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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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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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2/06

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Editorial - Journal History

As I prepare this final issue of the *Journal of Psychological Inquiry (JPI)* in my capacity as managing editor, I want to reflect on the journal's origin. In *JPI*'s first issue (1996), I commented,

“a more extensive discussion about starting this journal occurred at The Fourteenth Annual Great Plains Students' Psychology Convention held in Kansas City, MO on February 18 and 19, 1994.”

Although that statement was accurate, it did not tell the entire story. I would like to describe some of the events that preceded and followed that February meeting.

The earliest formal discussion of a student journal, which would become *JPI*, occurred at the inaugural meeting of the Nebraska Psychological Society (NPS) on September 25, 1993 at Nebraska Wesleyan University (NWU) in Lincoln, NE. The minutes of that meeting recorded the names of faculty in attendance from Bellevue College (now University), Creighton University, Doane College, NWU, University of Nebraska at Kearney, and University of Nebraska - Lincoln. The minutes also reported, “Keith suggested that ... NPS sponsor a student journal, wherein outstanding student papers could be published.” The next paragraph read, “... issues were deferred to the Caretaker Executive Board.”

Members of that board, including Ken Keith, Richard Miller, Robert Rycek, Roxanne Sullivan, and Mark Ware, met at NWU on January 21, 1994. The following quotation from the minutes of that meeting constitutes documentation of a strong impetus for establishing an undergraduate journal.

“The group talked at some length regarding the possibility of sponsoring an undergraduate psychology journal ... the board agreed that we should act to develop more information. Further, it was agreed that, should we become involved in the future, Ware might make an excellent editor for such a journal - a possibility that he was willing to take under consideration.”

During the next month, discussions followed with members of PERK and the Great Plains Students' Psychology Convention (GPSPC) and in particular with Stephen Davis from Emporia State University. The outgrowth of those discussions resulted in the “more extensive discussion about starting this journal at The Fourteenth Annual Great Plains Students' Psychology Convention.”

Further momentum for initiating the journal occurred at the NPS retreat on April 29, 1994 in Omaha, NE. Discussion focused on a memo MW had written on April 1. That memo included suggestions for the number of editors and their responsibilities as well as for the review process, production, and funding. During that spring, there were several suggested titles for the journal, including *Journal of Psychological Inquiry*, *Studies in Psychological Science*, and *Psychological Investigation*. Before the end of the spring semester, Richard Miller submitted a proposal for a Special Features section to the new journal.

The first meeting of the nascent *JPI* editorial board convened on June 9, 1994 in Overland Park, KS at the Best Western Hallmark Inn. Persons in attendance included Stephen Davis, Gwen Murdock, Robert Rycek, Marilyn Turner, and Mark Ware. Topics for discussion included eligibility for submission, instructions for contributors, the review process, subsequent processing of manuscripts, journal production, cost of production, and sources of funding. Additional discussion included creating a separate nonprofit corporation (Great Plains Behavioral Research Association) for processing funding and securing copyright protection for the journal.

Among outcomes of the first editorial board meeting was the addition of a Special Features section with Richard Miller as its editor. Additionally, we agreed to hold reviewer workshops at future gatherings of the GPSPC. The purpose of such workshops was to introduce reviewers to the philosophy, policies, and practices of the journal. The first such workshop was held at the home of Stephen Davis in Emporia, KS on March 31, 1995. The appearance of *JPI*'s first issue was in the spring of 1996. For those of you who are counting, the gestation period for *JPI* was almost half again as long as that of an Asian elephant, but I think the wait for the journal was worth it!

Finally, I would like to reiterate my comment in the editorial that appeared in this year's first issue of *JPI*. “I am pleased to announce that Susan Burns from Morningside College in Sioux City, IA has accepted the position of Managing Editor-Elect for the *Journal of Psychological Inquiry*.” Please direct future inquires regarding *JPI* to Susan at burns@morningside.edu

Mark E. Ware
Managing Editor

Notes:

Affects of Culture and Experience on Judgments of Attractiveness

Bradley J. Stastny

University of Nebraska at Kearney

Previous research has demonstrated that humans form a clear preference for attractive faces during infancy (Langlois, Ritter, Roggman, & Vaughn, 1991). The purpose of this research was to determine if these views of attractiveness are set in infancy or modified across a lifetime. The sample was elementary school children from Northern Europe attending an international school in Mallorca, Spain. Participants viewed various equally attractive prototype photos of typical looking Northern European and Spanish children. Younger participants (i.e., 3rd graders) rated the Spanish children as less attractive than children whose appearance was similar to their own. Results were reversed for older participants (9th graders). Findings were consistent with some theoretical predictions.

Although the adage states that “beauty is only skin deep,” empirical research on the relation between appearance and attraction suggests that appearance (i.e., good looks) is very important (Berscheid, 1980). Adults and children prefer attractive versus unattractive individuals, they attribute positive qualities and abilities to attractive individuals and negative qualities and abilities to unattractive individuals, and they behave differently toward attractive and unattractive persons (Berscheid & Walster, 1974; Langlois, 1986). Furthermore, adults and children use similar standards in evaluating the attractiveness of other people (Maruyama & Miller, 1981; Sorell & Nowak, 1981). Even different ethnic groups show substantial agreement in their attractiveness judgments of members of their group as well as different ethnic groups (Cunningham, 1986).

What are the origins of these preferences for attractive individuals? Many people believe that individuals acquire standards of attractiveness gradually and that process is largely a product of the media. However, empirical research conducted over the past two decades has contradicted this widely held belief. Langlois et al. (1987) showed that even young infants, without exposure to media, prefer attractive to unattractive female faces and that these preferences are similar to preferences that adults have for attractive faces. Infants’ preference for attractive-

ness extends to Caucasian and African American female faces, infant faces, and male faces (Langlois, et al., 1991).

How might such early preferences for attractiveness be explained? One process might be prototype formation, a cognitive ability common to both infants and adults (Rhodes & Tremewan, 1996). A prototype refers to the mathematical average or mean value of the attributes of a category. Langlois and Roggman (1990) created naturalistic averaged faces (prototypes) by combining individual faces to create a composite image using digital averaging procedures. They found that both infants and adults preferred composite faces because these composites represented the central tendency or average of the population of facial configurations and are thus prototypical. Both infants and adults are capable of abstracting a prototype after viewing exemplars of a class or category. The prototype of a category, because of its standing as a unique and representative member of a category, is typically the most preferred member of that category. Research has demonstrated that participants prefer prototypes of several types of categories as opposed to less prototypical exemplars (Martindale & Moore, 1988; Smith & Melara, 1990; Whitfield & Slatter, 1979).

Although the ability to form prototypes is probably innate (Walton & Bower, 1993), the particular exemplar faces that individuals encounter are averaged and environmentally determined. Thus, within a given culture, the youngest children will have highly idiosyncratic standards of attractiveness based on their particular experience because they are in the process of forming a prototype. How much experience with faces is necessary before infants form a facial prototype representing the central tendency of the population of a given culture? Previous research suggests that within the first 6 months of life, infants view a sufficient number of faces to create a culturally relevant prototype (Langlois & Roggman, 1990; Langlois, Roggman & Musselman, 1994).

In two studies attempting to extend the results of Langlois and colleagues (Langlois & Roggman, 1990;

*Readers can find a description for the context of this award in: Ware, M. (2006). Editorial. *Journal of Psychological Inquiry*, 11, p. 5.

Richard Miller from the University of Nebraska at Kearney was faculty sponsor for this research project.

Langlois et al., 1994), Stastny, Middleton, Hemphill, and Keller, (2004) and Stastny and Petermann, (2005) attempted to discover if early childhood interaction between infants, ages 3 to 6 months, and their early frequent human contacts (e.g., parents) would influence the individual's long-term perception of attractiveness. College students compared faces averaged from photographs of strangers to equally attractive faces averaged from strangers along with family members, using pictures of the parents taken when the college student was 3-6 months old. The results suggested that college-aged participants preferred prototypical faces that included a photo of a family member in the creation of the prototype. Perhaps our earliest contacts can have important long-term effects on who we find attractive.

The experimenter designed the present study to determine whether this prototype is set in infancy or subject to change during the lifespan, and if it is subject to change, at what stage can modifications be detected? I hypothesized that participants' more recent exposure to the faces of a nationality different from their own would have a marked impact on how they rated photos of similar and dissimilar others on attractiveness, likeability, and similarity. I also hypothesized that younger participants (those in the 3rd grade) would rate a composite face of their own nationality as more attractive and likeable, whereas older participants (those in the 9th grade) would rate a composite face from a different nationality as more attractive and likeable than a composite of their own nationality. I also hypothesized that participants would rate the photos of their own nationality the most similar to themselves but that this similarity would not effect judgments of attractiveness.

Method

Participants

The 19 participants were 9 boys and 10 girls from the 3rd and 9th grades. There were eight 3rd graders ($M = 8.3$ years) and eleven 9th graders ($M = 14.6$ years) in the sample. The experimenter treated all participants in accordance with APA ethical standards for the treatment of human participants in research.

This study sampled elementary school children of Northern European descent in grades 3 and 9 at the Balears International School in Mallorca (Mallorca is a small island in the Mediterranean where most of the population is of Spanish descent). The children were Northern Europeans who had moved to the island when

they entered school age. The children interacted with individuals of their own nationality very early in life and with Spanish individuals later in life.

Materials

The experimenter took digital photographs of each participant during a regular school day. To select photos representing similar and dissimilar others for morphing, the experimenter displayed each of the participant's photos in a presentation, along with several stranger photos, to allow the 8th grade class at the Balears International School to rate which of the two stranger photos looked most and least like each of the participants. The experimenter created digital composite photos based on the 8th grade's ratings using the software program Smartmorph 1.5, developed by Meesoft. The experimenter organized the digital composites into unique individual presentations and displayed them to participants. The presentations included morphed composites of participants - a same nationality photo, participants - a dissimilar (Spanish) nationality photo, and several photos that included a typical looking Spanish boy and girl, and a typical looking Northern European boy and girl.

Procedure

The experimenter asked participants to rate a series of photos. They completed the ratings individually in the Balears International School office. Participants viewed the presentations on a computer screen and rated each photo separately for three measures on 5-point Likert scales. Participants completed each of the three measures separately, ratings the attractiveness of each photo first, then the likeability of each photo, and finally, the similarity of each photo to himself or herself. After completing the experiment, the experimenter thanked participants and returned them to their classroom. The entire procedure lasted approximately 5 to 10 min.

Independent and Dependent Variables

The design was a 2 (culture of origin) x 2 (grade level: 3rd vs. 9th) in which the experimenter defined culture of origin in a number of ways depending upon the analysis, but the definition always included the composite picture of self - same nationality stranger (similar) vs. one of the many operationalizations of dissimilar: either the composite picture of the self - different nationality stranger, a Spanish boy, or a Spanish girl. Dependent variables included participants' ratings of attractiveness,

likeability, and similarity of the composite photos using 5-point Likert scales.

Results

Attractiveness

There was no main effect of culture of origin on ratings of attractiveness, $F(1, 17) < 1, p = ns$, for the similar versus the Spanish girl morphed photos. However, there was a main effect of grade, $F(1, 17) = 4.40, p < .05$, and there was a significant interaction between culture of origin and grade on ratings of the girl photos, $F(1, 17) = 11.68, p < .05$. Examination of the means indicated that the 3rd grade participants rated their girl-similar photos ($M = 4.4$) as significantly more attractive than the Spanish girl morphed photos ($M = 3.5$), whereas the 9th grade participants reported their similar photos were less attractive ($M = 2.7$) than the Spanish girl photos ($M = 3.3$).

In comparing the similar photos versus the Spanish boy morphed photos, there was a main effect of culture of origin, $F(1, 17) = 18.27, p < .05$, as well as a main effect of grade, $F(1, 17) = 5.83, p = .05$. There was also a significant interaction between culture of origin and grade on ratings of the boy photos, $F(1, 17) = 14.31, p < .05$. Examination of the means indicated that the 3rd grade participants rated the similar boy photos ($M = 4.9$) as significantly more attractive than the Spanish boy morphed photos ($M = 2.9$), whereas the 9th grade participants indicated only a slight preference for the similar boy photos ($M = 2.7$) over the Spanish boy photos ($M = 2.6$).

Likeability

A similar pattern emerged with regard to likeability. There was a main effect of culture of origin, $F(1, 17) = 9.87, p < .05$, for the similar versus the Spanish girl photos, but there was no main effect of grade, $F(1, 17) < 1, p = ns$. There was a significant interaction between culture of origin and grade on ratings of likeability of the girl photos, $F(1, 17) = 12.34, p < .05$. Examination of the means indicated that the 3rd grade participants rated their similar photos ($M = 4.8$) as significantly more likeable than the Spanish girl photos ($M = 3.1$), whereas our 9th grade participants reversed this rating, indicating that the similar photos ($M = 3.3$) were somewhat less likeable than the Spanish girl photos ($M = 3.5$).

