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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

Editorial

This past summer the American Psychological Association released the 6th edition of the APA Manual. If you have had contact with the new manual, you have seen that the new manual is much slimmer in appearance and is presented in a very reader friendly format. To supplement the new manual, the APA has put together a very useful website as an accompanying resource (www.apastyle.org). This website not only provides content to frequently asked questions, but listed changes from the previous edition, and tutorials for learning the new style.

Instructions for Contributors

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

1. Manuscripts must have an undergraduate as the primary author. Manuscripts by graduates will be accepted if the work was completed as an undergraduate. Graduate students or faculty may be co-authors if their role was one of teacher or mentor versus full fledged collaborator.
2. Manuscripts must (a) have come from students at institutions sponsoring the Great Plains Students' Psychology Convention and the *Journal of Psychological Inquiry* or (b) have been accepted for or presented at the meeting of the Great Plains Students' Psychology Convention, the Association for Psychological and Educational Research in Kansas, the Nebraska Psychological Society, the Arkansas Symposium for Psychology Students, or the ILL-OWA 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.
4. All manuscripts should be formatted in accordance with the APA manual (latest edition).
5. Empirical studies should not exceed 15 double-spaced pages; literature reviews or historical papers should not exceed 20 double-spaced pages. The number of pages excludes the title page, abstract, references, figures, and tables. We expect a high level of sophistication for literature reviews and historical papers.
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2/06

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How Does Type of Crime Presentation and Eyewitness' Gender Influence Recall Accuracy and Confidence?

Sarah K. Cotton and Geoffrey W. Sutton*

Evangel University

Abstract

This study was designed to evaluate how the presentation of a staged crime (live or videotaped) and the influence of an eyewitness' gender (man or woman) affected the accuracy and confidence of 84 undergraduate eyewitnesses' reports. The results indicated that those viewing the live crime incident were more accurate in identification of the criminal $F(1,80) = 10.58, p = .002, \eta^2 = .12$. There was a significant interaction between presentation type and participant gender on the confidence level of the eyewitnesses, $F(1,80) = 4.89, p = .03, \eta^2 = .06$. Men reported similar confidence levels for the live and video conditions, but women were more confident than men in the live condition and less confident than men in the video condition.

Keywords: Eyewitness Accuracy, Eyewitness Confidence, Eyewitness Recall

Everyday events can be difficult to recall. The recall of everyday memories can be less coherent and less cohesive than the recall of a traumatic event (Talarico & Rubin, 2003). For instance, people can forget what they wore yesterday because they did not form an emotional connection to the apparel they wore. However, if a student wore a particular outfit to school and other students made fun of it, the student would be more likely to remember the outfit because of the emotional connection. According to Christianson (as qtd. in Butler & Pallone, 2002), "emotional events are remembered differently than ordinary, expected events" (p. 255). Butler and Pallone (2002) attributed the "distinction of events or details" (in this case being made fun of) to the memory of these emotional events (p. 255). Talarico and Rubin (2003) found that eyewitnesses of an emotionally evoking events, such as September 11, 2001, are likely to have a more detailed recall of that event than of their clothing or actions of three weeks before. In this study we attempted to create an emotional event to evaluate the effects on recall.

Eyewitness Variables

Eyewitness Accuracy and Confidence

A crime scene, such as a bank robbery, typically has witnesses. The many eyewitnesses who see the same crime will claim accuracy of their description. However, research does not support these claims. According to Kassin, Tubb, Hosch, and Memon (2001), in order for eyewitnesses to have a rank of "general reliability," they must be at least 77% accurate, and to be "very reliable," the individual must be 91% accurate (p. 411). In reality, eyewitnesses are significantly less

accurate than they expect to be (Brewer, Keast, & Rishworth, 2002; Memon, Hope, & Bull, 2003; Pozzulo & Warren, 2003; Smith, Lindsey, Pryke, & Dysart, 2001; Weber & Brewer, 2004).

Confidence has a role in the accuracy of recall. Berger and Herringer (1991) found that even though eyewitnesses were confident in their recall accuracy, that confidence and accuracy were not necessarily positively correlated. Bornstein and Zickafoose (1999) found that eyewitnesses' "confidence in their responses exceeded their accuracy" (p. 84). In addition, Yarmey (1993) found that although men and women differed on their accuracy of recall, their confidence levels were equal. According to Roebbers (2002), although eyewitnesses score very high on confidence ratings, the same eyewitnesses do not score as well on accuracy regarding criminal identification. Smith et al. (2001) demonstrated that postdictors (i.e., confidence, decision time, and relative vs. absolute judgment strategy) predict accuracy 67% of the time when an eyewitness chooses the criminal of the same race. In the present study we measured both accuracy of recall and level of confidence.

The location of a crime and the type of weapon used significantly affect an eyewitness' accuracy. When comparing eyewitness accuracy in a live crime scene with that in a videotaped crime scene, Fahsing, Granhag, and Granhag (2004) found eyewitnesses to a live crime scene had a higher percentage of accuracy: "Of the verifiable attributes, 64.8% (1,450) were completely correct, 22.5% (503) were partially correct, and only 12.7% (284) were incorrect" (p. 725). In addition, a live crime scene allows witnesses to connect emotionally to the crime. For example, a live crime scene with a gun poses an immediate danger to eyewitnesses, possibly causing them to worry about becoming the next victim. A videotaped crime scene, on the other hand, may lack the ability to affect the eyewitness personally. When studying videotaped crime scenes, Smith, Lindsey, and Pryke (2000) found that the distance of the criminal from the camera directly affected the accuracy of an eyewitness who chose a criminal from a lineup. A video camera makes it harder to guarantee that the details and the extent of what would have been seen in a live situation would be seen on the videotape. In this study we included live and videotaped conditions.

*Faculty Sponsor; The authors would like to dedicate this study to the victims and survivors of the April 16, 2007 shootings on the campus of Virginia Tech. When writing this manuscript in early 2007, they were horrified to learn of the massacre. The authors would also like to thank Robert Cirtin, Assistant Professor of Criminal Justice, for his expert consultation regarding crime scenes, firearms safety, and participation as classroom professor. Thank you also to Eric Praschan and Michael Burnett for volunteering to work as actors.

