. To give you an example, I wrote a paper that we submitted to Psychological Bulletin, and it was rejected. When I was referring to it, while writing another paper, I asked "Well what should I do? How do I cite the paper when it was rejected?" Endel Tulving said, "Well that's easy! Cite the paper as 'rejected by Psychological Bulletin.'" I didn't understand it at the time, but years later I understood.

When you say something in a paper that is somewhat controversial, you stand the chance to get rejected. My mentor was someone who was willing to go with it. If other people didn't like it, he would just try to persuade them that they were wrong. Just because a lot of people say "X is true," it doesn't make it true. Science is a lot about people following the leader, and he [my mentor] wasn't willing to follow what other people were doing. Another feature that I admire about Endel [Tulving] is that he's a complete person with a happy marriage, happy kids, and he plays tennis! He's balanced, admirable, and a very good person.

Gordon [Bower] was terrific. He wasn't always the first to do something; he might do it second, but he did it a little better than other people. So he was a leader that other people would follow, and he taught me the influence of writing a lot.

When I was in graduate school I felt sorry for myself because I was doing research that was different from what other people were doing. I now realize that many advisors would say, "Do it; it's my grant money so you better do what I'm doing." He [Gordon] allowed me to work on what I wanted; he knew that was the right course for me. He's had a lot of successful students, and I think it's because he led them to know their own way rather than trying to impose his structure on them. I've been very fortunate with the mentors I've had.

I hope my students have been [fortunate with mentors] also. I think my students have succeeded in many ways that are not all academic. One former student went into publishing, one went into public relations, one went into management and is involved in several levels of academia, and some former students work for a testing company. The important point is not that they follow any one path but that they follow the path that leads to them.

Wells: You mentioned that Endel [Tulving] was balanced in terms of his family and such. How have you found that balance?

Sternberg: At first, I felt disappointed that I hadn't followed in either of their footsteps, that I wasn't as scientifically distinguished as they were, but then I came to the conclusion that we all have to find our own paths, and I just took a different path. It's not a better path or worse path; it's just one that's more appropriate for me.

In terms of my career, I don't think I've been as successful in achieving my goals as I'd hoped to be. In our society, the status of formal testing and the status of education are still about the same, but we're trying and that's all we can do. We're trying to make a difference.

My children found what they wanted; Seth is working in corporate business, and Sara is an undergraduate who plans to go into public policy. They are both happy with what they are doing.

In terms of my home life, I play the cello and take cello lessons. I learned Spanish as an adult and now I'm trying to learn Russian. I think my career has been successful. I travel a lot. I would say my life's okay. It could be better, it could be much worse. It's what you make it.

Intellectual Development

Colwell: Tell us about your creative writing entitled "The Princess Grows Up: A Satiric Fairy Tale About Intellectual Development" (Sternberg, 1992).

Sternberg: In good talk and good business, there is always a story, and you can choose to be more explicit or less explicit, but either way you are always telling a story. What you have to ask yourself is, "How do I want to convey this story?" From there you can do it in a way that is somewhat fictional but, even if it is just narrative, tells the story. What you are trying to do is tell a story to sway people that it's a good story to believe in. You are telling one story and your competitor, with another theory, is telling a different story. You want people to like your story and not your competitor's story, or at least to appreciate the value of the story you have to offer.

Wells: In your tale (Sternberg, 1992), the princess visits planets in order to answer the question of how she will grow up intellectually. She visits the planets of Psychometrica, Piagetica, Neo-Piagetica, Cognitiva, Learnia, and Contexta. What would the princess encounter in "Sternbergia"?

Sternberg: I direct the PACE Center in which I have about three dozen people defining what they want to do and doing it. The Center is not based on following my theory, but rather on the notion that if we can

help people to find what they believe in, what is meaningful to them, we will do better work. Everything we do is "people friendly" because we believe that by working as a team, people can capitalize on what they do well, and they can compensate for what they don't do well.

There are things I don't do well, but there will be other people on the scene who will do those things better. And then the things I do do well, I can compensate for the others who don't do these things as well. The atmosphere at the Center is to help people find themselves and, in finding themselves, find a niche that will take care of their life, as well as everyone around them.

What I've found to be most important to me, and the other people at the PACE Center, is to impact science, as well as to advance education and society. We are a little different than other academic groups that are more focused on basic research. Everyone at the PACE Center wants to make a difference beyond science — the way teachers educate, to the way parents raise children. That's very important to us that science be applied in a way that makes a difference.