For ratings of similar boy photos versus the Spanish boy photos, there was a main effect of culture of origin, $F(1, 17) = 10.85, p < .05$. There was no main effect of grade, $F(1, 17) < 1, p = ns$, however, there was a significant interaction between culture of origin and grade on likeability ratings of the girl photos, $F(1, 17) = 5.79, p < .05$. Examination of the means indicated that our 3rd grade participants rated the similar photos ($M = 4.7$) as significantly more likeable than the Spanish girl photos ($M = 3.0$), whereas our 9th grade participants indicated only a slight preference for their similar boy photos ($M = 3.3$) over the Spanish boy photos ($M = 3.1$).

Similarity

In contrast to the ratings of attractiveness and likeability, the ratings of similarity showed no significant interaction between culture of origin and grade for the girl photos, $F(1, 17) < 1, p = ns$. There was a significant main effect of culture of origin, $F(1, 17) = 25.68, p < .05$, for the similar versus the Spanish girl photos, in which participants viewed the similar photo as significantly more similar to themselves than the Spanish girl photos. Similarly, participants' ratings of the boy photos showed no significant interaction between culture of origin and grade, $F(1, 17) < 1, p = ns$. There was a main effect of culture of origin, $F(1, 17) = 33.18, p < .05$, for the similar versus the Spanish girl photos and there was no main effect of grade, $F(1, 17) < 1, p = ns$. The means for 3rd grade participants' similar photos ($M = 3.8$) indicated that they viewed the similar boy photo as significantly more similar to themselves than the Spanish boy photos ($M = 1.8$), as did the 9th grade participants ($M = 3.1$ vs. $M = 1.3$).

To help clarify the previous findings, determining whether the results simply indicated a difference in attractiveness between the similar and dissimilar photos is important. I conducted an additional analysis of the similar photos versus an additional, equally attractive dissimilar photo composed of nonSpanish dissimilar nationality photos (i.e., Indian or Asian photos). The results revealed no interaction between culture of origin and grade for either the girl $F(1, 17) < 1, p = ns$, or boy photos $F(1, 17) < 1, p = ns$. There was no main effect of grade, $F(1, 17) = 1.81, p = ns$. There was, however, a main effect of culture of origin, $F(1, 17) = 8.37, p < .05$. An examination of the means indicated that both the 3rd grade ($M = 3.7$) and 9th grade participants ($M = 3.2$) rated their similar photos as more attractive than the nonSpanish dissimilar nationality photos ($M = 2.6, M = 2.1$, respectively).

Discussion

The results illustrated that 3rd grade participants gave overall higher ratings than the 9th graders for most of our measures. Because of the 3rd graders' ratings, the overall ratings of the similar photos were significantly higher than overall ratings for the Spanish photos. The 3rd graders exhibited a tendency to rate similar photos as more attractive and likeable than the Spanish boy and girl morphed photos. The 9th graders reduced or reversed this trend, as their ratings of similar photos were almost equally attractive or likeable to the Spanish morphs. In some cases they even showed a preference for the Spanish morphs. The reversal or near reversal of the 9th grader's ratings could be because of the length of exposure these older children have had to Spanish faces on the island.

Langlois and Roggman (1990) established that infants form their views of what is attractive through the process of prototype formation. As a result, infants view a sufficient number of faces to create a culturally relevant prototype (Langlois & Roggman; Langlois et al. 1994). The reversal or near reversal of attractiveness ratings from the 3rd to the 9th graders in this study suggests that people's views of attractiveness are modified across their lifetime. After individuals form their initial prototype, novel experience may modify overall views of attractiveness.

This study sampled Northern European children who had moved to the island of Mallorca when they became school aged. In the children's initial environment, they interacted most often with others of their own nationality. The children's environment changed when they moved to Mallorca because the majority of inhabitants on the island are of Spanish descent, affording the children more direct exposure to Spanish faces. This experience may account for the reversal or near reversal for the 9th graders. Contrary to the old adage that familiarity breeds contempt, hundreds of studies have shown that familiar objects become more attractive is more likely (Bornstein, 1989). Also, that our participants rated a nonSpanish dissimilar nationality photo as less attractive than their similar photos lends further credibility to the measures by indicating that this study was not simply measuring a perceived difference between the similar photos and the Spanish photos.

In terms of similarity, the results showed that the participants were aware that the photos of similar nationality were, in fact, more similar to them than the Spanish photos and yet, the older participants still rated their sim-

ilar photos as equally or, in some cases, less attractive and likeable than the Spanish photos. This study provides an interesting exception to the similarity attraction hypothesis proposed by Byrne (1961), which indicates that, in general, people like similar others and dislike dissimilar others, although it may be that over time, living on the island influenced teen-agers to see greater similarity between themselves and their peers than they see between themselves and their parents who provide their culture of origin. These findings also suggest an exception to the matching hypothesis that predicts that individuals prefer others whose attractiveness roughly matches their own (Murstein, 1986).

One explanation of these findings is provided by the theory of mere exposure outlined by Zajonc (1968). This theory suggests that exposure to unfamiliar stimuli may cultivate liking for that stimuli. The results of this study indicate that repeated exposure may be a more important determinant of the attractiveness of other people than similarity, at least in the long term. Future research in this area might focus on determining whether this phenomenon continues into adulthood and if the prototypes that we form continue to change significantly as the result of experience.

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Notes:

Affect of Religious Attitudes on Approval of Organ Donation

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This study examined the impact of religious affiliation, gender, education, and acquaintance with an organ donor or recipient on approval of organ donation. Seventy-three participants (41 men and 32 women) completed the Organ Donation Attitudes Scale to assess their approval of organ donation. The results showed that Muslims were significantly less likely than Catholics or Jews to approve of organ donation. Participants, who were acquainted with an organ donor and who had received an education on the subject, were significantly more approving of organ donation. Discussion included a description of the study's limitations and directions for future research.

Currently, more than 92,000 people await organ transplants in the United States. Each day 74 individuals receive organ transplants; however, 18 people die each day because of the shortage of donated organs (Department of Health and Human Services, 2006). Despite the growing need for organs, research has shown a considerable hesitation toward organ donation because of societal attitudes, cultural values, and religious beliefs (Smith & Braslow, 1997).

Religious Attitudes

Attitudes toward organ donation are influenced by individual values and religious beliefs, with various religious groups harboring different opinions regarding organ donation. Researchers have found that religion can be either inhibit or facilitate whether individuals will become organ donors (Bulka, 1990; Cohen, 1988; Habgood, Spagnolo, Sgreccia, & Daar, 1997; Kunin, 2005; Mackler, 2001; Pearl, 1990; Rocheleau, 2005; Teo, 1992; Ulshafer, 1988).

Religion often influences an individual's acceptance of organ donation. Rumsey, Hurford, and Cole (2003) evaluated the major religious influences on organ donation through distribution of the Organ Donation Attitude Survey (ODAS) to 190 undergraduate students enrolled at a small Midwestern university. The survey consists of 20 questions assessing the overall attitude toward organ donation using a scale ranging from strongly agree (4) to strongly disagree (1). The results indicated that education regarding organ donation, knowledge of someone who had donated an organ after death, awareness of an indi-

vidual who had received an organ donation, and religiosity play key roles in the decision to donate. Rumsey, et al. found that regardless of an individual's religious affiliation, frequency of attending services, and religiosity were associated with attitudes toward organ donation. In addition, the support of the religious community and religious leaders facilitated willingness to donate organs.

Islamic Attitudes. Islamic views strongly influence Muslim beliefs about organ donation. Al-Mousawi, Hamed, and Al-Matouk (1997) sent questionnaires to 50 Muslim scholars residing in six countries: Kuwait, Saudi Arabia, Iran, Egypt, Lebanon, and Oman. The questions specifically evaluated acceptability of organ donation during life and after death, discontinuation of life support when deemed brain dead, removal of organs from patients with brain death, and purchasing and selling of organs. They found that within Islamic beliefs, using organ donation to save the lives of others is strongly encouraged providing it does not harm the donor. Although Muslims believe that an individual's body belongs to Allah (God), the majority of respondents, nevertheless, approved of organ donation if it is used to save lives or cure a disease.

Generalizing about Islamic teaching about organ donation is difficult because there are many sects of Islam. The majority opinion of Muslim scholars supported organ donation (Habgood, et al., 1997) with a few conditions: there must be informed consent; the organ cannot be used for the purposes of earning a profit; and most Muslims believe it is morally acceptable for the dead to donate their organs as long as the donor had no objections while living and the family consents on the donor's behalf.

Ashkenazi, Berman, Ben Ami, Fadila, and Aravot (2004) conducted an evaluation of the views of the Islamic and Jewish believers on organ donation. Using data from 22 hospitals in Israel, they conducted an evaluation of characteristics of potential organ donors and recipients and reasons for consent or refusal. These researchers found that the main reason for donating

Ken Keith from the University of San Diego was faculty sponsor for this research project.

organs was altruism, which overpowers religious and ethnic conflicts.

Al-Khader, Shaheen, and Al-Jondeby (2003) highlighted some of the reasons the Islamic religion allows for organ donation. They, too, found that the first and most significant reason is altruism. Islamic teaching highly values altruism, and organ donation is a clear example of this principle. Additional reasons include the belief that promoting overall good is more important than avoiding harm, and the belief that saving one life saves all of humankind. Finally, in Islamic practice, necessity allows for doing forbidden things and violating religious laws. In other words, organ donation (a necessity) would be acceptable even though it may violate some essential teachings of the religion (Al-Khader, et al., 2003).

Jewish Attitudes. Feld, Sherbin, and Cole (1998) evaluated the views toward organ donation in a sample of the Jewish population in Toronto. The results illustrated that signed organ donor cards were proportionately fewer than in the general population. The major barrier to donation was the belief that Jewish law prohibits those actions.

Kunin (2005) documented the conflict that arises in Jewish law regarding organ donation. According to Jewish law a person has the obligation to save the life of another. However, with regard to donating an organ to save a life, there may be some conflicts. For example, Jewish law does not permit individuals to place their own lives in danger or to injure themselves or cause mutilation of the body, which would seem to prohibit organ donation. However, the obligation to save another's life is most important and takes precedence over all other laws. Therefore, an individual may donate organs to save the life of another person, although not obligated to do so because of the potential harm to the donor (Kunin).

Traditionally, there have been conflicts surrounding the topic of organ donation. Bulka (1990) cited two problematic issues in Jewish teachings regarding donation: desecration of the body after death and prohibition against gaining any benefit from a corpse. However, Rabbinic authorities have concluded that saving or enhancing a life through organ donation supersedes these concerns. Mackler (2001) echoed this view and added that a person's subjective feelings about preserving the body after death must be ignored if there is the potential to save a life. Cohen (1988) stated that all Jewish laws, with the exceptions of murder, idolatry, and illicit sexual relations, may be violated to save the life of another individual. In the Jewish religion, the goodness and sanctity

of human life is of foremost importance. Saving the life of another person is the most powerful admonition, thereby deeming organ donation an acceptable practice (Bulka; Cohen; Kunin, 2005; Mackler; Pearl, 1990). However, simply permitting a practice such as organ donation is likely a less powerful statement than proactively condoning it, and as a result Jewish people may be less likely to approve organ donation.

Catholic Attitudes. In contrast to other religions, Catholics strongly support organ donation. According to Rocheleau (2005), Catholics have the most pro-donation attitudes because of their overall beliefs in outcome expectancies, religious attitudes, and positive anticipatory affect. The official church catechism describes the benefits of organ donation. This teaching deems organ donation moral and acceptable as long as potential benefits outweigh the foreseeable risks. The church also considers organ donation a noble action that is highly encouraged, especially in situations in which a person's life is at stake.

Magisterial teaching considers organ donation a service to life and a "particularly praise worthy example of human sharing" (Habgood, et al., 1997, p. 27). Overall, the Catholic church supports organ donation. However, this religion, too, expresses some objections. One objection is that certain organs may not be donated, including the gonads and brain because they are structurally connected with procreating (Habgood, et al.). Ulshafer (1988) raised another potential concern for Catholics; the sanctity of the human body. He cited a letter from Pope Pius XI. The letter stated that individuals may not mutilate their bodies or render their body unfit for its natural functioning. However, more recently Catholics view organ donation as acceptable as long as the donation does not interfere with the functional integrity of the body (Ulshafer).

Teo (1992) found similar views regarding organ donation. According to Catholic teachings, human beings were created in the image of God and thus deserve to be treated with dignity. Catholics believe that God made himself human in the form of Jesus Christ and in doing so affirmed that human beings be treated with respect. This belief led to the Catholic teaching that the person donating an organ should be treated respectfully. Therefore, donating organs is acceptable as long as the process treats the body respectfully and promotes the overall wellbeing of humankind (Teo). Although there may be some barriers or objections within the Catholic religion surrounding organ donation, the church accepts donation as an act of love and charity (Habgood, et al., 1997; Rocheleau, 2005; Teo; Ulshafer, 1988).