The level of violence witnessed in a crime can also directly affect the accuracy of an eyewitness. The emotional reaction of the eyewitness in response to the violence is one factor that affects the memory of the witnessed events. Porter, Spencer, and Birt (2003) found that the more negative the emotion, the more susceptible one is to remembering false information. However, Wagstaff et al. (2003) found the level of violence did not contribute to eyewitness accuracy until the level was high. For example, in a rape case, the eyewitness accurately identified the criminal's hair color. The more violent the crime, the more accurate the eyewitness was. In addition, the more personal the crime (live crime scene), the more accurate the eyewitness was. For the present study, we attempted to induce negative rather than positive emotions by presenting a crime in the context of a loud argument, large criminal figure, and sounds of gun shots.

Eyewitness Accuracy and Eyewitness Gender

Limited research has been conducted on the effects of eyewitness gender on accuracy. Yarmey (1993) found that women were more accurate than men when recalling an individual's weight. Stewart, Vassar, Sanchez, and David (2000) conducted research dealing with the stereotypes of gender. They found men and women tend to remember details about members of the same gender better than those of the opposite gender. Previous research has also indicated that gender roles (masculine or feminine) can affect differences in everyday memory tasks (Colley, Ball, Kirby, Harvey, & Vingelen, 2003). For instance, women were more likely to remember shopping lists than men were, which confirms the stereotyped gender role of women as grocery shoppers. Because gender might make a difference in eyewitness recall, we included gender of the participants as a quasi-independent variable.

Purpose and Hypotheses

Our purpose was to explore the difference in recall accuracy and confidence of participants who witnessed either a live crime incident or a videotape recording of the same crime incident. We also wanted to examine the relationships between an eyewitness' gender and the eyewitness' ability to recall details about a criminal accurately and confidently. Specifically, we hypothesized that those viewing the live crime scene would be significantly more accurate in their recall of a criminal's characteristics than those in a videotaped crime incident. In addition, we expected a significant eyewitness gender difference in the accuracy of recall but did not predict a direction because there was too little research indicating the direction of gender differences. We also explored the possibility of a significant interaction between the type of crime incident presentation (live or videotaped) and the eyewitness' gender (man or woman). Furthermore, we predicted there would be a significant difference in the mean confidence percentage of the eyewitnesses based on the same conditions of type of presentation and gender but we did not predict a direction because of the limited research base.

Method

Participants

Eighty-four undergraduate students (29 men, 55 women) from a small Midwestern university volunteered to participate in the study for class credit. The students were from two Introduction to Sociology classes. We did not randomize the participants, but according to chi-square analyses, our groups were similar in age and ethnicity. The first class had 11 men and 28 women, and the second class had 18 men and 27 women. The students ranged in age from 18-40 years old, $M = 19.2$, $SD = 2.5$. Most were European American (84 %). There were also 2% African Americans, 6% Hispanics, 2% Asians, 3% other, and 3% did not declare an ethnicity. Over half of the participants classified themselves as first-year students (55%), and the other half consisted of 28% sophomores, 13% juniors, and 4% seniors. Of the participants, 71% claimed to have been an eyewitness to some form of a crime in their lifetime. Participants signed an informed consent form, and were treated ethically according to the American Psychological Association guidelines.

Materials

The materials included a consent form, eyewitness response form, demographic form, and a scoring form. According to Robinson, Johnson, and Robertson (2000), participants have greater accuracy when asked to recall the witnessed events instead of recognize details. Therefore, we used primarily open-ended (recall) questions to measure the accuracy of the participant's description of the criminal: age, gender, height, build (weight), hair color, hairstyle, ethnicity, weapon, face shape, type of clothing and duration of the crime (Fahsing et al., 2004; Wagstaff et al., 2003). We also used some multiple choice (recognition) questions derived from the work of Smith et al. (2001). The recognition questions referred to characteristics such as gender and hair color. Following each item, the participants rated the level of confidence in the accuracy of their report on a scale from 0 to 100%.

We used a 10-point scale derived from the scoring method used by Wagstaff et al. (2003), to evaluate the accuracy of the participant's memory for ten characteristics of the criminal. The scale ranged from *completely accurate* (10) to *completely inaccurate* (0).

Apparatus

We used two Cannon model ES 8400VA camcorders mounted on tripods at a distance of 10.67 meters from the primary crime scene. The primary camera position was at an angle in the corner of the classroom that would provide a maximal view of the crime scene. The second camera was placed 10.68 meters as a backup recording. The video was recorded on two Hi 8 mm videotapes. Following the live scenario, we played the videotape on a ceiling mounted projector using a front wall mounted white projection screen. The gunshots were blank rounds fired from a handgun outside the classroom.

Design

We used a 2 X 2 factorial design with one independent variable (live or videotaped condition) and one quasi-independent variable, the gender of the eyewitness (man or woman). The dependent variables were the accuracy of the eyewitnesses (participants) and the mean confidence percentage of the eyewitnesses (participants).

Our study had two groups. The first group involved 39 participants (28 women and 11 men), all from the first section of the Introduction to Sociology class. We exposed them to the live crime incident. The second group had 45 different participants (27 women and 18 men), all from the second section of the Introduction to Sociology class, and we exposed them to the videotape of the crime incident recorded in the first class.

Procedure

Prior to beginning the procedures of our experiment, we received approval from the University's review board. After getting the approval, we proceeded with our experiment. For ethical reasons, exactly four weeks before the crime incident took place, we informed the participants in the class selected for the live crime incident that if they chose to be part of the study, they would watch an incident unfold that would involve hearing a gun shot with blanks. We provided an opportunity to respond to questions and handed out consent forms.

To create the live crime incident, we recruited two experienced actors (one victim and one criminal), and the professor of the class as a mediator of the conflict. Our criminal actor in the crime incident did not attend the same university as the participants. Our victim in the crime incident was on staff at the university; however, the victim did not need to be unknown to the eyewitnesses.

Before the staged crime, campus security reviewed the script and posted an officer in the hall near the classroom. In addition, volunteers remained in the hall in case bystanders would come by and be startled by the noise. Furthermore, all faculty and staff in the building were made aware of the time and location of the gunshot to avoid any cause for alarm.