Thoughts on Intelligence Research

Caouette: Intelligence tests are widely used and some people say that the g-factor does a good job of measuring intelligence. Do you see any value in the g-factor?

Sternberg: If your goal is to get a baseline measure of memory and analytical skills, intelligence tests do a decent job. However, they don't hold for everyone equally well. My issue has never been that intelligence tests are terrible; it's that they are incomplete. What surprises me is why, after a hundred years, do people still have the same attitudes toward intelligence tests? It's been shown thousands of times that the g-factor predicts various abilities. So my question is, if it's been shown to predict achievement, say 3,826 times, why would you want to do the 3,827th study to show that the 3,826th worked well? Is it to collect a paycheck, or is there a certain security in knowing that you could do what 3,826 other people have done, or what? Why keep doing the same work over?

My issue has never been that intelligence tests are terrible; it's that they are incomplete.

Many of the people in the field just keep writing the same paper that Spearman wrote in 1904. It's not that they are writing the exact same paper as Spearman, but that they're so happy with repeating his work. It's been said before, and it's been tested that the g-factor predicts. I don't argue. This repetitive stance toward mental testing is like having a television show that runs forever. Because it's a pretty good show, no one tries to develop a new show. Because we have this show, we can run it a few more years and, after a hundred years, you would think that maybe people would want to have a second show, or a third show, but there are costs to that. The costs are that the newer tests don't have 100 years of research on them, so they're not going to be as precise and will need more development. To a lot of people, science is contrary to what one believes when one enters a field of research. The traditional researchers want to have little pats on the back and hear, "Yes, you did the same thing we've done, and isn't it nice that we all agree?"

When you defy the crowd, you encounter opposition. What I tell my students is that if you give a talk and everyone likes the talk, or if you write a paper and everyone likes the paper, you've failed because you didn't say anything new. If everyone likes what you're doing, what that means is that you're not taking any risks, you're not doing anything new, you're just rerunning old shows. So it is absolutely fine, from my point of view, if some people don't like what I do because that's my job to persuade, or try to persuade, those people to see things in a different way.

Standardized Tests

Ramaekers: How do you feel about standardized tests in use across the country? What advice would you give to those who are taking a standardized test and after they receive their scores?

Sternberg: I think that our country has gone kind of bananas on standardized testing. It's disappointing, and there are several reasons why this has happened. One reason is this obsession the country has with what I call "pseudo quantitative precision." That's the

idea that there is a number, and it must be ordinal.

A second problem is that we're a country that has created a power structure. Every country creates a power structure and stratifies its citizens, but in recent times, we've stratified on the basis of test scores. We use test scores so that individuals can gain entrance into prestigious universities, law schools, med schools, business schools, and dental schools. Students have to take all these tests so that the people in power can see who did well on the test. The people in power were good at these tests so now that they are making decisions, they want to look for other people like themselves.

A third reason [our country has gone bananas over standardized testing] is that all these results are being published. States publish test scores — *Peterson's Guide* publishes SAT scores — colleges try to raise their rankings in the *US News and World Report* annual colleges issue. Colleges and universities get into this competition and congratulate themselves when they go up two points in the *US News and World Report.* Instead of competing on variables that are important, they're competing on variables that aren't important. People who run colleges and universities want the magazine to make them look a little better so that more students will apply to their school.

Once you believe that something is important it's very hard to give up the idea of its importance. Many people believe that test scores are important, and this belief makes it hard for low test scorers to get into a graduate program. Experts say students who succeed in graduate school have high Graduate Record Exam (GRE) scores, but that's because those are the only students who have made it into graduate school! We never even get a chance to see how other people would do. So the superstition is reaffirmed, and you have a confirmation bias. You never try to disconfirm what you believe.

I don't have anything against standardized tests, I just think that the problem is not the test itself. The problem is when people make very high stakes decisions on the basis of tests that often measure fairly trivial skills.

Wells: What's your opinion of Bush's push for education and standardized testing?

Sternberg: Oh, the "Bush push"! I think he probably means well, but it's a mistake. I don't have anything against accountability and that's why I say that he means well. Accountability is important, but I don't think that the road to accountability is to keep ratcheting up the importance of standardized testing.