General Public Attitudes

Research has shown that a person's general attitude toward and knowledge about organ donation can be associated with willingness to donate. For example, Horton and Horton (1991) studied the relationship between knowledge and attitude regarding organ donation and actually becoming a donor. They developed the Organ Donor Willingness Model, which serves as a framework for how and why individuals decide to become organ donors, found that attitudes toward organ donation include: knowledge, values, attitude toward death, age, altruism, and willingness to donate blood. Horton and Horton (1991) surveyed college students and found that positive attitudes and knowledge regarding organ donation were related to willingness to carry or request an organ donor card.

Despite earlier negative attitudes toward donating organs, currently 85% of Americans support the general idea of organ donation, and two-thirds of Americans are likely or somewhat likely to donate organs after death (Gallup Organization, 1993). However, although 85% of Americans support the concept of organ donation, only 42% report having made a personal decision about donation. Further, in the same 1993 Gallup survey, 37% of respondents reported being very likely to donate their own organs after their death; however, only 28% had actually given formal permission by signing a donor card or driver's license to do so.

Researchers have conducted several studies investigating which individuals are willing to donate and which are unlikely to donate (e.g., Conesa, et al., 2003; Lauki, 2005). Individuals who are willing to donate are typically below age of 40 years, single, and have high levels of education, previous experiences with organ donations, history of prosocial behavior, and a favorable attitude toward their partner (Conesa, et al.). Conesa and colleagues also found that individuals who opposed organ donation generally had the following characteristics: above 40 years of age, low education level, never performed a prosocial act, and have no previous experience with organ donation or transplantation. Lauki constructed an additional profile in which donors were characterized as family people, educated, generous, and religious. In contrast non-donors were older, uninformed, and uneducated individuals.

The current study specifically examined the religious attitudes of Catholic, Muslim, and Jewish individuals toward organ donation. We sought to determine whether there are differences among religious groups regarding acceptance or

general support of organ donation, and whether there is a connection between religiousness and approval of organ donation, and organ donation education and approval of organ donation. Further we examined education, gender differences, and the effect of acquaintance with organ donor or recipient on attitudes toward organ donation.

We hypothesized that people with different religions would not significantly differ from each other in their approval of organ donation. Our rationale for that hypothesis was that because these three religions are monotheistic and developed out of related traditions, their opinions on organ donation would be relatively similar. With regard to gender differences, we predicted that women would be more accepting of organ donation than men. We also hypothesized that individuals who were acquainted with an organ donor or who were organ recipient and those who received an education would be more likely to approve of organ donation.

Method

Participants

Seventy-three members of religious institutions in San Diego County participated in this study. Participants were affiliated with either Islam, Judaism, or Catholicism. Participants were all over age 18 years and participated voluntarily. There were 23 Muslim participants (18 men, 5 women), 21 Jewish participants (8 men, 13 women), and 29 Catholic participants (15 men, 14 women). Forty-one men and 32 women were surveyed in total; the majority of participants were Caucasian.

Procedure

The Organ Donation Attitudes Scale (ODAS), a 20-item questionnaire developed by Rumsey, et al. (2003), assessed participants' attitudes toward organ donation. Examples of items included: "I have a religious objection to organ donation," "I am willing to have organs donated after my death," and "Organ donation is consistent with my moral values and beliefs." Representatives of the various religious groups distributed the questionnaire to members located throughout San Diego County. These institutions included: Hillel of San Diego State University, San Rafael Catholic Church, University of San Diego Jewish Student Union, Islamic Center of San Diego, and Temple Adat Shalom. Members of these groups completed the questionnaire at meetings and various church related activities. Upon completing the questionnaires, participants returned them to the researchers for analysis.

Scoring for the ODAS ranges from one (*strongly disagree*) to four (*strongly agree*), with reverse scoring for four items. We did not include scores for two of the items because they did not relate to organ donation. The total scores ranged from 18 to 72, with higher scores reflecting a more positive attitude toward organ donation. Several questions assessed participants' degree of religiosity of the participants on a scale of 1-10, with higher scores reflecting stronger religiosity; the score on this scale was used to operationally define the concept of religiosity.

Results

The mean score on the ODAS differed for members of the religions $F(2,70) = 6.28, p = .003$. The effect size was moderate (Cohen's $d = .30$). Post hoc analysis showed significant differences between Muslims and Jews ($p = .007$), and between Muslims and Catholics ($p = .009$), with scores for Muslims being lower in each case (see Table 1). There was no significant difference between Catholics and Jews.

The mean scores for religiousness differed among the groups, $F(2,68) = 7.21, p = .001$ (see Table 1), with a moderate to large effect size (Cohen's d) of .32. Post hoc analysis determined that Jews scored significantly lower than either Catholics ($p = .01$) or Muslims ($p = .002$) on religiousness.

Knowing someone who had donated an organ while living showed no significant difference in scores on the ODAS compared to those who had not. Additionally, we found no significant differences in scores on the ODAS between those who knew someone who received an organ transplant, and those who had not. However, participants scored significantly higher on the ODAS when they knew someone who had donated an organ after death, compared to those who had not, $t(70) = 4.09, p < .001$, with a rather large effect size (Cohen's d) of .98. Across all religions, individuals who had received an education on organ donation scored significantly higher on the ODAS, $t(27) = 2.57, p = .016$, than those who had not, again with a large effect size (Cohen's $d = .99$). A chi-square analysis showed no significant difference in the proportion of people across religions who had received an education regarding organ donation.

There was a marginally significant difference between men and women on the ODAS total scores, with women ($M = 57.16$) scoring higher than men ($M = 53.59$). A 2 (gender) x 3 (religion) analysis of variance showed no significant main effect for sex or religion, and

no significant interaction between sex and religion for total ODAS score.

Table 1
Mean Scores of Organ Donation Attitude Scale and Religiousness

	Organ donation Attitudes		
	Jewish	Catholic	Muslim
Mean	57.57 ^{ab}	56.90 ^b	50.74 ^c
SD	7.685	7.683	6.159
Religiousness			
Mean	4.86 ^a	6.96 ^b	7.39 ^b
SD	2.33	2.17	2.57

Discussion

The results of this study were consistent with prior research showing that religion has an affect on attitudes toward organ donation (Bulka, 1990; Cohen, 1988; Habgood, et al., 1997; Kunin, 2005; Mackler, 2001; Pearl, 1990; Rocheleau, 2005; Teo, 1992; Ulshafer, 1988). The failure to find a significant difference between individuals professing Jewish and Catholic religions may be primarily because of the development of the Catholic religion out of the Jewish tradition. Therefore individuals in these groups may share a similar belief system that influences their attitudes. Those individuals affiliated with the Islamic religion may adhere more strongly to conservative views than Catholics or Jews, which are more willing to make exceptions to save the life of another (Al-Khader, et al. 2003; Habgood, et al.; Rocheleau; Teo; Ulshafer).

Education regarding organ donation and the transplantation process may have had an impact on attitudes because participants were more informed about the benefits and potential risks related to organ donation. This education may help to overcome barriers or misconceptions that individuals hold concerning organ donation. Knowing someone who had donated organs after death may have a strong impact on attitudes because donating may seem more prevalent and necessary and perhaps more accepted. Donating organs after death may be viewed as a lesser violation of traditional religious teachings, particularly those views regarding mutilation of the body.

There are several limitations to the current study. First, we studied a convenience sample that may not represent the views of the population of those religions. In addition, the number of female participants associated with each religious group was not proportionately equal to the number of male participants. This imbalance was a potential threat to the internal validity of the study because women in the study were slightly more accepting of organ donation than men. However, through further analysis we determined that gender was not the reason for the differences in acceptance of organ donations among the religious groups.

We chose to focus on monotheistic religions; however, attitudes in Eastern religions (e.g., Buddhism and Hinduism) may be significantly different than those religions examined in the present study. Therefore, attitudes of individuals from other religions cannot be predicted from the results of this study and there should be additional research to understand fully the approval of organ donation among those religious groups.

Another limitation to this study was participants' perception of the religious orientation of the researchers. For example, if participants perceived the researchers as a member of their own religion they may have responded more favorably toward the idea of organ donation. Whereas, if participants perceived the researchers as belonging to a different religion, they may have resisted giving more favorable ratings about organ donation.

Future research should lead to efficacious means for increasing organ donation within religious groups, and to understanding barriers and misconceptions that members of certain religious groups may hold. Education could be implemented to correct any non-faith based misconceptions that may exist concerning acceptability of organ donation within a religious group.

Attitudes do not always express themselves in behaviors. Thus, a potential follow-up study should examine whether participants actually held a signed donor card or were willing to donate organs themselves. A study might also address whether individuals are more likely to donate organs while living or after death.

The topic of organ donation needs more focus because of its importance to many people. As previously stated, more than 92,000 people are currently waiting for an organ transplant (Department of Health and Human Services, 2006). This statistic constitutes a substantial number of people who may die if they do not get the transplant that they need. Research addressing organ

donation should be continued as a catalyst for increasing donations and saving lives. Additionally, further study should be conducted to discover barriers to donating organs, especially within religious groups. Religion is a major influence on many people's lives and helps to shape attitudes and actions. Changing non-faith based attitudes within religious groups could substantially increase the number of organ donations each year.

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Beliefs About the Effects of Magnets: The Divergence Between Authenticity and Perceptions

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This study assessed the effects of magnets on several behaviors. We used a 2 (wristband type) x 2 (wristband label) x 2 (time) mixed design to examine 90 male and female college students' (M = 20.5 years) increase in grip strength and finger tapping speed, as well as perceived improvement. There was no effect of magnets on finger tapping or grip strength. Participants who wore wristbands labeled as magnetic reported significantly more improvement than did participants who wore wristbands labeled as nonmagnetic. Findings were consistent with previous findings and support a conclusion about placebo effects.

Vallbona, Hazlewood, and Jurida (1997) have suggested magnets can alter a person's physiology, yet other researchers consider magnets ineffective (Flamm 2006; Hinman 2002). Lack of conclusive evidence of magnets' effectiveness has not hindered buyers' enthusiasm; in recent years magnetic therapy has become a billion dollar industry (Weintraub, 1999). Magnet therapy manufacturers have bolstered their profits through the use of scientifically unproven claims that suggest exposure to concentrated magnetic fields increases blood flow and oxygen levels within the body, thereby leading to improved health and faster recovery from injury (Pope, 2006).

Ample empirical research exists suggesting that magnets are unable to alter an individuals' physiology (Flamm, 2006; Hinman, 2002;). Hinman tested the physical effects of magnets on heart rate and blood pressure, and results revealed that the presence of a magnetic field had no effect on participants' heart rates and blood pressure. Flamm provided a scientific explanation for this lack of effect, stating that the magnets currently on the market are static (i.e., nonmoving) magnets that create a magnetic field but produce no electromagnetic radiation. A primary claim of magnet manufacturers is that magnets separate red blood cells from other cells by attracting iron contained in hemoglobin in blood cells. Flamm suggests that such an effect is impossible because the iron contained in hemoglobin is not ferromagnetic, and exposure to a simple magnetic field would be insufficient to cause separation of the red blood cells, thus rendering the magnets ineffective.

Research also exists, however, suggesting that many people find magnetic therapy effective at reducing pain

and increasing energy. Vallbona et al. (1997) examined the effectiveness of magnets to minimize pain, specifically muscular and arthritic pain caused by postpolio syndrome. In this study, participants treated with magnets reported significantly more pain reduction than participants not treated with magnets. Vallbona and colleagues concluded that the presence of a magnetic field can increase the size of an individual's capillaries, thereby increasing oxygen flow throughout the body. However, Barrett (2004) challenged the validity of the study because of apparent methodological weaknesses, such as nonrandom assignment of participants, uncontrolled applications of a pain trigger point, and a lack of follow-up data collection.

The lack of the physiological effects of magnets implies the influence of another variable. The current popularity of magnetic therapies reveals there is a population of consumers who believe in the effectiveness of these interventions. The perceived effectiveness of magnetic therapy may be a placebo effect. In a related study, Greenwald, Spangenberg, Pratkanis, and Eskenazi (1991) tested whether subliminal self-help audio tapes could positively impact a person's performance. They proposed that a person may perceive that subliminal self-help audio tapes improve their performance, whereas there are no genuine improvements, thereby implying a placebo effect.