Our first group saw the live crime incident. After the participants entered the class, the professor took attendance and handed out a quiz. As he collected the quiz, the professor unobtrusively excused one student who did not sign the informed consent four weeks earlier. (This student was not included in anyway in our experiment). After the student left the classroom, the criminal and the victim began a loud verbal altercation in the stairwell that was adjacent to the front of the classroom. The criminal and victim entered the classroom at 12:17 p.m., about five seconds after the fighting began. The victim ran to the professor immediately, and the professor yelled, "What is going on?" While yelling, the criminal grabbed the victim and pushed him against the classroom wall. The professor then intervened to separate the criminal and the victim. While trying to maintain order in the classroom, the professor demanded that the criminal and the victim take the fight back into the stairwell. The three (the

professor, the criminal and the victim) went into the stairwell, shutting the door to the classroom. The criminal continued to yell and create fighting noises (e.g., banging on the wall) so that the class could hear but not see the commotion. At the climax of the conflict, (still 12:17 p.m.), the gun was fired four times by the classroom professor, who is a firearms safety instructor. The gunshot took place in the stairwell adjacent to the classroom and was not visible to the participants. Immediately after the gun was fired, the criminal and the professor ran out of the stairwell back into the classroom. The criminal proceeded to run out through the classroom. As soon as the criminal left the classroom, the investigator entered. The professor and investigator informed the class that they had just witnessed a staged crime incident. The course professor and the investigator reminded the students that this was the incident for which they had signed an informed consent four weeks ago. We distributed the packet of materials and instructed them to answer the items related to what they had just witnessed. After collecting the packets, we debriefed the participants by explaining the study, answering questions, and offering an opportunity to speak with any student who felt distressed by the incident. We also mentioned that they could obtain confidential counseling from the student counseling center. We asked the participants not to talk about this study with other students until we completed the second phase. We then thanked them for their involvement in our experiment and handed the class back over to the professor.

The second group viewed the videotaped crime incident. We handed out the consent forms at the beginning of the class. We explained that they were about to watch a video of a crime incident. Following the videotape presentation, we distributed the packet of materials. After we collected the packets, we provided a debriefing, offered the opportunities for further questions or counseling as in the first session, thanked them for their participation, and returned the class to the professor. Follow-up with the course professor indicated no students in either class voiced complaints or requested counseling assistance.

Results

Preliminary analysis

Before conducting the main analysis, we examined the relationship between the two dependent measures. We found a significant relationship between the two measures of confidence and recall accuracy ($r(84) = .321, p = .001$, one-tailed).

Main analysis

We used two 2-way between groups ANOVAs to analyze the data. Type of crime presentation significantly affected recall accuracy, $F(1, 80) = 10.58, p = .002, \eta^2 = .12$. The recall accuracy of the live crime was greater than the accuracy of the video-taped crime. There were no effects for gender of participant or interaction of presentation and gender ($ps > .05$). See Table 1 for the means and standard deviations.

Table 1

Recall Accuracy of Live vs. Videotape by Eyewitness' Gender

| Eyewitness Gender | M(SD) | M(SD) | Sample Size | |
|----------------------|------------|------------|-------------|-------|
| | Live | Video | Live | Video |
| Men | 3.45 (.52) | 2.72 (.75) | 11 | 18 |
| Women | 3.32 (.86) | 2.85 (.82) | 28 | 27 |

Note. 4 = accurate, 3 = did not provide enough information, 2 = inaccurate.

There was a significant interaction between the type of crime incident presentation (live and videotaped) and the eyewitness' gender (man or woman) when analyzing the participants' confidence level for the accuracy of their report, $F(1, 80) = 4.89, p = .03, \eta^2 = .06$. Men reported similar confidence levels for the live and video conditions but women were more confident than men in the live condition and less confident than men in the video condition. The group effect was also significant, $F(1, 80) = 6.02, p = .02, \eta^2 = .07$. See Table 2 for the means and standard deviations.

Table 2

Confidence Level for Live vs. Videotape and Eyewitness' Gender

| Eyewitness Gender | M(SD) | M(SD) | Sample Size | |
|----------------------|--------------|--------------|-------------|-------|
| | Live | Video | Live | Video |
| Men | 74.85(11.03) | 74.11(13.60) | 11 | 18 |
| Women | 81.32(9.98) | 67.03(15.99) | 28 | 27 |

Note. Higher means indicate higher levels of confidence in reports of accuracy.

Additional analysis

Although we did not preplan a hypothesis regarding various demographic variables and the measures in this study, one correlation interesting relationship emerged. We found a significant inverse relationship between eyewitness' age and their estimate of criminal's age ($r(84) = -.26, p = .01$, one-tailed). Thus the younger the eyewitness, the more accurate was their recall of the criminal's actual age.

Discussion

Our results supported the hypothesis that recall accuracy would be greater for participants who viewed a live crime incident compared to those who viewed a videotaped crime incident. This result confirms the findings of Wagstaff et al. (2003). We also found that a live crime incident produced greater confidence in participants' answers than a videotaped crime incident. Overall, we found that as confidence increased so does recall accuracy, which contradicts the find-

ings of Roebbers (2002). However, our results are similar to those obtained by others (Brewer et al., 2002; Memon, Bartlett, Rose, & Gray, 2003; Pozzulo & Warren, 2003; Smith et al., 2000; Weber & Brewer, 2004).

Although we found support for the effect of crime presentation type on accuracy recall, the significant interaction for confidence level indicates investigators should consider the important role of gender when evaluating the confidence participants' attribute to their memories. In this study, gender appears to have a mediator role rather than a direct association with level of confidence in the accuracy of reports but gender was not a factor in recall accuracy. Yarmey (1993) reported similar findings regarding gender and confidence.

Certain factors may have affected our results. First, internal validity might have been affected because the perception of the eyewitnesses of the videotape may have differed from those of the eyewitnesses of the live crime. In addition, all participants did not see the crime incident from the same position in the room (e.g., a chair or a person in front may have obstructed the view of the crime). The lack of random selection of participants also possibly affected our results. Diffusion (i.e., the possibility of participants from the live crime incident talking to participants of the videotaped group before their participation) additionally could have weakened the validity of our study. The history of participants' could also have affected the internal validity of our experiment (Matthews & Mackintosh, 2004). That is, participants could have had prior experiences involving a gunshot or a crime incident similar to the one in the study. If a participant had experienced a similar event, the experiment might have resurfaced any repressed emotions about that event. Along with a participant's history, an individual's mood can affect accuracy (Ambady & Gray, 2003).