What's happening is that this reliance on standardized testing is impacting education in a negative way. We go into classes now, and teachers are just preparing students for the tests instead of educating the students. Teachers don't want to engage the students in serious science because it's not on the test. Teachers don't want to challenge the students in the arts because it's not on the test. Teachers don't want to conduct interesting exercises in history, where you have to imagine yourself being there, because it's not going to be on the test. What happens is that instead of educating the students you're preparing them for the test. And, the scores from one test often don't even transfer to another test. If a researcher develops a better placement test, it doesn't mean that students will do better on the California Achievement Test.

Schools are not even preparing students for taking tests. In general, schools are preparing students for a specific test. We need to think more broadly about accountability in terms of producing well educated students who have both a broad knowledge base and good test-taking skills.

> *What happens [with an reliance on standardized testing] is that instead of educating the students you're preparing them for the test.*

Thoughts on Wisdom

Ramaekers: Would you consider yourself to be a wise person?

Sternberg: No wise person considers him or herself to be a wise person. But in any case, I don't consider myself to be particularly wise.

Ramaekers: What is the "balance" in your balance theory of wisdom?

Sternberg: You are balancing your wisdom with other

people and with institutions. The institution includes anything ranging from your department, to your university, to your community, to your state, to your country, to God. You balance those interests over the short and long term for a perfect balance. Once you decide on what your weaknesses are, it is up to you to change yourself because the environment will not change them for you.

Colwell: How do you think abilities, wisdom, and intelligence change as you age?

Sternberg: There are obviously biological factors involved as well as your attitude toward life. You can decide to be a learner and try to improve yourself, or you can decide to close yourself off and think that you know everything. You can decide that you can learn at any age. The older I get, the more I realize what I don't know and what I need to know. I think you need to challenge yourself and prevent yourself from becoming entrenched, or stuck. A person can't start thinking, "I'm a professor, a teacher, an executive, so what a great person I am!" Rather take the attitude that I have much to learn, and because I have that attitude, I will end up doing a lot of things that would be closed off to me if I thought that life was a one-way street. To me teaching/learning is a magical process. When you are a teacher, you are also a learner, and a learner is also a teacher. When you are a learner, you are teaching other people, and when you are a teacher you should always be learning. I think that you can continue that great servility within biological limitations.

Wells: Do you think society inhibits wisdom?

Sternberg: I think society can inhibit wisdom by putting an overemphasis on standardized tests. The way I define wisdom is when you apply your intelligence, successful intelligence, in order to achieve a common good. In other words, what you're trying to do is not just what's good for you. You care about what's good for you, but you also care about what is good for other people, and what is good for the institution. It's a balancing of interests, not just your own interest, but also your interest in others.

In our educational system we place too much emphasis on the acquisition of knowledge rather than how knowledge is used. Schools could put much more emphasis on how students are going to use knowledge for a good end.

Another mistake is that we are a very, very individualistic society. What can end up happening, for instance, is at college they train you how to get ahead, but sometimes you get ahead at other peoples' expense. In the long run, when you do that, you hurt other people and those in the group you are a part of. I would like to see us put less emphasis on test scores and more emphasis on developing students who will use the knowledge they have for a wise end.

> *… we place too much emphasis on the acquisition of knowledge rather than how knowledge is used.*

It's important to use knowledge wisely. What I try to do with my own students is to be a role model by showing them how I think knowledge can be used for a good end.

We try to use the scientific knowledge we gather [at PACE] for improving education. We have a lot of education projects, military projects for improving leadership development, a number of projects in Africa, and studies in India, China, Jamaica, and Europe. We try to help people in other cultures improve their quality of life with education.

Toward the Future

Ramaekers: What is your current research focus?

Sternberg: We have about a dozen grants and contracts, so we have quite a few projects going on. The areas in which we are working are intelligence, creativity, and leadership. If any of your readers are interested our website for the PACE Center is http://www.yale.edu/pace. I say "we" because we work as a team. There are a few projects I do on my own, but there's almost nothing I can say that is just mine.

Ramaekers: If you become APA president, what will your goals be?

Sternberg: One goal is education. I would like to have more of an impact on education because psychology has a lot to offer. My second goal is what I call "unified psychology." We have a paper coming out in *American Psychologist* in December (Sternberg, 2001) called "Unified Psychology." The idea is that many of the divisions, like the practitioner and the patient divisions, are artificial. My third goal is that

I'm interested in international psychology and want to improve relations with psychologists and psychological organizations in other countries. Americans are a little bit chauvinistic, at least in psychology, but actually in other ways as well. About half the people at the PACE Center are from abroad. We have many visitors from abroad, and we have a lot to offer to people from other countries. I would like psychologists to appreciate the importance of culture. So those are three of my main goals.