Greenwald et al. (1991) examined two self-improvement areas (i.e., self-esteem and memory) that manufacturers claim may be improved by using subliminal tapes. The researchers created four groups: participants were (a) given a self-esteem tape and told they had a self-esteem tape, (b) given a memory tape and told they had a memory tape; (c) given a self-esteem tape and told they had a memory tape, or (d) given a memory tape and told they had a self-esteem tape. Participants completed pretests and posttests for both memory and self-esteem. No significant changes occurred between pretest and posttest as a result of the subliminal audiotapes. Interestingly, Greenwald and colleagues found that when asked about their perceptions of improvement regarding the two tests (i.e., self-esteem and memory) participants told by the

William Wozniak from the University of Nebraska at Kearney was the faculty sponsor for this research project.

experimenter that they had received self-esteem tapes believed that the tapes had actually improved their self-esteem. Participants told by the experimenter they had received memory tapes believed that their performance on the memory test had improved. This perceived improvement was a function of what the experimenter told them was on their tape regardless of what was actually on the tape. Thus, participants' expectations determined the perceived improvement (i. e., the placebo effect) rather than any actual improvement in memory or self esteem.

Popularity of magnetic therapy has persisted despite inconsistencies in the research regarding the effectiveness of magnets. The purpose of the present study was to test simultaneously the effects of magnets on physiological measures as well as on participants' perceptions of these effects. We hypothesized that participants would show no improvement in physical performance in the presence of magnetic bracelets. We also hypothesized that participants who were told they were wearing magnetic bracelets would perceive an improvement in physical performance, regardless of whether they were actually wearing a magnetic wristband. Thus, the independent variables were type of wristband participants wore (magnetic vs. nonmagnetic) and type of wristband participants were told they were being given (labeled magnetic vs. labeled nonmagnetic). The dependent variables were participants' pretest and posttest scores on dynamometer grip strength and finger-tapping, as well as participants' self-reported perceptions of the effectiveness of the magnet on improving grip strength, finger tapping, and on their overall improvement.

Method

Participants

Participants were 90 undergraduate students (37 men, 53 women, $M = 20.5$ years) from the University of Nebraska at Kearney. We recruited students from introductory psychology courses. They earned extra credit for their participation.

Design

We used a 2 (label) x 2 (magnet) x 2 (time) mixed factorial design. The independent variables were label (i.e., participants told they had been given a magnetic or nonmagnetic wristband), the type of wristband (magnetic or nonmagnetic) participants were actually given, and the time (time 1 or time 2) participants' dynamometer and finger tapping performances were measured. The depen-

dent variables were participants' pretest and posttest scores on finger tapping and dynamometer grip strength and participants' perceived improvements on finger tapping and dynamometer grip strength.

Materials

To increase the face validity of the study, once wristbands were in place, participants completed hand and wrist exercises designed for warm up before playing the piano (Palmer, Manus, & Lethco, 1997.) The first exercise was clenching the fists for 5 to 10 s and then relaxing them; the exercise was repeated four times. Participants then pressed each pair of fingers together individually. Finally, they massaged their palms and fingers.

We used a dynamometer to measure hand grip strength. Participants squeezed the dynamometer, but they could not read the measurement. We used a telegraph key connected to a mechanical counter (Lafayette 5822 Impulse Counter) to measure finger-tapping speed. Participants were not allowed to see the measurements.

Wristbands were made of stretchable terry cloth generally available at athletic supplies stores. They were 6 cm wide. Magnets were static, round kitchen magnets, 2 cm in diameter and approximately 0.5 cm in thickness. The nonmagnetic control was two pennies glued together. We folded over the wrist bands, inserted the magnet or pennies, and sewed the wrist bands closed. There were no marks that distinguished the magnetic from the nonmagnetic wrist bands.

Procedure

We told the participants that the purpose of the experiment was to test for the impact of magnets on the participants' performance in the grip dynamometer and finger tapping tests. The first activity the participants performed was a grip dynamometer test; then they performed the finger-tapping activity. Participants were seated at a desk and asked to tap a single button keypad with the index finger of their preferred hand as quickly as possible for 30 s.

Participants were then given wristbands. Groups were either told that they had magnets in their wristbands or that they were part of a control group that did not have magnets in their wristbands. The experimenter then read a prepared summary of the Vallbona et al. (1997) study in which evidence was found supporting the contention that magnets can act as pain reducers. The experimenter told participants that research has shown that the presence of

a magnetic field causes slight dilation of the blood vessels, thereby causing increased blood and oxygen flow throughout the body.

Participants then completed the warm-up exercises; an activity that we told them was necessary to allow for greater amounts a blood to pass through the magnetic field. Participants repeated the dynamometer and finger-tapping tests and then completed a survey concerning their perception of how the magnets affected their performance. The survey consisted of three questions: how the magnets affected their performance in the dynamometer test, the finger-tapping test, and their overall performance on both tests. They were asked to give ratings on a scale 1 (*greatly reduced*) to 7 (*greatly increased*). We tested participants individually, taking 10 -15 min to complete.

Results

We calculated a 2 (label) x 2 (magnet) x 2 (time) mixed ANOVAs to determine if any differences existed between participants' pretest and posttest dynamometer performance or between pretest and posttest finger tapping scores. We failed to find significant main effects or interactions involving label, magnets, or time (all F s < 1). Thus, we failed to find an impact of magnets on the performance measures of hand strength and finger tapping speed.

We conducted a 2 (label) x 2 (magnet) between subjects factorial ANOVA on participants' perceptions of grip change. We found a significant main effect for label, $F(1, 87) = 5.42, p < .05$. Participants who were told they were wearing magnets ($M = 4.66, SD = 1.22$) rated their performance as improving significantly more on grip than did participants who were told they were wearing control wrist bands ($M = 4.13, SD = .95$). We did not find a main effect for magnets nor an interaction between label and magnets ($F < 1$).

A 2 (label) x 2 (magnet) between subjects factorial ANOVA was calculated comparing the self-perceptions of finger tapping change. A significant main effect for label was found, $F(1, 87) = 4.42, p < .05$. Participants who were told they were wearing magnets ($M = 4.36, SD = 1.06$) rated their performance as improving significantly more on finger tapping change than did participants who were told they were wearing control wrist bands ($M = 3.91, SD = .93$). The main effect for magnets ($F < 1$) was not significant.

We found a significant interaction between label and magnet, $F(1, 87) = 3.91, p < .05$. Inspection of the raw

data scores revealed an outlier. A female nontraditional student generated inordinately low tapping and strength scores. She informed the researchers that she had arthritis and had struggled through the exercises. She was the only participant who rated the magnets as detrimental to her performance. A second two-way analysis on the scores with her scores removed revealed the same pattern of significant main effects, but no significant interaction ($F < 1$). The data indicated that the label placed in the wristband significantly increased the participants' perceptions that their performance improved. However, the presence of an actual magnet in the wristband had no effect.

Discussion

This study was conducted to test the effectiveness of magnetic therapy on the physical behaviors of hand strength and finger dexterity. We hypothesized that magnets would have no significant effects on hand strength and finger dexterity; our findings support this hypothesis. The presence of magnets did not significantly affect dynamometer performance or finger-tapping speed, regardless of whether participants were told they were wearing magnets. These findings are congruent with the findings by Hinman (2002) who found no data to suggest that magnets affect physiological responses.

Although we found no support for improvement in performance, participants who were told they were wearing magnets perceived change. A significant main effect for label with regard to participants' perceptions of grip change and finger tapping was found, a finding that supports our second hypothesis that telling participants they are wearing magnetic wrist bands would effect their perceptions of improvement. Our findings, therefore, support the hypothesis that the effects of magnet therapy are because of placebo effects rather than physical changes.

Our study replicates the Greenwald et al. (1991) findings. Although we used a different measure (i.e., physical vs. cognitive/emotional measures, memory, and self esteem), our data support the position that the perceived effectiveness of some therapeutic techniques may be highly subject to placebo effects versus perception of improvements. With regard to magnet therapy specifically, future research should consider the amount of time wristbands are worn between pre- and posttests because manufacturers of magnetic bracelets typically state that bracelets must be worn for at least several minutes but possibly up to several days for observable effects (e.g., acemagnetics.com). Although unlikely, performance improvements may have taken effect had participants

worn the magnetic wristbands for a longer period of time. Implementing multiple pretests and posttests may also eliminate the expected improvements in performance because of practice effects.

The implications of this study lie in the popularity of magnet therapy as a form of non-medicated healing. If the results of magnet therapy are simply because of a placebo effect, magnet producers are persuading consumers to purchasing perceptual healing products. More serious consequences may include people disregarding traditional medicine and treatments in favor of magnet therapy. If magnets are being used under false pretenses and people are not given accurate data about the ineffectiveness of magnet therapy, then the production, distribution, and use of magnets as therapy is misleading. Should future research on magnetic therapy continue to fail to find healing effects, the scientific community should actively inform the public about its findings. Although some people may choose to continue purchasing magnets for healing purposes, the public should have access to adequate medical information regarding magnet therapy so that they may make an informed decision.

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Psychopathy in Adolescents: Implications of This Label

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A label of psychopathy has numerous implications in the criminal justice system and mental health community, but professionals know very little about the etiology of psychopathy and what they do know is primarily from research using adult, male criminal and clinical samples. However, some researchers have asserted that psychopathy begins to appear early in life (see Johnstone & Cooke, 2004). Research has begun examining pre-adult psychopathy in relation to a multitude of issues including the influence of the early environment on personality and behavior. The current article discusses research examining psychopathy and related disorders in adolescent samples, the possible benefits of such research, along with the legal and developmental issues that could arise.

Psychopathy is a personality construct that consists of two correlated, but unique dimensions, and these two dimensions distinguish psychopathy from similar personality disorders, most notably Antisocial Personality Disorder (ASPD) (Hare, 2001; Lilienfeld, 1998). Hare and Lilienfeld noted the first of these dimensions, Factor 1, consists of the core personality features such as superficial charm, callousness, and egocentricity. Factor 2 relates to antisocial behaviors including early conduct issues and criminal versatility. The characteristics of Factor 2 have a high association with ASPD, but because of the weak association with Factor 1, ASPD and psychopathy represent two related but different personality constructs. Research examining the construct of psychopathy and the two factors has focused on clinical or incarcerated adult male samples, which may hinder generalization to other groups. Recently however, research has begun to examine psychopathy in other populations including minority ethnic groups (Cooke, 1998), women (Salekin, Rogers, Ustad & Sewell, 1998; Vitale & Newman, 2001), and children/adolescents (Frick, 2002; Moffit & Caspi, 2001).

Researchers and clinicians developed measures for assessing psychopathy in the last two decades; Hare's (1991) Psychopathy Checklist - Revised (PCL - R) is the most widely accepted by professional. Because of the widespread use of the PCL-R and its acceptance as the primary measure of psychopathy, researchers have shifted their focus to examine etiological factors of psychopathy (Marshall & Cooke, 1999). This acceptance, along

with the predictive validity of psychopathy and violence, allowed for research on early childhood variables and juvenile psychopathy to gain momentum in the last 10-15 years (Edens, Skeem, Cruise, & Cauffman, 2001; Salekin, Neumann, Leistico, DiCicco, & Duros, 2004). Research on adult populations has used the hypothesis that psychopathic traits, namely antisocial behaviors, originate early in life and that adult psychopathy is related to a variety of childhood/adolescent behavioral problems (Kosson, Cyterski, Steuerwald, Neumann, & Walker-Matthews, 2002). However, Moffitt (1993) contends that professionals need to examine antisocial behaviors carefully, presenting a theory of life-course persistent antisocial behavior that must be distinguished from adolescent-limited antisocial behavior. She contends that individuals with antisocial behaviors cannot be examined as an entire group, but rather researchers and clinicians should place these individuals into these two separate categories. These categories illustrate that for some delinquent adolescents such delinquent behavior is temporary because of a "maturity gap that encourages teens to mimic antisocial behavior" (Moffitt, , p. 674) versus other adolescents who have encountered more pervasive issues dealing with neurocognitive problems, parental problems, and other related issues in childhood that lead to life-long antisocial behaviors (Moffitt, Caspi, Harrington, & Milne, 2002). Although Moffitt, and colleagues presented these distinct categories and research in relation to antisocial behaviors, researchers have conducted minimal investigation, especially in the context of longitudinal studies, to assess the stability of the construct of psychopathy (see Gretton, 2004). Such limitations thereby complicate the use of a psychopathy label in nonadult populations (Edens et al., 2001).

Researches on psychopathy-prone adolescents could open doors to new treatment regimens and start to answer long-asked questions about the origins of psychopathy. However, what are the potential costs of using a label of psychopathy on adolescents? For the purpose of this article, I used the term "adolescent" to refer to youth between the ages of 13 and 18 years old. The current article examines research focusing on psychopathy and relat-

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ed disorders in adolescent samples, the possible benefits of such research, and the legal and developmental issues that could potentially arise. Understanding the construct of psychopathy as currently understood and the measures used to assess it is an important first step.

Measurements of Psychopathy

Hare (1979) developed the Psychopathy Checklist and the PCL-R to assess the personality and behavioral characteristics that define psychopathy (Hare, 2001). Assessment using the PCL-R consists of a multi-dimensional examination of the individual including a semi-structured interview, a review of the individual's case history, interviews with family and friends, along with observations when possible.