Although interesting findings emerged from this research, there are some limitations to external validity. First, all the participants were from the same Midwestern university. In addition, the information given before the experiment likely lessened the emotional reaction to the crime. Finally, demand characteristics could have affected the outcome. Participants' knowing that they were part of a study might have affected their responses. If the participants guessed the hypotheses, then the participants could have intentionally paid closer attention to the live crime incident or the videotape.

In conclusion, we note that this study, completed in 2005, could not reasonably be replicated with gunshots because of the tragic April 16, 2007 shootings on the campus of Virginia Tech. We recommend that future studies use interviews, surveys, and video recordings to conduct further research about the accuracy and confidence of an eyewitness. Future research should investigate the stereotypes of criminals to see if an unconventional criminal would increase or decrease the accuracy of the crime. Perhaps a different ethnicity and gender of a criminal may affect the eyewitness' accuracy as well. Additionally, future research should compare the accuracy of a victim's recall and an eyewitness' recall of a crime. Victims may be more likely to remember

details about a criminal than an uninvolved bystander.

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A Review of Recent Advances in Deep Brain and Vagus Nerve Stimulation Techniques

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Abstract

Advances in technology have allowed medical professionals to take a step beyond pharmacological approaches in treating neurological disorders. Deep brain stimulation (DBS) and vagus nerve stimulation (VNS) techniques have created new options for patients suffering from a variety of neurological disorders, including epilepsy, Parkinson's disease, and depression. The long-term effects of these procedures are unknown and are not always equally effective to all patients who receive treatment (Janskzy et al., 2005). This review examines, describes, and compares what is known about DBS and VNS techniques and their effectiveness in treating neurological disorders.

Keywords: Deep Brain Stimulation, Vagus Nerve Stimulation

Since their approval by the Food and Drug Administration (FDA) in 1997, deep brain stimulation (DBS) and vagus nerve stimulation (VNS) have been used to treat a variety of neurological disorders including epilepsy, Parkinson's disease and treatment resistant depression (TRD; Rado & Janicak, 2007). Current research demonstrates the effectiveness of DBS and VNS in treating neurological disorders; however, the long-term effects of these procedures are unknown and are not always equally effective to all patients who receive treatment (Janskzy et. al., 2005).

The use of electricity in treating illnesses is not a new approach. In second century AD, a Greek physician by the name of Galen suggested using electric eels as a treatment for headaches and other ailments involving facial pain ("Zapping the Blues," 2006). Although related applications were used for medical purposes over the centuries, it was not until 1987 that the first known successful use of stimulation for movement disorders was reported in France by professors Alim-Louis Benabid and Pierre Pollak from the University of Grenoble (as cited by Song, 2006). Benabid and Pollak's discovery led to extensive research and eventually a new field of treatment.

Before the introduction of stimulation techniques, the predominant treatments for movement disorders focused on pharmacological approaches using dopamine replacement therapy (Sestini et al., 2002). Dopamine replacement therapy incorporates the use of drugs such as levodopa to increase dopamine levels in the brain (Rosenzweig, Breedlove, & Watson, 2005). Despite the effectiveness of these procedures, individual responses to levodopa vary widely and the drug is only effective for a limited time before its effectiveness in controlling the motor tremors decreases (Sestini et al.). However, recent advances in science and technology are

allowing medical professionals to take a step beyond pharmacological, and even psychological and behavioral interventions. DBS and VNS treatments are often used as a last resort when other treatment programs have failed, and the success rate has given patients and their families hope for a more promising future.

DBS

The DBS surgical technique involves implanting small electrodes into targeted regions of the brain. These electrodes emit electrical impulses that alter abnormal activity without destroying the tissue (New England Journal of Medicine, 2001). See Figure 1. Patients are conscious during the procedure, hence they are able to describe their surroundings or report abnormalities that may occur during the surgery (Dobbs, 2006).

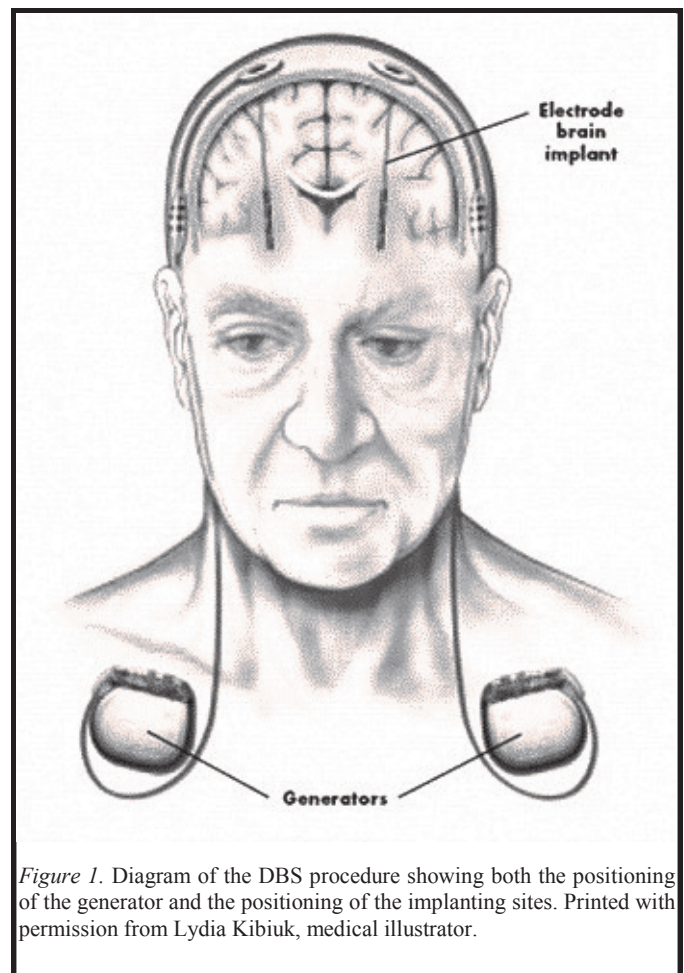


Figure 1. Diagram of the DBS procedure showing both the positioning of the generator and the positioning of the implanting sites. Printed with permission from Lydia Kibiuk, medical illustrator.