Ramaekers: How do you see the focus of psychology shifting in the future?

Sternberg: There are two questions: "How can psychology change?" and "How can I change?" The field of psychology is becoming more biological and more narrowly focused. Psychologists are highly educated, and they are becoming more and more specialized. In some ways psychology is becoming more microscopic in the direction it takes.

My career has spanned 27 years. Eventually you realize there is no one approach that gives you the answer. What I would like to see is the realization that there is not a single answer and that we have to work together to understand and concentrate on the phenomena rather than the approaches.

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Psychologically Speaking: An Interview with Ludy T. Benjamin, Jr.

Tara Hauger, Julie Grohmann, and Ramie Cooney

Creighton University

Dr. Ludy T. Benjamin, Jr. received his bachelor's degree from the University of Texas and his doctorate from Texas Christian University. He currently holds a University Professorship in Teaching Excellence and the Fasken Chair in Distinguished Teaching at Texas A&M University. Dr. Benjamin has received numerous teaching awards including the Distinguished Teaching in Psychology Award from the American Psychological Foundation, the Distinguished Faculty Achievement Award in Teaching from Texas A&M University, and the Psi Chi Teacher of the Year.

Dr. Benjamin is an American Psychological Association (APA) and American Psychological Society (APS) fellow and recipient of the prestigious Distinguished Career Contributions to Education and Training Award from APA in 2001. His research on the history of psychology has resulted in the publication of 13 books, 24 book chapters, and over 50 articles. This research program has focused on psychology's transformation to a laboratory science including the importance of early psychologists (e.g., Harry Kirke Wolfe) and implications for public understanding of psychology. His research laboratory at Texas A&M is grant supported and contains thousands of archived books and articles.

Dr. Benjamin visited Creighton University during November of 2001 as the keynote speaker for the Eighth Annual Nebraska Psychological Society Convention hosted by Creighton University. His talk, "Origins of the New Psychology in Nebraska," examined the life and contributions of Harry Kirke Wolfe. Dr. Benjamin was interviewed by Julie Grohmann and Tara Hauger, Creighton University students, as well as Dr. Ramie Cooney, Assistant Professor of Psychology at Creighton University.

Interest in the Field

Hauger: How did you become interested in the field of psychology?

Benjamin: When I was an undergraduate, I was interested in lots of different subjects. In fact I liked biology, history, English, anthropology, and psychology. I think that I could have majored in any of them. I went into psychology, I guess, because it seemed to embody so many subfields, and behavior is pretty interesting. It is hard to imagine how anybody could not be interested in behavior; it is a pretty exciting field. One of the reasons I eventually gravitated to the history of psychology, ultimately, was that early interest in history.

Grohmann: Were there any particular classes that you took that served as a catalyst for your interest in psychology?

Benjamin: I remember two outstanding psychology professors. One taught child psychology in an auditorium with about 500 students and lectured from a stage. He was a very fascinating lecturer. The other course was in perception. The professor was brand new, but he liked demonstrations. He did today what we call active learning, although I didn't know it by that label. I went to class every day excited and that was very stimulating. I have thought about that class many times. It certainly affected my choice of study as a graduate student because by then I had decided that I wanted to be a college professor, but I didn't really know in what discipline.

Grohmann: You mention several areas of psychology that you are interested in. Why did you become interested in the history of psychology as a specialty?

Benjamin: When I went to Nebraska Wesleyan University for my first job, my department head at Wesleyan assigned me to teach the history of psychology course. I tried to study two or three pages ahead of my students. I enjoyed that class, but I started looking for things I could use that were not in the book. You know, something I could talk about that was different from what they were reading about. At Wesleyan in those days, probably 85% of students came from Nebraska. I found a reference to Harry Kirke Wolfe, who got his Ph.D. and came back to Nebraska, to open a laboratory. I talked to the

We extend thanks to Ludy T. Benjamin, Jr. for his time and pre-publication comments.

archivist at the University of Nebraska's Love Library, and he said "Oh, we've got some of his papers down here from his time when he was here, some of his lectures." I told my students what I had learned. Eventually, I was invited to give a talk on the history of the psychology department at the University of Nebraska in Lincoln. After that talk, one of the faculty members came up to me and asked if I had thought about publishing it. I thought, "Publish? These are my lecture notes." That is how I got into it. The history of psychology became something I really enjoyed — a passion.