The semi-structured interview consists of a 20-item measure that examines both behavioral (i.e., poor behavioral control, criminal versatility, juvenile delinquency) and personality variables (i.e., glibness/superficial charm, shallow affect, callousness/lack of empathy) (Bodholdt, Richards, & Gacono, 2000). Researchers score these variables on a three-point scale with 0 (does not apply), 1 (applies to a certain extent), and 2 (item applies), making a total possible score a 40 (Bodholdt et al.; Marshall & Cooke, 1999). The cutoff is not universally set to label psychopathy, but in most clinical cases, an individual must score 30 or more to receive such a label (Lilienfeld, 1998).

Research investigating the reliability and usefulness of the PCL-R has shown positive results when conducted by qualified clinicians and researchers. Whereas such research has found high reliability and validity, the instrument has primarily focused on white male incarcerated offenders, although more recent research has begun examining women and nonforensic populations (see Bodholdt et al., 2000; Hare, 2001). Harpur and Hare (1994) asserted that there is evidence that psychopathic traits, especially Factor 1, remain relatively stable over a life span.

The relative stability assertion that psychopathy begins at a young age has led researchers to examine the construct of psychopathy in adolescents. Early research on youth relied heavily on the PCL-R until researchers decided that some of the concepts in the measure were age inappropriate (Edens et al., 2001). Researchers modified the PCL-R by omitting or changing questions that pertained to a parasitic lifestyle and many short-term marital relationships to accommodate for age differences (Edens et al.,). Some researchers made modifications to

scoring criteria for items that dealt with juvenile delinquency and criminal versatility because of the shorter history of adolescents. Some early research findings based on this new measure, the Psychopathy Checklist-Youth Version (PCL-YV) (see Table 1), revealed adequate levels of internal consistency and inter-rater reliability (Forth & Burke, 1998; Forth, Kosson, & Hare, 2003). The authors of the PCL-YV focused on taking the experiences and life course of the adolescent into account through many of its revisions (as noted above), but Edens et al. contended that the stability of these changes remains a contentious and open issue. Current literature and research state that the PCL-YV should only be used in children ages 13-18 years; however several studies have used it with 12 year old children (Edens et al; Forth & Burke).

The PCL-YV is a multidimensional assessment that takes has 20 items. Preliminary exploratory factor analysis shows that the 20 items related to both Factor 1 and Factor 2 constructs. The PCL-YV also includes a review of case history, interviews of family, friends, and teachers, along with observation when possible (Kosson et al., 2002). Researchers and clinicians score this measure on the same three-point scale as discussed with the PCL-R.

Although the PCL-YV is one of the main measures used in research on childhood/adolescent psychopathy, other researchers created different assessments to overcome some of the limitations of the PCL-YV. Frick and Hare (2001) developed the Psychopathy Screening Device (PSD) by modifying the PCL-R and adapting it to the context of children/adolescents. Like the other modified assessments, the PSD is a 20-item questionnaire that researchers and clinicians rate on the same three point scale as discussed previously. However, this measure, unlike the PCL-YV, can be administered by parents or teachers rather than relying solely on trained clinicians (Edens et al., 2001). Factor analysis of the measure found a two-factor solution consisting of a 6 item Callous-Unemotional (CU) Factor and a 10-item Impulsivity/Conduct Problems Factor (Seagrave & Grisso, 2002). Researchers criticized the PSD and PCL-YV though because of their reliance on conceptualizations of adult psychopathy. Hart, Watt, and Vincent (2002) postulated that adolescents with psychopathic traits may look very different from adult psychopathy, and some researchers (i.e., Barry et al., 2000; Lynam, 1996) have postulated a relation between youth-related disorders like Conduct Disorder (CD) and Oppositional Defiant Disorder (ODD) and adolescent psychopathy. I will discuss their arguments for such a stance later when I examine developmental issues in relation to psychopathy.

Table 1
Items measured in Forth, Kosson, and Hare (2003)
PCL-YV

Item Number and Name	Factor
1. Impression Management	1
2. Grandiose Sense of Self-Worth	1
3. Stimulation Seeking	2
4. Pathological Lying	1
5. Manipulation for Personal Gain	1
6. Lack of Remorse	1
7. Shallow Affect	1
8. Callous/Lacking Empathy	1
9. Parasitic Orientation	2
10. Poor Anger Control	2
11. Impersonal Sexual Behavior	2
12. Early Behavior Problems	2
13. Lacks Goals	2
14. Impulsivity	2
15. Irresponsibility	2
16. Failure to Accept Responsibility	1
17. Unstable Interpersonal Relationships	2
18. Serious Criminal Behavior	2
19. Serious Violations of Conditional Release	2
20. Criminal Versatility	2

Conduct Disorder, Oppositional Defiant Disorder, and Attention Deficit Hyperactivity Disorder

A growing amount of research has examined the relation between adolescent psychopathy and other youth-related disorders. To provide clarity to these disorders and the differences that exist for future discussion, the following section will distinguish between these disorders. As seen in Lynam (1996), Barry et al. (2000), and Salekin et al. (2004) the three mental disorders implicated in the study of adolescent psychopathy are Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), and Attention Deficit/Hyperactivity Disorder (ADHD). Whereas CD and ODD are related to severe conduct issues and antisocial behavior, ADHD is related to issues of impulsivity. These issues of impulsivity and antisocial behavior directly relate to the two factors of the PCL-R.

Conduct Disorder, as classified in the DSM-IV-TR (American Psychiatric Association, 2000), consists of a “repetitive and persistent pattern of behavior in which the

basic rights of others or major age-appropriate societal norms or rules are violated” (p. 93). The DSM-IV-TR divides the specific behaviors characteristic of CD into four categories that consist of: aggressive acts toward people and animals, the destruction of property, deceitfulness or theft, and serious violation of rules. CD is related to Antisocial Personality Disorder (ASPD) in that to receive a diagnosis of ASPD one must have shown symptoms of CD before the age of 15 years. Trained mental health professionals diagnose ASPD, which is closely associated with adult psychopathy, only in individuals above the age of 18 years. Because of this diagnostic stipulation, it seems relevant that the precursor to ASPD is being investigated in relation to juvenile psychopathy.

ODD consists of a “recurrent pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures that persists for at least 6 months” (DSM-IV-TR, p. 100). The frequent occurrence of at least four of possible eight behaviors, such as deliberately doing things to annoy others, losing temper, and being angry and resentful characterize ODD. However, clinicians cannot diagnose ODD if such actions constitute a diagnosis of ASPD or CD. Symptoms of ODD usually occur before age 8 years, but no later than early adolescence, therefore many professionals view ODD as a precursor to CD. However, a diagnosis of ODD does not mean that a subsequent diagnosis of CD will be made. Clinicians make this subsequent diagnosis if symptoms continue in the individual and these symptoms are not accounted for by developmental changes and/or effective treatment.

Before moving onto ADHD, it is interesting to note the potential development of ASPD from ODD and CD. As noted above, ODD is often a precursor to CD and a diagnosis of ASPD requires a history of some CD symptoms before the age of 15 years (DSM-IV-TR). There seems to be a gradual development over one’s lifespan of these symptoms. However, not all diagnoses of ODD and CD progress to adult ASPD. Looking at the overall development of ASPD, one can see a gradual progression with ODD before the age of 8, to a progression of CD, and finally to the diagnosis of ASPD after the age of 18. Once again, one has to be careful when making such statements because not all individuals diagnosed with ODD will develop CD and not all individuals with CD will develop ASPD. As researchers continue to examine the precursors to adult psychopathy it is interesting to note that the disorders (i.e., ASPD, CD, ODD) associated with psychopathy are in many ways progressive. Examination of this progression, including treatments or developmental changes that interrupt the progression from one disorder

to the next, could potentially add to the understanding of the progression of psychopathy and potential treatment options to help minimize or eliminate the expression of psychopathy.

Along with severe conduct problems, ADHD is often implicated in psychopathy. The main feature of ADHD is “a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development” (DSM-IV-TR, p. 85). ADHD, like CD and ODD, relates to Factor 2 of the PCL-R because of its impact of behavioral expression. However, research examining solely ADHD and the expression of psychopathic traits has been minimal with most research focusing on individuals with the comorbid diagnosis of ADHD and either CD or ODD.

Research on the Relation Between Youth-related Disorders and Adolescent Psychopathy

Investigators have examined these youth-related disorders to determine whether there is a relation between these disorders and the expression of adolescent psychopathic tendencies. Such research questions, whether these disorders are simply comorbid diagnoses or if psychopathy itself is a collection of these various personality traits (Warren et al., 2003). Barry et al. (2000), used the PSD in a study examining 154 children aged 6 to 13 years who had been referred to an outpatient diagnostic and referral service because of behavior and emotional problems. That study hoped to extend the research and theoretical implications expressed by Lynam (1996) regarding the relation of juvenile psychopathy with other childhood psychopathology, namely CD, ODD, and ADHD. Lynam concluded that children diagnosed under the age of 13 years with both ODD/CD and ADHD showed numerous neuropsychological correlates that made the child similar to adult psychopaths. These correlates included poor passive learning, cortical underarousal, and deficits in executive functioning, which have not been found to be associated with either ODD/CD or ADHD alone.

Lynam’s (1996) finding suggests that a combination of severe conduct disorders and impulsivity are correlated with traits associated with adult psychopathy. However, Barry et al. (2000) extended the research to examine possible personality traits that Lynam did not examine. Barry et al. examined whether they could identify youth with the presence of callous unemotional traits

with the emotional deficits associated with psychopathy in adults. They found that youth between the ages of 6 and 13 years with severe conduct problems and ADHD exhibited psychopathic traits such as fearlessness and reward-dominant response style, but only youth with high ratings of Callousness/Unemotional (CU) traits displayed these traits. Barry and his colleagues also found that youth exhibiting psychopathic traits did not exhibit higher levels of anxiety symptoms. This finding is consistent with research on adult psychopaths and suggests that youth high in CU traits (with CD and ADHD) are not distressed by their negative behaviors as much as those youth who only exhibit CD and ADHD without high ratings in CU traits (Barry et al., 2000)

As Barry et al. (2000) and many other psychopathy or antisocial behavior researchers have shown, other youth-related disorders correlate with psychopathy as they are in adults. Other researchers have examined variables that relate to adolescent psychopathy beyond youth-related disorders.

Research on Psychopathy and the Adolescent

Minimal research on adults and adolescents has examined the environmental variables of psychopathy because numerous researchers, notably Cleckley and Hare (as cited in Marshall & Cooke, 1999), have opposed the idea that psychopathy is influenced by environmental factors. Hare (2001) does maintain, however, that environmental variables may shape the expression of the disorder. Research examining biological and genetic variables has not conclusively determined the etiology of psychopathy. Familial and twin studies have indicated a genetic component but the heritability of psychopathy is far below 100% (Marshall & Cooke). Such a statement seems peculiar but what Marshall and Cooke’s findings illustrate is that psychopathy cannot be solely attributed to genetics, but rather that other influences, such as society, parental upbringing, and biology come into play.

Kosson et al. (2002) were the first to examine the reliability and validity of the PCL-YV on US male adolescents. Their study examined a variety of questions, but most notably, the construct validity of the PCL-YV in regards to other forms of child psychopathology, interpersonal behavior, the depth of interpersonal relationships, and the factor structure underlying PCL-YV ratings. Results showed that psychopathy as defined by the PCL-YV was correlated with more conduct disorder symptoms than with ADHD and ODD symptoms. Even

though Kosson and colleagues explored these correlations, the research community still knows little about the etiology of psychopathy and whether, for instance, conduct disorder is a precursor to psychopathy-prone adolescents or what the relation is between the two constructs. The work of Moffitt, et al. (2001, 2002) began to examine these questions with particular focus on antisocial behaviors and childhood variables that different juvenile delinquent populations have exhibited.

Colledge and Blair (2001) specifically examined the two features of ADHD, namely impulsivity and inattention, and their relation to psychopathic tendencies without the presence of ODD or CD. In their study, they examined the relation between the attentional and impulsivity characteristics of ADHD with the two factors of psychopathy using children with emotional and behavioral difficulties aged 9 to 16 years. Using a cutoff of 25 for the PSD and several other assessment measures, Colledge and Blair found that the inter-correlations between the attentional and impulsivity components of ADHD with the two factors of psychopathy were primarily because of the association between the impulsivity of ADHD and Factor two (i.e., antisocial behavior) of PCL-R defined psychopathy. The inattention aspect of ADHD was not significantly related to either of the factors, whereas Factor 1 (i.e., callous and unemotional traits) was not significantly related to either of the two components of ADHD. This finding is consistent with previous research that showed the predictive ability of early conduct problems and hyperactivity-impulsivity for criminal involvement later in life but extends such research to illustrate the importance of the impulsivity, versus inattention, in relation to antisocial behaviors (see, Babinski, Hartsough, & Lambert, 1999; Colledge & Blair, 2001; Moffitt & Caspi, 2001). Yet to be determined, however, is the etiology of such impulsive and hyperactive behaviors and the potential causes for the development of ADHD, ODD, and CD. Research on the etiology of these disorders could aid in discovering the etiology of psychopathy.