Amy Pierce from Missouri Southern State University–Joplin was faculty sponsor for this literature review.

The two main types of DBS in use today directly stimulate the subthalamic nucleus (STN) or the globus pallidus interna (GPi; Anderson, Burchiel, Hogarth, Favre & Hammerstad, 2005). Stimulation in these regions has been largely successful in treating Parkinson's disease, a neurological disorder caused by the impairment of the dopaminergic neurons in the substantia nigra (Jahanshahi et al., 2000).

The GPi and STN sites send projections to other brain regions with output pathways into the basal ganglia and substantia nigra, regions that are both believed to be directly involved with the motor impairments seen in Parkinson's disease (Jahanshahi et al., 2000). In a study by Sestini and colleagues (2002), stimulation in the STN increased regional cerebral blood flow (rCBF), which is strongly correlated with the improvement of mobility. Patients exposed to the STN stimulation exhibited greater improvements in mobility during the stimulation process (Sestini et al.), and they also had a higher success rate in the reduction of levodopa needed to treat the symptoms, 38% compared to 3% in that of the patients receiving GPi treatment (Anderson et al., 2005).

Even though the treatment in the STN region has had greater success rate in improving mobility than the GPi region, the STN is associated with more negative side effects, including impaired performance, impaired associative learning, behavioral disorders, and mood changes (Okun, et al., 2003; Rodriguez-Oroz, Zamarbide, Guridi, Palmero, Obeso, 2004; Witt et al., 2004). GPi patients showed little or no changes in mood or personality; however, the required dose of levodopa was much higher than that of STN patients (Anderson et al., 2005). In the study conducted by Anderson and colleagues, there was little difference in the GPi and STN patients' daily living in the absence of medication. However, because the use of levodopa in GPi patients is high relative to STN patients, many doctors prefer to use STN stimulation, which in return has created a lack of data on GPi stimulation in comparative studies (Okun et al., 2007).

Anderson and colleagues (2005) concluded that GPi stimulation may be of greater benefit to those who face dose-limiting dyskinesia (i.e., impairment of voluntary movement) and that STN stimulation may be more beneficial to younger patients with prominent bradykinesia (i.e., slowness in execution of movement). Hence, the suggestion that the stimulation site should be targeted is based on the symptoms of the patient.

The way in which the electrodes are implanted can also have an impact on the effectiveness of the procedure. Electrodes can be implanted either unilaterally or bilaterally, meaning they are either implanted on one side of the brain or both. Bilateral surgery is performed only in severe cases in which the patient is experiencing debilitating symptoms originating from both the right and left sides of the brain; however, implanting both electrodes in a single surgery is rare. Typically, patients who have bilateral stimulators have two separate surgeries (Okun et al., 2007). Ondo, Almaguer, Jankovic, and Simpson (2001), found bilateral stimulation of

the STN more effective in controlling patients' essential tremors (ET), but unilateral DBS did not offer as many effective results. Though bilateral stimulation of the basal ganglia is more effective in treating in ET than the unilateral stimulation, bilateral stimulation is associated with other clinical problems, such as psychiatric and behavioral disorders that were not present prior to the surgery (Rodriguez-Oroz et al., 2004). Changes in mood and personality have been reflected in DBS patients; hence, patients who undergo any type of DBS treatment risk altering their normal day to day behavior and personality. However, for patients suffering from advanced Parkinson's disease or any other advanced neurological disorder, the risk of potential side effects is preferred over the detrimental effects of the disorder itself.

VNS

Though DBS has been effective in treating patients with Parkinson's disease, it has not been effective in treating all types of neurological disorders. For example, in a study by Lado (2006) on seizure induced rats, DBS actually induced higher frequencies of seizures rather than decreasing them. Findings such as these gave rise to a new solution for patients suffering from different forms of epilepsy. Based on DBS procedures, VNS was originally developed specifically to treat severe epilepsy ("Zapping the Blues," 2006). The VNS procedure is much less complex than that of the DBS. For the VNS procedure, a small generator is implanted into the thoracic area of the chest along with a lead implant that is surgically wrapped around the vagus nerve (Labiner & Ahern, 2007). See Figure 2. The lead stimulating device and the generator can be implanted in around 45 min without a hospital stay; whereas, a DBS patient may spend an entire day in the operating room followed by a hospital stay ("Zapping the Blues," 2006). Once implanted, the small

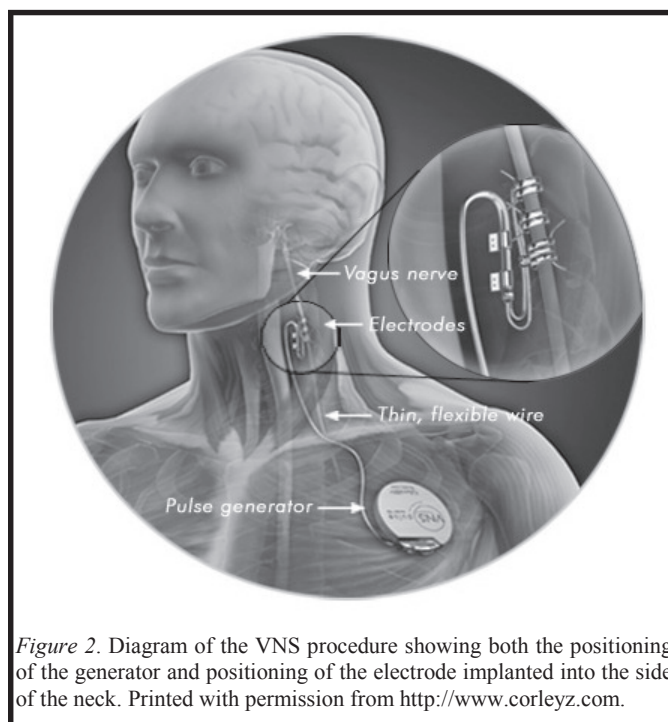


Figure 2. Diagram of the VNS procedure showing both the positioning of the generator and positioning of the electrode implanted into the side of the neck. Printed with permission from <http://www.corleyz.com>.

generator sends programmed impulses to the lead stimulators in the neck, which increases blood flow in regions of the cortex, cerebellum, and the isula (Labiner & Ahern).