Hauger: Was there anything other than being a professor that you considered doing?

Benjamin: Well, I went to college to become a dentist. My dad wanted me to be a doctor, but I really liked playing golf. At that time, golf was important to me. I thought you couldn't play golf as a doctor because you had to be on call. I saw medical fields as being more demanding on my time than I wanted. I thought as a dentist that you would not have the same emergency situations, and you could set up your practice so that you would be done by 2:00 to be on the first tee by 2:30 P.M.

But, I changed my mind. I think my poor grades in chemistry helped make this decision. Being a college professor looked very promising because I thought college professors did not work very hard. I was an undergraduate at the University of Texas. A lot of my professors seemed to come in late, and they disappeared early. I assumed they were home or out on the golf course, playing tennis, or doing something relaxing. I did not know they were in their labs working themselves silly. I think I was always interested in teaching, but I did not want to teach in the public schools. So, being a college professor seemed to be a great job. I thought that, as a psychologist, I could do a number of things.

Cooney: Would you recommend a history of psychology course for every student?

Benjamin: I do not understand how you have a good understanding of contemporary psychology without a background in history. For example, you cannot understand where managed care comes from unless you know the history of American mental asylums in the 19th century. It is important to have at least an understanding of how the mental asylum evolved because that shaped America's views toward the mentally ill and toward the treatment of the mentally ill.

I do not understand how you have a good understanding of contemporary psychology without a background in history.

There is just so much of that in contemporary psychology and contemporary America that I think the history of psychology helps us understand. I tell my students that one of the things you learn is humility for your own views and tolerance for the views of others. I think that is one of the lessons of history. Those lessons of the past are very important because people will be more tolerant of students or faculty who would speak out and who would have different opinions.

Researching the History of Psychology

Cooney: So, what would you recommend that students who are interested in the history of psychology do to get more involved? In your NPS keynote address (Benjamin, 2001), you showed a lot of documents (e.g., class schedules). How did you come across these materials?

Benjamin: The same way that you collect data in a developmental study or a cognitive study. You go to the data, which are the raw documents wherever they might be preserved. As you might imagine, it is a real hit and miss record, but archives exist all over. Mostly these are the collections of those individuals whose work is germane to the topic you are interested in. I think one of the very exciting things in doing history research is working with the raw materials and that means working in archives, and for researching history of psychology that means going to Akron, Ohio. It's called AHAP, which stands for Archives of the History of American Psychology. AHAP contains the correspondence, unpublished manuscripts, case studies, clinical records, patients' records, and the records of the more than 750 psychologists who are listed on their website. There is a lot of old equipment and every kind of psychological test you have ever heard of at AHAP. They go back to the very beginnings of psychology. AHAP at Akron is the biggest psychology collection in America.

Hauger: Can you get this information over the Internet or do you have to travel to Akron?

Benjamin: You would have to travel to the archives and in some cases the data will be on microfilm. Scholars go to these collections and work. For example, there is something special about holding in your hand the letters that William James wrote. It means so much more to sit in the Harvard archives, as opposed to looking at the computer screen.

Cooney: Do you have any personal archives? Can you describe them?

Benjamin: Yes, it is really quite a large collection, and I have been building it for the 30 years I have been an academic. It occupies, now, an enormous room at home and two large rooms in the psychology building at Texas A&M. I have about 4,000 books in psychology, and the heart of the collection is reprints, articles, and letters from various archival collections and microfilm journals.

So there are thousands of books and journals, all cross-referenced. You can search in any of them by person, subject, or you can go to the subject files. There is information on deceit, depression, eating disorders, and so on. It is also a lab that my students in the undergraduate history and graduate history classes use.

Cooney: How did you begin your study of the history of psychology?