The body of research on the role of the environment on the development of psychopathy is tentative and inconclusive because of the lack of replication and generalization. However, several researchers have begun looking at the influence of family upbringing and societal influences on psychopathy. Marshall and Cooke (1999) performed a retrospective study to examine the possible influence of familial and societal variables on the development of psychopathy. Their study consisted of comparing criminal psychopaths ($n = 50$) and noncriminal psychopaths ($n = 55$) using the PCL-R and the Childhood Experience of Care and Abuse (CECA). CECA has high

reliability and validity as a measure of childhood risk factors and is objective because it seeks to identify specific behaviors and actions from childhood, versus feelings and emotions (Marshall & Cook). They identified significant mean differences on a variety of childhood variables that they predicted based on previous research on adult criminality and childhood experiences. These variables included questions dealing with familiar relationships such as parental discipline, antipathy, and supervision, along with societal influences such as negative school experience and negative school performance. Furthermore, they performed a multiple stepwise regression that illustrated that familial experiences were more closely related to personality features (Factor 1) of psychopathy and societal influences were more closely related to antisocial behavioral features (Factor 2) of PCL-R defined psychopathy. These two main influences, familial and societal, have a different relation with psychopathy. Marshall and Cooke found that societal variables had a positive linear relation with psychopathy showing that as harmful societal variables increased so did the PCL-R score whereas familial variables had a negative curvilinear relation. This relation shows that as the PCL-R score increases, the influence of familial variables decreases.

Lynam (1996) suggested, through his research on the relation between conduct problems and adult psychopathy, that environmental variables played an additional role in psychopathy independent of genetic factors. Raine, Mellinger, Liu, Venables, and Mednick (2003) found that when 3 to 5 year olds were placed in special preschools and provided nutritional supplements that by the age of 17 years of age they showed lower rates of antisocial behavior and mental health problems in comparison to the control group. This result was greatest for participants who had been undernourished at three to five years of age and suggests that the environment has some impact on the expression of antisocial behaviors and mental health issues. This research and Lynam's suggestion about environmental variables could eventually show that a biological or genetic predisposition, along with the familial and societal variables, can explain the expression of psychopathy. Research on the role of the environment in psychopathy has been limited because of its reliance on self-report measures and correlation, but research on delinquency and adult criminality has been more successful in illustrating the role of the environment (Marshall & Cooke, 1999). Although the environment may have some influence on the expression of psychopathic traits, further research must examine whether developmental issues could influence the expression of psychopathic-related traits.

Developmental Issues with the PCL-R

The PCL-YV revised the PCL-R to take into account the age inappropriateness of several items. However, Hart et al. (2002) contended that psychopathy-prone adolescents may not even resemble adult psychopathy. Therefore simply modifying an adult assessment by adjusting some questions that are age inappropriate to fit adolescents may be flawed thinking. They asserted there are three principles of developmental psychopathology that caution against expecting psychopathy to have a consistent manifestation throughout the lifespan. These principles discuss the potential differences in manifestation across the lifespan (i.e., heterotypic continuity), the diverse pathways for development that lead to the same outcome (i.e., equifinality), and the potential for diverse outcomes from the same developmental pathway (i.e., multifinality). According to Hart and colleagues, heterotypic continuity would illustrate, for example, how a lack of emotional attachment could, in late childhood, be related to problems developing interpersonal relationships, whereas in early adulthood such behavior could be displayed as sexual promiscuity. That assessment does not just take adult characteristics and apply them to adolescents and children is important, but rather assessment should examine the potential differences between these age groups. Different developmental pathways may exist causing the same outcome of psychopathy. At an early age one child may show signs of psychopathic tendencies and later develop adult psychopathy whereas another child may not show tendencies until the teenage years, but still develop adult psychopathy or not develop adult psychopathy at all. These different pathways, with identical outcomes, illustrate that protective and risk variables may influence the expression of psychopathy (Hart et al.).

On the other hand, similar pathways may lead to different outcomes. Two children raised in a similar environment may express childhood psychopathic tendencies but express different forms of adult psychopathology or perhaps even no pathology (Hart et al., 2002). Therefore the developmental issues involved with childhood and adolescent psychopathic tendencies may be too complex to simply adjust an adult measure to assess younger age levels. The various developmental changes complicate the study of psychopathy in child and adolescent populations even though it may be possible to treat this personality construct early in its development. Also the PCL-R requires collateral information that examines changes over the lifespan when used with adults. Such information is often incomplete or may not even exist when examining an adolescent.

Upon examination of the PCL-YV, some researchers found that several items were inappropriate in regards to developmental influences that may be occurring at the same time as a diagnosis. Personality itself as a construct may not solidify until late adolescence or early adulthood (Kernberg, Weiner, & Bardenstein, 2000). If personality is not crystallized until later, assessing the part of psychopathy that differentiates psychopathy from CD and ODD in adolescents is difficult. Although developmental issues must be taken into consideration when assessing the personality characteristics that relate to psychopathy, clinicians and researchers must carefully examine individuals predisposed to develop psychopathy. This careful examination must include vigilance to the developmental changes to be sure that these characteristics are persistent and pervasive, rather than transient. There are significant individual differences between adolescents and their development; several of the item descriptions do not provide a clear enough delineation between normal and disordered adolescent-like personality characteristics and behaviors.

The question is whether there is a clear delineation of symptoms or if abnormal symptomology follows a similar course to normal development (Frick, 2002). Frick contends that normal and abnormal outcomes often involve similar processes and the key is to find the cause for the differences. However, even if the developmental outcomes come from the same processes, the characteristics that emerge should, if examined over a period of time, appear to last longer in the adolescent or child. The only problem is the inherent difficulty in monitoring adolescent populations for long periods of time because researchers have conducted very few longitudinal studies. Once again the work of Moffitt and her colleagues (2001, 2002) on life-course-persistent and adolescence-limited antisocial behaviors could provide insight into psychopathic-related issues.

Taking into account the experiences of similar aged adolescents is necessary to examine if certain behaviors or actions are within a normal range or activity. However, only one item in the PCL - YV (item 14) explicitly states that "signs of impulsive behavior should be excessive or evident across more domains compared with similar aged youth" (Forth, et al., 2003, p. 16). The other items used in the PCL-YV do not make explicit statements about the importance of placing the behaviors in the context of the developmental stage of the youth. Seagrave and Grisso (2002) discussed the developmental implications of psychopathy as they related to each of the 20 items used in the assessment of adolescents with psychopathic traits. They pointed out that there are potential problems using

the PCL-YV with adolescents because of the developmental changes, namely those related with puberty, which occur during this time period.

Looking at the variety of potential developmental confounds, there is reason to believe that diagnosing and labeling an adolescent with psychopathy could have detrimental effects on their well-being. Rosenhan's (1974) seminal study suggested the impact of professionals labeling normal individuals, who committed themselves to a mental hospital, as schizophrenic. Immediately after entering the hospital the individuals behaved normally, but the staff still saw them as abnormal, causing the participants to report feelings of powerlessness, invisibility, and boredom. Rosenhan's participants were all normal, competent adults, but if we apply this finding to identifying adolescents with a label of psychopathy, there is the risk of harm by such action. Experiencing a negative label could cause adolescents to behave consistently with the label. Murrie, Cornell, and McCoy (2005) however, found that diagnostic labels had minimal effects in their study, whereas a diagnostic criterion of antisocial behavioral history influenced juvenile probation officer recommendations more than the criterion of psychopathic personality traits.

Implications to the Legal System

A diagnosis of psychopathy is a variable in decisions to transfer youth charged with a serious offense to adult court (Zinger & Forth, 1998). However, numerous researchers have asserted that the current state of research on juvenile psychopathy is insufficient for use in making such important decisions (Frick, 2002; Seagrave & Grisso, 2002). Seagrave and Grisso argued against the use of the psychopathy label in juvenile cases because of the difficulty in successfully assessing juvenile psychopathy. Although measures exist that examine juvenile psychopathy such as the PCL - YV, these measures are not developed sufficiently to use in such a serious matter of transferring a juvenile to adult court. Transferal from juvenile to adult court is done primarily because of the evidence that points to a general lack of recovery from psychopathy and the limited time that a juvenile would have under the jurisdiction of the juvenile court (Seagrave & Grisso). The evidence that points to a lack of recovery has primarily come from research on incarcerated adult men, which makes it difficult to apply to adolescents because of the complexity of this diagnosis. Although this research shows the ineffectiveness of treatment, the basis for the conclusion is case studies and anecdotal evidence (Zinger & Forth). Therefore we have insufficient evidence to conclude that psychopathic adolescents cannot be treated nor

that researchers will not find successful treatment.

Along with the general belief that psychopathy cannot be treated, the evidence about the ineffectiveness of treatment on adults is inconclusive at best (Zinger & Forth, 1998). Treatment of individuals described as high risk and high need, such as psychopaths, has found success by providing intensive treatment and addressing criminogenic needs (Zinger & Forth). However, the allocation of resources limits such research even though psychopaths are responsible for a disproportionate amount of violent crime. Therefore even marginal success in treating psychopaths and reducing recidivism could have immense gain for the public. Because many researchers believe numerous traits of adult psychopathy arise during childhood, research on the treatment of psychopathic traits during adolescence or childhood could prove very effective in reducing the prevalence of adult psychopathy and the harm that adult psychopathy poses for society. This research could also reduce adolescent antisocial behavior and the related characteristics associated with adolescents prone to psychopathy. Professionals must recognize that the research on treatment options for adolescents with psychopathic traits is very limited. Therefore using the inconclusive treatment research on adult psychopaths as a potential reason to transfer a juvenile to adult court is risky. Zinger and Forth warn that the courts are influenced by the diagnosis of psychopathy and that such a diagnosis and label can have significant negative outcomes for the individual.

Conclusion

Researchers and trained mental health professionals understand psychopathy as a stable personality disposition that has long range implications on the individual and society (Edens et al., 2001). Researchers have established the association between psychopathy violence and recidivism in adult male psychopaths, yet the research is inconclusive about this personality construct's relation to adolescents. Because of the inconclusiveness of the research findings, the legal and mental health systems should be very careful in using such a label on adolescents. Because investigators have refuted the exact validity of the construct in adolescents (Salekin et al., 2004), using the label to transfer juveniles to adult court can be detrimental. Along with this detrimental effect, the potential negative effect of labeling an adolescent as a psychopath has wide ranging implications that authorities do not fully understand. The label psychopathy does not connote a positive image, but rather one of violence, sleaze, and cunningness (Edens et al., 2001). Applying such a label could damage or hinder the development of the adolescent and potentially cause a self-fulfilling

prophecy as adolescents take on the characteristics that mental health professionals, the legal system, and researchers have applied to them. Researchers need to examine the possibilities and effects of labels as they complete more research and develop a better understanding about the existence or nonexistence of psychopathy in the juvenile population.

Research is inconclusive as to the relation of ADHD, CD, and ODD to adolescent psychopathy. Preliminary research shows that there is a relation, but such findings are inconclusive. The presence of psychopathy in the adolescent population is an incredibly complex and under-researched issue. The role of the environment and societal influences comes to the forefront on examining the etiology of this pervasive personality construct. However, confounding this research is the issue of normal development. Adolescence is an intense time of development and various psychopathy assessment tools, such as the PCL-R, assess several issues that fail to take into account normal developmental issues of a youth such as impulsivity. We need additional research to examine this construct in youth. More importantly, we need research to identify treatment options for children and adolescents who present psychopathic tendencies because of the potential benefits such treatment could have on the life of these youth and society at large.

Whether research will ever be able to confidently say that psychopathy exists in adolescents is unknown, but the lack of such a label should not hinder the mental health community from treating adolescents that present psychopathic tendencies. Therefore, the legal and research communities should not use measures assessing the presence of psychopathy in the adolescent or juvenile populations to make decisions that could have long-term clinical implications or make long-term predictions of violent behavior.

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Special Features

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The Special Features section provides a forum for three types of essays that should be of considerable interest to students and faculty. Students can address a variety of issues for subsequent issues of the Journal's Special Features sections. At the end of this issue, you can read about those topics; Evaluating Controversial Issues, Conducting Psychological Analyses—Dramatic, and Conducting Psychological Analyses—Current Events.