The results of the VNS procedure have been largely successful in comparison to pharmacological treatments. One third of all epilepsy patients who undergo VNS experience a 50% reduction in seizure frequency. The remaining two thirds exhibit either worthwhile reduction or little or no reduction at all (Janszky et al., 2005). Abnormal magnetic resonance imaging (MRI) can be a good indicator in the success of VNS treatment. The more abnormal the MRI, the more likely the patient is to benefit from the treatment (Janszky et al.). To date, the literature has not documented the same patients receiving both DBS and VNS treatments. However, a comparative study by Janszky and colleagues determined that patients who were older in age and had experienced longer durations of epileptic seizures were more likely to respond better to VNS treatment than DBS treatment.

Even though VNS was originally developed as a treatment for epilepsy, its use has not remained within the realms of its creation. Researchers discovered that some of the negative side effects seen in DBS patients were absent in patients exposed to VNS. The side effect of particular interest was the change of mood and personality. Unlike DBS patients, patients receiving VNS treatment were showing improvement in mood and personality, with improvements lasting as long as six months in some patients. These findings were not correlated with the improvement or lack of improvement in the frequency of the patients' seizures (Schachter, 2002). The implications of these findings led to VNS being tested and later approved as a therapy for depression in July of 2005 (Labiner & Ahern, 2007). With up to 30% of all major depressive episodes being non-responsive to pharmacological or psychological therapy, researchers and patients have turned to VNS as a last resort for the treatment of treatment resistant depression (TRD; Rado & Janicak, 2007). It is believed that the antidepressant effects of VNS are due to the vagus nerve's projection into the solitary nucleus of the medulla, median dorsal raphe nucleus, and locus coeruleus. Changes in blood flow noted in VNS also may be an important asset in treating patients with severe depression. Though improvements are seen in mood and personality abnormalities, the effects of VNS treatment are not always readily apparent and can sometimes take weeks or months to reach a desired effect; therefore, researchers have concluded that VNS is best suited for patients with chronic depressive states. Patients suffering from severe depressive episodes lasting short periods of time are not likely reach the desired effect within the time constraints of the episode (Rado & Janicak).

More recently, VNS has been examined as a potential aid in motor recovery following a fluid percussion brain injury (Smith et al., 2005). Smith and colleagues trained rats in tasks previous to brain injury and then tested them before and after the VNS procedure. Rats that received VNS treat-

ment showed significant levels of improvement 14 days following the procedure, eventually matching the mobility scores of the uninjured subjects (Smith et al.). In a follow-up study, Smith and colleagues (2006) concluded that the use of VNS following traumatic brain injury (TBI) was a potentially effective procedure for human participants, especially considering the fact that epileptic seizures and depression commonly co-exist following TBI.

Concluding Remarks

Potential outcomes of VNS treatment are promising. To date over 40,000 patients have received treatment worldwide (Labiner & Ahern, 2007). However, the overall impact of these surgeries and the long term effects are still largely unknown. The uses of DBS and VNS are beneficial to Parkinson's disease, epilepsy and TRD patients. Though these treatments come with a set of potential side effects, the side effects are considered insignificant when compared with the detrimental effects of any advanced neurological disorder.

Medical researchers and engineers are collaborating to develop wireless sensor and stimulation systems to monitor patients with neurological disorders. For example, biomedical engineer Dr. Vijay Varadan and colleagues have proposed human clinical trials using wireless stimulation implants in patients with Parkinson's disease (personal communication) and other labs are exploring wireless wearable systems for monitoring Parkinson's patients in their homes (Patel et al., 2007). Wireless implants would eliminate the need for an implanted generator in the thoracic region of the chest, and allow doctors to monitor patients and make adjustments without additional surgeries or excessive check-ups.

Future research in this area will include larger numbers of patients and more consistent treatment methods (Okun et al., 2007). One of the problems with assessing the effectiveness of DBS and VNS treatments is the fact that the treatments are being implicated in so many different neurological disorders. Studies are now being performed on patients suffering from obsessive compulsive disorder and Tourette's Syndrome (Okun et al.). Therefore, patients receiving treatment are not always receiving the treatment for the same neurological disorder. Hence, DBS and VNS may be an effective treatment for some neurological disorders but not others. Individual differences within the same neurological disorder treatment groups are also problematic for researchers (Okun et al.). More longitudinal studies need to be performed in order to better address these issues. Long term effects of DBS and VNS stimulation techniques remain to be fully examined, yet the reported physical and psychological improvements to date have provided victims of neurological disorders with hope for the future.

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Test Anxiety, Academic Performance, and Manipulation of Inventory Label

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Abstract

The purpose of the present study was to investigate the relation between test anxiety, academic performance, and manipulation of inventory label. One-hundred, thirty-nine participants received surveys and then were randomly assigned to 1 of 3 groups. They received the same Test Anxiety Inventory (TAI; Spielberger 1980), with different labels to see if the label influenced their responses. The data in the current study revealed that there was clearly not a strong relation between TAI scores and GPAs, and there was moderate correlation between high school GPA and college GPA. The inventory label did not have an effect on TAI scores.

Keywords: Test Anxiety, Academic Performance

At some point in their lives, people in developed countries (e.g., United States, European Union countries) complete some type of assessment. From elementary school through college, assessment, in the form of taking academic tests, is an unavoidable experience.

There are several factors (positive and negative) that may influence students' academic performance. Positive influences include motivation, ambition, optimism, self-efficacy, and positive attitude, whereas negative effects consist of procrastination, depression, substance use, lack of confidence, and test anxiety. Test anxiety is one of the negative factors that may have a significant effect on student's academic performance. Zeidner (1998) defined test anxiety as "the set of phenomenological, physiological, and behavioral responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situation" (p. 17).