Benjamin: Let me tell you about one event that was really important in getting me started toward being a full-time history of psychology researcher. When I was at Nebraska Wesleyan I did not have a whole lot of money. I remember getting a paper accepted at the American Psychological Association (APA) meeting in New Orleans in 1974. I wanted to go because I thought that I would never get another paper accepted at APA; so I needed to go that year. My paper was on what I had discovered about Wolfe, Nebraska, and his impact on students. Marion McPherson came up to me after the talk and said, "Do you know that there are papers related to some of these Nebraska psychologists at Akron at the Archives of the History of American Psychology. Have you heard of the archives?" I said that I had not. She told me about a fellowship that I applied for and was awarded $350. I got a round trip bus ticket from Lincoln to Akron, and I stayed in the dorm while doing research at the archives. I xeroxed about 1,000 pages that trip. I packed all those papers in my suitcase and mailed all my underwear and clothes home.

Cooney: Because the papers were more important?

Benjamin: Oh, absolutely. I could buy new underwear, but if I lost those papers in the mail, I could not go to find and copy them over again. That really started me as a historian in psychology. I got an NSF grant a few years ago for $700,000. I can promise you it in no way gave me the kind of excitement I got when I received that $350 fellowship from the University of Akron back in 1975.

The Psychological Roundtable

Benjamin: Something else came out of that visit to Akron in 1975 when I was researching Harry Hollingworth — a famous applied psychologist. I had gone to work in his papers a little bit. When I was pulling out some of his papers, I discovered another folder, which was not something that I had intended to look at. As I started to put it back, I saw that it had the initials P.R.T. on it. I wondered what they meant. I opened it and there were four or five letters inside. They were not relevant to my research, but there was something about them that caught my interest. That is one of the things that happens in the archives — you end up reading other things, but that's part of the fun. I was reading these letters, and it was clear they were discussing a secret psychological society. It was called the Psychological Roundtable, and it had started in the early 1930s. It was run by some kind of a group called the Secret Six, who issued these invitations. Some of these names I recognized; they were very famous psychologists, who were still alive. When I got back to Lincoln, eventually I started to write to some of these people.

> *I was reading these letters, and it was clear they were discussing a secret psychological society.*

Grohmann: Who were these people?

Benjamin: They were Neal Miller, James Gibson, S. S. Stevens, and others. Many of the big name researchers on the East Coast were a part of this group. I started writing to them, eventually writing to over a hundred of them.

Cooney: So they existed simply for the motivation to share intellectual ideas?

Benjamin: Yes, it was incredible. People who wrote to me from that era would say that it was intellectually the most stimulating thing that they had done. Around the room would be the brightest minds in psychology, and you were not to talk about anything you published. You could talk about things you were doing or going to do. People would rip your work apart, put it back together, and you would go out of there with a study five times better than you started with. That was certainly something that afforded me opportunities to correspond with some of the most famous psychologists of that time. Those were a couple of the things that defined me and helped me to understand that I could take this interest and make it into a job.

Grohmann: Because history affects us, how have World War I, World War II, and other events influenced our study of psychology?

Benjamin: That is a first rate question. One of the goals of my class is to help students understand that psychology never occurs in a vacuum and that psychology is always part of a broader historical context. Historians talk about it in terms of internal history versus external history. The rest of the story is exactly what you are talking about — what was happening that affected psychology and caused psychologists to get interested in the field at that time? All of these things do affect psychologists in powerful ways. Both World Wars had an enormous impact on psychology, particularly applied psychology. Applied psychology certainly gets a big boost after World War I because a lot of psychologists, who were mostly experimentalists in their academic settings, ended up in applied settings in the war. So many of them shifted their research to focus on real world problems after the war.

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In World War II, the big winner for the field was clinical psychology. The modern professional clinical psychologist comes out of World War II. The American government realized by 1943 that we were going to win; it was just a matter of time before we would win in Europe and in Japan. One of the things that we started dealing with was the recognition that psychological services were needed for returning soldiers. Congress and the Vetrans Administration (V.A.) realized that there were not enough psychiatrists. So, the government turned to the V.A. and to the American Psychological Association requesting a way to identify clinical psychologists who could treat individuals in need of psychological services.

Hauger: What other societal events led to changes in psychology?

Benjamin: By this time, American psychologists realized that nobody was talking about any kind of standardization. So, a bunch of them, about 73 altogether, got together in Boulder, CO in August of 1949. They created what is called the “Boulder Model” or “Scientist-Practitioner Model” of professional training. These things happened, that is, psychology changed in dramatic ways, because of what was happening in American and world history.