Psychological Analyses – Dramatic

A Psychological Analysis of *The Day After Tomorrow*

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In *The Day After Tomorrow* (Emmerich, 2004), Jack, a climatologist studying global warming, discovers that the world is about to undergo the next ice age. Before and during this event there are many psychological phenomena that pertain to environmental theories that explain why people react to the environment the way that they do. The theories and characteristics involved in this psychological analysis include the crisis effect, levee effect, adaptation, learned helplessness, behavior constraint theory, and social support.

In this movie, the world is hit by a cataclysmic event that has not been seen in many years. After careful observation, Jack discovers that the ocean currents have shifted. Jack attempts to warn the United States government but is unable to do so before the storm hits. As soon as the storm hits, the President realizes the devastation that is about to occur and takes action to evacuate the northern half of the United States. While everyone is evacuating, Jack continues to travel north to save his son, Sam, who is trapped in Manhattan. Along the way, both Sam and Jack encounter many obstacles brought about by the storm, and they must find a way to survive.

The first characteristic is the crisis effect (Burton, Kates, & White, 1993). The crisis effect occurs when the awareness of a disaster is greater during and after the disaster hits. Although there was some awareness about the storm before the ice age hit, not everyone knew about it. When Jack discovers that the world is experiencing global warming and is about to witness the next ice age, he attempts to warn the Vice President to evacuate the United States. In the time before the disaster, the Vice President ignores Jack and does not take him seriously because the possibility of an ice age seems improbable. However, as soon as this cataclysmic event starts to happen, people begin to panic.

The President and Vice President take action, and people in the cities start to evacuate. The President issues a nation wide evacuation for everybody in the southern states to go to Mexico for safety from the storm. People start to concentrate on what they need to do to escape the disaster and get to safety. Immediately after the disaster, the President makes a public announcement concerning the extensive use of the world's natural resources. The President realized that people were using natural resources too much and that they needed to conserve more to avoid future disasters. The President also sent out search parties to find those people who fought for their lives and survived in the storm.

After the storm started to hit the United States, the government initiated what is called the levee effect (Burton, et al., 1993). As soon as measures have been set in place, the levee effect occurs as people follow and settle into the protection that is given. After the coming of the ice age had been discovered, there were safety measures taken to ensure the survival of the citizens of the United States who could be saved. A major evacuation was implemented to move all citizens to the southern states and Mexico. Citizens started making their way to the south and settling the best they could. The United States government even had to make agreements with the Mexican government to ensure a place for Americans to go. Soon some Americans and members of the United States government were settling at the American Embassy to ride out the storm. Measures were even taken

Richard Miller and Robert F. Rycek are editors of the *Journal's* Special Features section.

to set up a hospital for those who were terminally ill and could not move on their own.

Even though there was not government issued protection, some people found a way to protect themselves in their own surroundings. Sam and the others at the library in Manhattan found shelter to keep warm and survive the storm, as did others in surrounding buildings.

Throughout the movie, there are adaptations that people make in responding to the threat. In a disaster, a person may hear so much about the impending destruction that it no longer is frightening and adaptation occurs (Bell, Fisher, Baum & Greene, 1996). In the movie, people tended to adapt to the threats of the disaster as the storm progresses. While Jack is dealing with the possibility of a worldwide global weather change, he is also thinking about getting his son out of Manhattan. Sam and the others, who trapped at the library, must also adapt and cope with what may come if Jack cannot reach them, and they get caught in the storm. Along with Jack, the Vice President and President must make major decisions that will affect the entire country. As the Vice President thinks that Jack's plan is improbable and unrealistic, he is also thinking that this cataclysmic disaster will not hit, and he will not be a victim. However, as the topic is discussed without Jack, the Vice President is informed about Jack's son in Manhattan and has a reality check with what is to come. This realization leads to the decision that everyone in the northern half of the United States needs to be evacuated. Other characters throughout the movie make major adaptations to the future that lies ahead. All of these adaptations are to the possibility that they might be victims of this horrendous storm and are in accordance with the levee effect described by Burton, et al., (1993).

Another phenomenon that takes place in the movie is the behavior constraint model (Proshansky, Ittleson, & Rivlin, 1970; Rodin & Baum, 1978; Stokols, 1978, 1979; Zlutnick & Altman, 1972). According to this model there is a loss of perceived control over the situation. The constraint in the situation can be an actual impairment from the environment or simply the belief that the environment is placing a constraint on us. The first experience is of discomfort or negative affect and then a person tries to reassert control over the situation. The people in the library have lost perceived control of their life and are looking to regain that control. They believe that they can control their destiny, and they have power over the storm. In Manhattan, where Sam and a couple of his classmates along with other Manhattan natives are trapped in the library, there is panic and worry. As soon as the word gets out that everyone north of Kansas is being evacuated to

the south, many of the people get up and start to leave. Sam attempts to warn them not to go, but the people refuse to stay and flee in fear for their lives. These people believe that if they stay in the library they will die, but if they make their way to the south, they may have a chance of survival. In the library, where Sam and others have stayed, they struggle to find a way to survive and regain control over their lives. In the southern part of the United States, other citizens trying to escape the disaster are prevented from crossing the border. In a panic to save their own lives, citizens of the United States illegally cross the Rio Grande into Mexico seeking refuge and protection. Because their safety was taken out of their hands, the people seek control by taking the initiative to save their own lives.

Throughout these changes in behavior there are depictions of learned helplessness among some people. The concept of learned helplessness is part of the behavior constraint model and is the ultimate consequence of loss of control (Garber & Seligman, 1981; Seligman, 1975). Learned helplessness is a result of repeated efforts at regaining control that result in failure, and people think that their actions have no effect on the situation. In turn people stop trying to gain control and "learn" that they are helpless (Bell, et al., 1996). As some of the people who left the library are on their journey, they give up and just quit. They leave themselves out in the cold to die believing that they would not make it through. These people lost their sense of control and felt helpless in the situation. Other people resting along the way also suggest giving up and believe that there is no hope by heading south. Sam's mother also endures this learned helplessness when she realizes no one is coming back for her and one of her leukemia patients, Peter. She gives up and realizes that she too is going to be caught in the storm and loses hope. Once this perceived control has dissipated, helplessness takes over.

There was one thing that helped this situation and that is the idea of social support during a natural disaster or any disastrous event (Norris & Kaniasty, 1996). Research findings indicate that people with more social support usually fare better in dealing with stress and appear to have fewer adjustment problems after the disaster. Even though Sam and the others were trapped in the library, they had each other to keep their spirits high. They could encourage each other and maintain the hope of making it out alive. In this situation, Sam knew that his dad was going to be coming and knew what to do in the situation. Sam kept the others motivated to survive. After Sam took a stand, others followed and helped by reminding each other that they were going to make it. Having a

good social support system can help to aid in overcoming a harsh situation.

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Psychologically Speaking Teacher, Advisor and Mentor: An Interview with Drew Appleby

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Drew Appleby received his PhD degree in experimental psychology from Iowa State University. His first full-time teaching position was at Marian College where he stayed 27 years. Currently he is the Director of Undergraduate Studies in the Indiana University-Purdue University Indianapolis (IUPUI) Psychology Department. In his 35-year academic career, he has published or presented literally hundreds of papers on the scholarship of effective teaching, advising, and mentoring. In the process, he has become what many people consider the very model of an effective teacher. Faculty colleagues and students alike call him an inspiration, citing his love of learning, his passion for psychology, his enthusiasm for teaching, and his generous caring for students.

Dr. Appleby is an APA Fellow and a recipient of the Society for the Teaching of Psychology Outstanding Psychology Teacher Award, the Marian College Teaching Excellence Award, IUPUI's School of Science Teaching Award, and IUPUI's Chancellor's Award for Excellence in Teaching. He also received the National Academic Advising Association's Outstanding Academic Adviser of the Great Lakes Region Award, IUPUI's School of Science Advising Award, and the IUPUI Psychology Department Advising Award. He also received the Marian College Mentor of the Year Award, IUPUI's Alvin Bynum Faculty Mentor Award, and the IUPUI Psychology Department's Faculty Mentor of the Year Award. He was also chosen to present a G. Stanley Hall Teaching Lecture at the American Psychological Association conference.

His influence on the teaching of psychology also extends into secondary education where he has created the Indiana High School Psychology Teachers Association, which holds its annual conference each spring on the IUPUI campus.

Miller: Before we begin, perhaps a little background on the purpose of this interview might be helpful. The Journal of Psychological Inquiry publishes undergraduate student research. In addition, there is a

Special Features section that serves a variety of purposes, including a forum for student essays on topical issues, critical analyses of media presentations, and articles that provide information of interest to both faculty and students related to the research process. We have asked you for this interview to explore your thoughts on involving undergraduate students in empirical research. The journal grew out of discussions among faculty from the Great Plains area who have sponsored student presentations at state and regional conventions. At some time, we began to ask ourselves, "And then what?" That question led to a discussion of the possibility of providing a forum for the publication of student research. We think of the journal as a means for increasing the quality of the work done by undergraduate students. So, that's the context in which we wanted to talk with you.

Brady: Who influenced you to become a psychologist? And were there significant teachers who played a role in your decision?

Appleby: I always knew exactly what I wanted to be when I grew up. I wanted to be a dental educator just like my father, who was the chairman of the Prosthetics Department in the University of Iowa Dental School. My father was a wonderful teacher. He loved his job and was so good at it that he was awarded the university's highest teaching honor, and his students named their children after him.

So, in my childish mind, I thought that I would have to become a dental educator if I wanted to be as happy and competent as he was. As an undergraduate, I chose biology as my major, and I took all of the courses that were necessary to go to dental school. During the summer between my sophomore and junior year, I took introductory psychology. I didn't take it because I wanted to take it; I took it because it was required. About a week and a half into the course, I suddenly realized that I had fallen in love

with psychology. I did so well on the tests that I earned my first college grade of A in that class.

As an undergraduate, I chose biology as my major I took (required) introductory psychology. I suddenly realized that I had fallen in love with psychology.

I remember going home that summer feeling uncomfortable because I thought my father was going to be disappointed that I wasn't going to follow in his footsteps. In his usual amazing way, he said, "Drew, I've always been concerned that you wanted to be just like me, and I'm very happy that you have found what it is that is going to make you happy. Let me tell you a little secret. I love dentistry, but I love teaching more. If that is also what you would love to do, then earn a PhD in psychology and become a psychology professor." So, my father and my first psychology course were the reasons why I became a psychology major and eventually a college professor.

Manker: What motivated you to get involved in scholarship and research?

Appleby: I entered Iowa State University's graduate program in 1969, and I earned my master's in personality in 1971 and my PhD in cognition in 1972. My dissertation was on iconic memory, and I used a tachistoscope that cost thousands of dollars to collect my data. Unfortunately, I left graduate school without any publications and, as you can imagine, that's not a very wise way to enter a competitive academic job market. I accepted a teaching position at a small, private teaching-oriented school, Marian College, in Indianapolis.

This small school had no budget for research, and it certainly did not have a tachistoscope. I had a conversation with our audio-visual director, explaining to him what a tachistoscope was, what it did, and what I studied. He said, "Why don't you just take a slide projector, insert your stimulus slide, and move your hand up and down in front of the lens?" Of course, he didn't realize I was varying stimuli in terms of nanoseconds. I realized my research in icon-

ic memory was over. Because I wasn't doing any research, I became isolated from the professional world of psychology. I had enjoyed teaching when I was in graduate school, and I continued to enjoy teaching at Marian.

Several years later, I received a letter about the Mid-American Conference for Teachers of Psychology. I'd never heard of a conference just for teaching, so I thought I would give it a shot. When I arrived, I fell in love with the whole atmosphere, and I made more new friends at that conference in a two-day period than I had made in the previous 10 years.

I became very involved with that group of colleagues, and I became an active member of the Society for the Teaching of Psychology (i.e., Division 2 of the American Psychological Association). At that conference, I also discovered that there were many people discussing their research on teaching. These researchers were manipulating independent variables between classes and then measuring their students' test scores as dependent variables, and I was thinking, "This is what it's all about." These teachers were doing research, the results of which could actually benefit what I was trying to do with my students. From that time forward, I started doing research in teaching. It had taken me quite a while to find what I really wanted to do research on, because you don't just do research. You have to have a passion for investigating some sort of problem that you would like to solve, and there are always problems to be solved in the classroom.

One of the things I've been doing lately is trying to create ways to motivate students to be more prepared when they come to class. A good friend of mine, John Kremer—who is our former department chair—had taken on the challenging task of re-vamping our introductory psychology course when he stepped down as our chair. It was a big course that enrolled about 3,000 students per year in large lecture sections. Unfortunately it wasn't working very well. Students weren't coming to class, they were coming to class and reading the newspaper, they were dropping out of the class, and they were performing very poorly. Although most psychology departments offer large lecture sections of introductory psychology because they produce a great deal of tuition revenue, John knew that this approach didn't work in terms of student learning because it allows students to be very passive learners.