One of the most widely used measures of test anxiety is Spielberger's (1980) Test Anxiety Inventory (TAI). Spielberger designed the TAI "... to evaluate the effectiveness of various behavior therapies in the treatment of college students suffering from test anxiety" (p.2). According to Spielberger, total TAI score measures overall anxiety in testing situations whereas the two subscales of TAI measure emotionality and worry. In each case, a higher score indicates higher test anxiety. Spielberger (1980), refers to emotionality and worry as "major components of test anxiety" (p. 5). However, Spielberger's factor analysis showed that the two factors, emotionality and worry, are not independent of each other and essentially are measuring the same thing, which is test anxiety.

Vulnerability to test anxiety varies among individuals (Spielberger, 1980). While taking exams, some students face high level of test anxiety, whereas other students experience test anxiety at minimal level. Spielberger also suggested that low level of anxiety may be positively related to academic performance, whereas high test anxiety may be negatively

associated with how one performs on exams.

Zeidner (1998) reported that previous research has indicated that test anxiety is associated with lower academic performance. According to Zeidner, students who had low test anxiety reported a higher grade point average (GPA) than those students who had high test anxiety. Further, Chapell et al. (2005) examined the relation between test anxiety in undergraduate and graduate students. They also found that students who had low test anxiety reported a higher GPA than those students who had high test anxiety. Keogh, Bond, French, Richards, and Davis (2004) similarly stated that "examination stress is thought to prevent some individuals from reaching their academic potential" (p.241).

High school academic performance is a good predictor for college success. A comprehensive literature review by Mathiasen (1984) concluded that high school academic performance is a strong predictor of academic performance in college. More recent research by Pike and Saupe (2002) reported that among other variables, high school academic performance is significantly associated to first-year GPAs in college. Students who have good grades in high school are more likely to have good grades in college.

I designed the present study to determine the relation between test anxiety and academic performance. I predicted that high test anxiety would be associated with decreased academic performance, whereas low test anxiety would be associated with increased academic performance. Also, I predicted that high school GPA and college GPA would be positively correlated.

Additionally, I predicted that a label change on the Test Anxiety Inventory (TAI) would affect the scores on the TAI. The idea to test this hypothesis came from confusion resulting from the label on the inventory. When I received the TAI, I wondered why it had a "Test Attitude Inventory" label instead of the "Test Anxiety Inventory" label on the questionnaire. It seemed logical that the author probably did not want the name of the inventory to influence individual's answers. Spielberger (personal communication, September 10, 2008) affirmed that he changed the inventory label from "Test Anxiety Inventory" to "Test Attitude Inventory" in order to avoid the title's influence of the questionnaire on people's responses. I consulted my advisor regarding the possible effect of changing the label of a questionnaire, and he said he was not sure. Therefore, I decided to answer that question through this research.

Method

Participants

In the current study, I used a sample of General Psych-

Robert McDermid from Missouri Southern State University served as faculty sponsor for this research project.

ology students from a Midwestern public university. One hundred forty participants took the survey during their class period; 1 student was excluded from the study because he was under age of 18 years. The final sample consisted of 139 students (58 men, 81 women). One hundred two participants were second-semester freshmen, 24 were second-semester sophomores, 11 were second-semester juniors, and 2 were second-semester seniors. The age range of participants was 18-44 years ($Mdn = 19$ years).

Materials

I administered a two-page survey to the participants. The first page of the survey consisted of nine demographic questions, including questions about sex, age, year in school, major, high school and college GPA, high school and college letter grades, and survey attitude. The demographic questions were followed by the TAI (Spielberger, 1980).

According to Spielberger (1980), "the *Test Anxiety Inventory (TAI)*, a self-reporting psychometric scale, was developed to measure individual differences in test anxiety" (p. 5). The TAI consists of 20 four-point Likert-type questions and has two subscales: Emotionality Subscale (E) and Worry Subscale (W). The total score on the TAI is the sum of all 20 items. Spielberger (1980) reported that the TAI total score is very reliable with Cronbach's α being consistently .92 or higher. There were three versions of the TAI used in this study. The only difference among the three forms was the title on the form. One form was titled "Test Anxiety Inventory," another form was titled "Test Attitude Inventory," and the last form had no title.

A sealed envelope was attached to the two questionnaires. Enclosed in the envelope was the manipulation check question, "The questionnaire I just filled out was titled (circle one)," followed five possible options. Three of the options were the three correct options ("Test Anxiety Inventory," "Test Attitude Inventory," and no title) used for the three forms of the surveys. The other two options on the manipulation check ("Test Apprehension Inventory" and "Test Attribution Inventory") were not the title of any of the forms of the questionnaire.

Procedure

I conducted this study in the spring semester which allowed me to obtain college GPAs from the freshmen. I administered surveys to students in small classes and randomly assigned participants to groups who received the three different forms of the TAI. I told the participants that they will fill out a survey about school-related issues. Also, I told the participants that they could withdraw from the survey anytime without being penalized. After everyone completed the survey, participants to tore off the envelope attached to it before they passed it forward. After passing their survey forward, they answered the question inside the envelope and put it back in the envelope. Then I collected envelopes and debriefed them.

Results

The Pearson correlation coefficient between high school GPA and total TAI scores was significant, $r(125) = -.191$, $p = .032$. Thus, higher high school GPAs indicated lower self-reported test anxiety. The Pearson correlation coefficient between college GPA and total TAI scores was not significant, $r(110) = -.177$, $p = .062$. Hence, there is no significant correlation between college grade point and test anxiety. The Pearson correlation coefficient between high school GPA and college GPA was significant, $r(103) = .533$, $p < .001$. Participants who did well in high school also tended to do well in college. The Pearson correlation coefficient between emotionality TAI score and worry TAI score was significant, $r(137) = .835$, $p < .001$. Thus, as participants reported higher subscale scores of emotionality, they also tended to report higher worry subscale scores.

A one-way ANOVA showed no significant differences on total TAI scores across the three groups, $F(2, 136) = .03$, $p = .966$. The mean for Test Anxiety Inventory label group was 37.74 ($SD = 16.41$); whereas the mean for Test Attitude Inventory label group was 38.38 ($SD = 12.90$), and the mean for No Label group was 37.69 ($SD = 13.20$).