Psychology’s ideas about sex differences changed dramatically after the passage of 19th Amendment giving women the right to vote in America. In the 1930s, there was a new group that formed in psychology called SPSSI (Division 9 in APA today). The Society for the Psychological Study of Social Issues would have only been founded in the ‘30s, not in the ‘20s and not in the ‘40s. It is a group founded to promote the application of psychology to social problems, like poverty, unemployment, and racial prejudice. If you think about what was going on in the ‘30s in America (e.g., major depression, huge unemployment, racial tensions, & immigration), you have so many Americans trying to find jobs with the flood of people from Europe, mostly Jews fleeing from the Nazi regime. You cannot explain the history of SPSSI, unless you know what was happening in America and the world in the ‘30s.

Cooney: Can you tell us what it was about American society that caused psychology to flourish here rather than in Europe?

Benjamin: It became much more applied here.

Americans, you could argue, are more pragmatic or practical. Americans just think, "What can we do with it? If we can't do anything with it then it's useless." I think that is why applied psychology was so popular in America, among both American psychologists and the American people. There was another part of that, which I will mention, psychoanalysis. Freud came to this country in 1909, his only visit, and psychoanalysis took off in America. Gale Hornstein writes in a 1992 *American Psychologist* article that by the 1920s America had wholly embraced psychoanalysis as the one true psychology. Now it is not that a lot of psychologists have become psychoanalysts, but psychoanalytic notions in the rest of culture have raised a lot of American interest in psychotherapy, clinical psychology, and related fields. There has just been a much greater acceptance of those fields in America than there was, for example, in Europe. I think that has helped psychology flourish. Of course, it is a lot more nuanced than that; that is a broad stroke for you.

Perception and Importance of Psychology

Hauger: Your work discusses that psychologists do not agree with the image that the public has about psychology (Wood, Jones, & Benjamin, 1986). Is there anything in particular that they are doing to fight that perception?

Benjamin: The APA, along with state psychological associations, such as the Nebraska Psychological Association, have been funneling some money into public service announcements and other types of advertising campaigns that would help people identify what psychology is as a field. You know, things like how would you find a psychologist if you wanted to see a psychologist, how would you evaluate if you were getting good services from a psychologist, or what kinds of things do psychologists do. The advertisements help get people over the stigma of seeking mental health assistance. So there have been efforts funded by psychological organizations to better educate the public, which is truly a double-edged goal.

One, it is to educate the public, but it is also to create a better market for the practicing psychologist. There is still a huge problem in terms of accessibility made more difficult now by managed care and the fact that mental health funding, as well as mental health insurance payments have been cut by more than 30% in the last few years. People still think that if you get tuberculosis, you didn't mean to. It happened, and you just caught it. But, if you are depressed, it must have been something you did. When you look at the data, and you know what the percentages are for the likelihood that someone — yourself, a loved one, a child, a parent, or a spouse — will experience depression in a lifetime, it is pretty damn high.

Grohmann: You have discussed public perception and the history of psychology. Where do you see the trend going in the future? Do you see people becoming more aware of psychology as a field, or do you see it continuing the same way that it is right now?

Benjamin: Boy, that is a tough one. I think psychology has enormous potential for the 21st century. For example, 7 of the 10 major causes of death have huge psychological components. Today, the three leading causes of death are heart disease, cancer, and stroke. All of those have huge lifestyle components. Other problems that psychologists are involved in include compliance with medical regimes, getting people to do things such as get annual pap smears and mammograms when they should be doing them. For men, they should be doing PSA tests for prostate, and colorectal exams for men and women.

> *... psychology has enormous potential for the 21st century. For example, 7 of the 10 major causes of death have huge psychological components.*

Additional problems that psychology can become involved in include marriage and divorce issues, child abuse, and unemployment. The whole nature of the world is changing with increased information processing capabilities. People used to work factory jobs at General Motors, but robots now do many of those jobs. So, those people have got to find a job and most involve minimal computer skills. Family violence, school violence, racism, all kinds of prejudice, sexism, environmental issues, are very heavily related to behavioral issues. I think job prospects in the 21st century for psychologists are tremendous. I don't think there is a better field to get involved in these days.

Concluding Thoughts

Cooney: For the sake of time, let's think about asking you one final question. It would be interesting to know what you consider your greatest life achievements, at this point.