Over the next 12 years, he slowly altered the course into an all active learning course. Because there are many of us who teach this course, we have decreased the class size to only 50 per section. There's only one rule in the class: no lecturing. Everything in class must be in the form of active learning activities. The classes are supported technologically with a wealth of pedagogically sound online learning exercises. In some of the classes, students must read the chapters and do a certain number of activities in order to earn the right to take their tests. In other words, if they have not studied for the test, then they don't get to take it.

I like to do things a bit differently in my class. There is a study guide at the end of each chapter in our textbook. My students are required to read the textbook assignment and complete the study guide before each class. Because my students know the material, I can ask if they have any questions, and they actually respond with intelligent questions; that's very refreshing. I will ask, "What was the material that was confusing to you in this chapter?" Someone will raise his or her hand and say, "I'm having a tough time figuring out the difference between punishment and negative reinforcement, can you explain that to me?"

Actually, I never explain it to them. I simply divide the class up into four teams. We arrange the room in such a way that it is an active learning room with tables and chairs that have wheels on them so we can set up the room any way we want. I assign the groups little tasks. For example, I might say, "Team 1, please come up with a definition of negative reinforcement. Team 2 create one for punishment. Team 3, produce an original example of negative reinforcement, and Team 4, do the same for punishment." They work hard to come up with these definitions and examples. In about 5 min I say, "Let's have a report." They report their answers, and everyone else listens intently.

I really think students become empowered by this type of situation because they begin to realize that, "Hey, we can learn this stuff by ourselves!" We also engage in some competitive activities like an academic version of the Millionaire Game, which gets pretty spirited even though they're not competing for many points. They're serious about this kind of activity, and they try hard to win in a friendly way.

One of my students came up with a motto for my class several semesters ago, which is "Don't come

dumb," because if you come to class unprepared, you not only don't learn anything in the class, but you also let your teammates down. There's a little bit of healthy competition in this. They don't like to get up in front of everybody and get a zero for their team when other people are earning points for their teams. So it's a nice motivator because it's just like life - if you snooze, you lose. Activities such as these have allowed me to transform myself from a teacher who required passive learning on the part of students by simply lecturing to them (i.e., a sage on the stage) to more of a guide on the side. In essence, I have become more of a coach than a teacher, and I constantly remind my students that learning is not a spectator sport and that they must get actively involved in the learning process if they want to learn.

I received the following comment on my end-of-semester student evaluation from one of my students. He did a nice job of summarizing what I try to do in this class. "I've never experienced a class like this before because the teacher didn't teach me in the way I am used to being taught. Rather than standing up in front of the class and telling us what we should know for the tests, he created classroom activities and a grading system that forced us to learn on our own. At first I was very upset by this because I had never been taught this way before, and I had to work harder than I am used to. However, by the end of the semester I was beginning to wish all my teachers taught this way. What he had done was to teach me how to learn on my own, and this is going to be a very valuable skill for me in the future, both in school and in my occupation."

Tompkins: How have you involved your undergraduate students in your research?

Appleby: I teach a capstone class in which my students do three assignments. They write a scholarly paper that describes the area of psychology that will lead them into their career. In another assignment, they create a professional planning portfolio in which they are required to create the documents that will lead them into the next stage of their lives (e.g., graduate school or employment).

If they are headed to graduate school, they must find three appropriate graduate programs, complete the application for each program, create a curriculum vitae, write a personal statement, get three people to sign a contract indicating they will write them a strong letter of recommendation, and provide me

with evidence that they have the necessary skills needed to take the GRE.

Those headed into the job market must create a similar set of documents (e.g., a resume, evidence of strengthening their interviewing skills, a thorough job search, and completed applications for three jobs resulting from their job search).

The third assignment in the class is a collaborative research project. For the last four years, we have been doing assessment projects. Two years ago, we had an external review of our department. Although our undergraduate program was reviewed very favorably, the reviewers suggested we determine where the student learning outcomes (SLOs) of our undergraduate program are being taught in our undergraduate curriculum. Therefore, my capstone class did a syllabus audit of all of the courses offered by our department.

Each student was assigned to collect five syllabi. Then we created a set of criteria that would allow them to read the syllabi and identify assignments that taught and assessed these SLOs. For example, what classes teach writing in APA style, develop oral presentation skills, teach the ethics of psychology, or provide students with career-related material?

Then we went one step further and performed this analysis developmentally with Bloom's taxonomy. Bloom, an educational psychologist, identified six kinds of skills you need to be fully educated about a topic. For example, you have to be able to remember information about a topic, but you also have to be able to understand it. As you well know, you can memorize something, but not really understand it. Memorizing things lets you answer the "who, when, and where" questions, but it's the why and how questions that require understanding.

You also have to understand something before you can actually apply it to solving a problem. Higher order cognitive processes like analysis - where you break a whole into its smaller components and figure out how they fit together - should also be acquired. Then there's synthesis, the creative process in which you put together things that you hadn't thought were related, into new and creative wholes.

Finally, there's evaluation, which is using a standardized set of criteria to judge the actual worth of something. So, for example, when evaluating the

worth of a psychological test you would use reliability, validity, and standardization as criteria.

In introductory classes, it may be enough if you just use the flash card technique and then come up with some interesting examples to understand psychological terms and concepts. However, when you begin taking upper division classes, you're going to be required to create things, such as an IRB for a research project or use statistical analysis in order to evaluate whether or not your results are significant. So we went a little farther and judged each one of these syllabus assignments as either indicative of a basic level, an intermediate level, or an advanced level. If all you had to do was remember and/or comprehend something during an assignment, that assignment was identified as occurring at the basic level. If you had to apply and/or analyze, the assignment was identified at the intermediate level, and if an assignment required you to evaluate something or actually create something new, then it was identified as occurring at the advanced level.

After collecting and analyzing our data, we got a clearer idea about where in our curriculum these SLOs were being targeted and at what levels. We found that some SLOs were being targeted much more often than others and that some were targeted at quite different levels. So now the question was, do we need to tweak our curriculum a little?

As a result of our capstone assessment projects, all departments in the school of science now have to have an annual assessment report that is written in very scientific terms. We have an assessment institute at IUPUI each year that's run by Dr. Trudy Banta - a nationally recognized assessment expert-who suggested an assignment for this year's capstone class.

There's a new, nationally standardized test called the Collegiate Learning Assessment that the Commission on Higher Education is recommending as a senior exit test for all graduating senior at all American colleges and universities. Dr. Banta does not think that's a very good idea. She thinks that each college and university should create its own unique set of SLOs and then measure them with their own unique assessment strategies, rather than having using a one-size-fits-all standardized test.

We did a neat piece of research on the face validity of this test, and then my students presented their

results at the National Assessment Institute in a session with Dr. Banta. My students really enjoy this kind of research activity because they see that the research they are doing has actual value in higher education, not just as an assignment they must do to satisfy the requirements of a class. They also see its value when they can include a presentation at a national conference on their curriculum vitae or resume. Making undergraduate research “real” is what makes it fun and also what makes students seek it out and take it seriously.

Tompkins: As a result of the growing interest in exploring teaching as an area of research, what is the best way to get undergraduates interested in researching teaching methods?

Appleby: Rather than pursuing students to do this kind of research, I wait for students to come to me. I’ve created a table that has the names of our faculty in one column and their research interests in another. For example, the description of my research says, “I investigate teaching, learning, advising, and mentoring processes and use the results of my research to create strategies that enable college students to adapt to their educational environment, acquire academic competence, identify and set goals, and achieve their career aspirations.”

If students find my research interesting and approach me about it, I give them some of my publications to read. I’ve written quite a few articles in *Eye on Psi Chi* on topics like the kisses of death in the graduate school application process, what companies are looking for in applicants who are psychology graduates with a bachelor’s degree, and what graduate schools want to read about in letters of recommendation. If they’re still interested, I ask them if they would like to help me gather some data on a current topic I’m exploring or they could suggest their own research idea.

I had two students do some very interesting research on classroom civility several years ago. They did naturalistic observation in two of my classes during which they recorded uncivil behaviors such as student conversations during lectures and ringing cell phones. What we did was very simple. We used two sections of my introductory psychology class, and I explicitly told one section that there were things I did not want to see happen in the class and I included a classroom civility statement in their syllabus. For the other class, I said nothing about classroom civility and their syllabus contained no civility statement.

My student researchers attended every day of class and observed the occurrence of uncivil behaviors. It was interesting to find that there were differences in these two classes in terms of their scores on tests, their attendance, and the number of uncivil behaviors.

We came to the conclusion that identifying specific uncivil behaviors, explaining how these behaviors undermine the teaching-learning process, and then telling students that these behaviors will not be tolerated created a more civil classroom atmosphere and produced higher educational outcomes. Interestingly, the two students who conducted this research ended up naming their first child Drew. I guess I’m becoming more like my father each year.

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Manker: Based on your research, what advice would you give to students regarding the characteristics that graduate schools and employers are looking for?

Appleby: I’ve published some research in *Eye on Psi Chi* about the characteristics that employers are looking for when they interview psychology majors. What’s interesting is that employers don’t seem to be very interested in what applicants know; they’re much more interested in what applicants can do.

Employers are interested in skills, not knowledge, and most of the skills they are interested in are social skills, such as the ability to work effectively with diverse people as a member of a team. Two of the characteristics they look for are initiative and persistence. That is, are you a self-starter and can you get things done without having to be reminded to do so? They are also very interested in writing and speaking skills, and the ability to gather, collate, analyze, and evaluate information.

I also wrote an article with two of my students on the characteristics that graduate admissions committees are looking for in letters of recommendation. We collected about 150 different application packages from schools and looked at what types of information the schools requested from letter of recommendation authors. Some of them simply requested a letter, some required a letter that addressed specific things, and some wanted a letter as well as the completion of a grid of skills and characteristics. It's a bit intimidating to realize that you are often reduced to a set of checkmarks in a grid indicating top 1%, top 5%, and so forth. We took all of these types of information, content analyzed them, and discovered that graduate schools are much more interested in how motivated and hard working you are than how smart you are. They can tell how smart you are from your GPA and your GRE scores.

Employers are interested in skills, not knowledge Two of the characteristics they look for are initiative and persistence.

What they're really looking for in letters of recommendation is evidence of the personal characteristics that will enable you to adapt to and thrive in a rigorous graduate program. I started in graduate school with 35 people in my cohort and, when the dust settled, only two of us got our PhDs. I can guarantee you that I was not the most intelligent student in my cohort. However, my gifts were my motivation, my focus, my persistence, and the fact that I had - and still have - an amazingly supportive wife.

... graduate admissions committees ... looking for in letters of recommendation is evidence of the personal characteristics. Graduate schools are looking for those who will fit into and survive their programs.

Graduate schools are looking for those who will fit into and survive their programs. Do you have the

same kind of research interests that their faculty have? Do you have the kinds of skills that will help you to go through their program? Most graduate schools make heavy investments in their graduate students in terms of faculty time, department resources, and financial support like fellowships and assistantships. They want to make sure that they are investing wisely in students who can finish their programs.

Brady: How can instructors increase appeal for undergraduates to be interested in research?

Appleby: Faculty must make their students aware of the advantages of becoming involved in research. Before they understand how important it is to do research, most undergraduates think research is something that is difficult, time consuming, and not very exciting. Why not just get your degree as quickly and painlessly as possible? It helps if you can make students aware of the fact that the people with whom they do research are going to be able to write them strong letters of recommendation.

Another thing that makes undergraduate research appealing to some students is that it gives them a chance to take control over a very important part of their education. Research allows you learn what you want to learn, not just what someone else wants you to learn. When students understand this, then research becomes a very exciting process because they are not only doing what they want to do, but they are also contributing original knowledge to the field of psychology. So, research has some external rewards, such as letters of recommendation, and it also has some internal rewards, such as like actually becoming a contributing member of the science of psychology.

Last, but certainly not least, is the opportunity to increase critical thinking skills such as application, analysis, synthesis, and evaluation as a result of engaging in research. These are the rewards of research I try to impress upon my students. When they learn how important research is, they start trying to figure out how they can get involved in research and who can mentor them in the research process. One of the great joys of my job is to act as a "people broker" in my department by paying close attention to what my students are interested in and what my colleagues are looking for. Then I do my best to match them up and, when such matches work out, I get the pleasure of being able to sit back and watch the students' research process begin.

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. All manuscripts should be formatted in accordance with the APA manual (latest edition).
2. 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.
3. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
4. Send three (3) copies of the a 3-5 page manuscript in near letter quality condition using 12 point font.
5. 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. 50-58) 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. All manuscripts should be formatted in accordance with the APA manual (latest edition).
2. 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.
3. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
4. Send three (3) copies of the a 3-5 page manuscript in near letter quality condition using 12 point font.
5. 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—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. All manuscripts should be formatted in accordance with the APA manual (latest edition).
2. 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.
3. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
4. Send three (3) copies of the a 3-5 page manuscript in near letter quality condition using 12 point font.
5. 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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