Benjamin: Well, I'll say one personal and one academic life achievement. Personally, I really take great pride in my marriage and my family. I was 18 when I married my wife; she was 19, and we had a child almost immediately. That was 37 years ago, and we were both juniors in college at the time. It was not supposed to work by statistics. She is still my best friend, has been always, and vice versa. We have a wonderful marriage, and I do not know how much credit to take for that because honestly I do not know that I have worked hard at it. Although, I think we certainly do things that are good in a marriage. The fact that we had that feeling about one another then, and we still have those feelings 37 years later, I consider that a great achievement. I would mention our girls and say we were blessed with two daughters who are people of high moral character.

> *... I think that the Wolfe book (Benjamin, 1991) probably is my greatest accomplishment ...*

In terms of things I have done professionally, I think that the Wolfe book (Benjamin, 1991) probably is my greatest accomplishment even though it has been 10 years since I worked on that book. I did not think I would publish the book because there are too many gaps in Wolfe's life and too much information I did not have. I had gone everywhere I could think of to try and find out information about him, and I just felt like I did not have enough for the book. Joe McV. Hunt, who was a former APA president and a Nebraska native, told me after many conversations, "You have all you can ever know about him. You either write the book or not. You do not need to put it off another 20 years because you're not going to know anymore." So I finally decided, "I'll give this a shot," and I wrote it. I am proud of that book, but not because I think it is a great biography. I am a great reader of biographies, and I know enough about good biographies to know it is not a great biography. The book chronicles the life of someone who would not be known today if I had not done that work. You can now pick up many history of psychology and teaching books and see him mentioned. When I started trying to research him his name could not be found anywhere. He became important to me as I realized this was a man who was successful because he had no personal ambition; instead he gave his life to his students, helping them to achieve great things in psychology. I am proud of the fact that he is no longer obscure. I took this man who deserved to be remembered, and I gave him at least a little place in history.

Grohmann: Thank you. We really appreciate you taking the time to answer these questions, and you have given us a lot of information.

References

Benjamin, L. T., Jr. (1999). *Harry Kirk Wolfe: Pioneer in Psychology.* Lincoln, NE: University of Nebraska Press.

Benjamin, L. T, Jr. (2001, November). *Origins of the New Psychology in Nebraska.* Keynote address at the Eighth Annual Nebraska Psychological Society Convention. Omaha, NE.

Wood, W., Jones, M., & Benjamin, L. T. (1986). Surveying psychology's public image. *American Psychologist, 41,* 947-953.

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.

Note to Faculty:

This task would work especially well in courses that instructors have students debate controversial issues. Faculty are in an ideal position to identify quality manuscripts on each side of the issue and to encourage students about submitting their manuscripts.

Procedures:

1. The postmarked deadline for submission to this Special Features section is December 2, 2002.
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 writing of the essay represents primarily the work of the undergraduate student.

Send submissions to:

Dr. Richard L. Miller
Department of Psychology
University of Nebraska at Kearney
Kearney, NE 68849

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 – Dramatic

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. 34-53) 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 December 2, 2002.
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 writing of the essay represents primarily the work of the undergraduate student.

Send submissions to:

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Kearney, NE 68849

Invitation to Contribute to the Special Features Section—III

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 – Current Events

Submit a 3-5 page manuscript that contains a psychological analysis of a current event. News stories may be analyzed from the perspective of any content area in psychology. The manuscript should describe the particular event and use psychological principles to explain people's reactions to that event.

Example 1: Several psychological theories could be used to describe people's reactions to the destruction of the World Trade Center on September 11, 2001. Terror management research has often shown that after reminders of mortality people show greater investment in and support for groups to which they belong and tend to derogate groups that threaten their worldview (Harmon-Hones, Greenberg, Solomon, & Simon, 1996). Several studies have shown the link between mortality salience and nationalistic bias (see Greenberg, Simon, Pyszczynski, & Solomon, 1992). Consistent with these findings, the news reported that prejudice towards African Americans decreased noticeably after 9/11 as citizens began to see all Americans as more similar than different.

Example 2: A psychological concept that could be applied to the events of September 11 would be that of bounded rationality, which is the tendency to think unclearly about environmental hazards prior to their occurrence (Slovic, Kunreuther, & White, 1974). Work in environmental psychology would help explain why we were so surprised by this terrorist act.

The analysis of a news event should include citations of specific studies and be linked to aspects of the news story. Authors could choose to apply several psychological concepts to a single event or to use one psychological theory or concept to explain different aspects associated with the event.

Procedures:

1. The postmarked deadline for submission to the next issue's Special Features section is December 2, 2002.
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 writing of the essay represents primarily the work of the undergraduate student.

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