In my manipulation check, 26 out of 43 participants (61%) who received the "Test Anxiety Inventory" label correctly answered the manipulation check question. Eight out of 48 participants (17%) who received the "Test Attitude inventory" label correctly answered the manipulation check question and 23 out of 48 participants (48%) who received the no label survey correctly answered the manipulation check question. Overall, only 57 out of 139 participants (41%) correctly answered manipulation check question. In my study, TAI total score had a Cronbach's α of .94.

Discussion

The data in the current study revealed that inventory label does not have an effect on TAI scores. There were three groups with identical questionnaires but different labels, and there were no difference in scores given by participants in those three groups. As it is evident from the 59% error rate on the manipulation check, most students did not remember the correct label or did not read it to begin with. This lack of awareness is likely why test scores were not influenced by the title.

Previous research (Zeidner, 1998) indicated that test anxiety is associated with lower academic performance; however, there is clearly not a strong relation between TAI scores and GPA in my data. A significant but weak negative correlation was found between TAI scores and high school GPA, whereas the negative correlation between TAI scores and college GPA was not significant. Test anxiety, as measured by TAI, is not highly related to high school and college GPAs.

Consistent with previous research (Mathiasen, 1984;

Pike & Saupe, 2002), my results showed that high school academic performance correlates with college success. Students who have a high GPA in high school are more likely to keep a consistently high GPA throughout the college. However, Mathiasen (1984) noted that there are some exceptions to that pattern. The moderate correlation in my study also indicates that there are exceptions to that pattern. Even though some students perform well in high school, they might not perform well in college because of various influences (e.g., procrastination, lack of confidence, and test anxiety) that can have an impact on academic performance. Another type of exception would be when students who did poorly in high school do very well in college.

The results in current study showed that the worry and emotionality scales were highly correlated. This finding, along with the high Chronbach's alpha total score in both Spielberger's data and my data, suggests a lack of independence between the worry and emotionality factors.

There were some limitations in my study that need close attention in order to improve future research. One of these issues is self-reported GPAs. It would be far better if GPAs could be gathered from official records. A second flaw is that my study used the sample of students who were in General Psychology classes. Future research should use a sample of upper level classes instead of first-year classes so investigators would be able to get college GPAs based on multiple semesters in college. Multiple-semester GPAs would provide a more stable measure of academic achievement.

Future research should also give an answer option "I don't know" on the manipulation check question because there were several people who either added that statement on their own or they might have made a guess because they did not have that answer option, which might have distorted the results. One final flaw is that I was limited to only one campus population. Future research should take place at more than one college. The research on college students from more colleges would allow investigators to make comparisons among colleges.

In closing, test anxiety is one of the factors that may have an effect on students' academic performance. There was significant, though weak, correlation between TAI scores and high school GPA. It was also found that students' academic performance is fairly consistent throughout their school years as evident by the current study finding that the high school GPA relates positively to college GPA. The data in the current study revealed that inventory label did not have an effect on students' TAI scores.

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Affect, Morality, and Reason: How Do People Make Moral Decisions?

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Abstract

Early models of morality emphasized cognitive interpretations of moral reasoning. More recent research has started to investigate the role of emotion in moral decisions and how it interacts with cognition. Researchers have proposed several models of emotion-based decision-making. These models provide insight into moral reasoning and have significant support from research, yet they are limited and do not cover all aspects of moral decision making. To develop a complete framework of moral-decision making, future research must examine different cultural views of morality, different forms of moral behavior and decision making, and effects of variables such as framing, content, risk, and incidental affect on moral behavior.

Keywords: Affect Decision Making, Moral Reasoning

Morality and the moral status of actions have been a major concern throughout human history. Some of the earliest documents focus on codes of conduct and the punishments that would ensue should people violate these codes (Haidt, 2008). Psychologists generally believe that all people have the capacity to learn, appreciate, develop, and apply moral principles to their actions and the actions of others. This “unwritten code” seems to be what most people refer to when deciding if something is morally acceptable, immoral, or somewhere in between. Although the ability to learn and appreciate moral codes is important for social cohesion, these same abilities can be problematic should individuals vary sufficiently that tension is generated between them. This variation is likely one of the primary bases of human conflict.

If we assume that the maintenance of a cohesive society requires the ability to reduce potential tension, then children need a solid educational framework to grow up knowing the proper ways to interact with members of other cultures. In-depth knowledge of how children develop moral viewpoints and how these codes are implemented in their behaviors would be necessary to maintain such a framework. This developmental approach has dominated much of past research, especially the work of Jean Piaget and Lawrence Kohlberg, two of the most influential theorists in moral psychology (Greene, Nystrom, Engell, Darley, & Cohen, 2004; Monin, Pizarro, & Beer, 2007). Their theories focused on the role of cognition in moral decision-making, a function that is culturally dependent, as illustrated by the difference in performance between individuals from different cultures on Kohlberg’s moral reasoning tasks (Haidt, 2008). Development of a consistent description of moral behavior would require the investigation of some of the basic principles involved in both moral learning and moral reasoning in order to find some relation between moral decisions and other cognitive functions.

In 1975, E. O. Wilson (as cited in Haidt, 2008) proposed that the study of ethics be combined with the study of biology and physiology to integrate the general processes of natural selection with the specific processes of neural functioning and develop a more adequate way to explain human behavior, something that could potentially go beyond culture in trying to understand what makes humans moral. Research has neglected biological factors due to the focus on cognition and development in moral psychology at the time. However, the evolutionary perspective would return with the renewed interest in the role of emotion in human behavior in the 1990’s and the return of sociobiology, renamed as evolutionary psychology (Chartrand, van Baaren, & Bargh, 2006; Haidt, 2008). As a result of the renewed interest in emotions and the investigation of inherited social behaviors Wilson’s idea of unifying the social and life sciences began to come closer to realization, leading to the first models of affective decision making and morality as influenced by emotion.

The purpose of this paper is to describe some of the current models of moral decision making and the evidence that supports them. The strengths and weaknesses of the models are discussed, along with areas for future research.

Models of Moral and Affective Decision Making

This paper explores four major models of moral decision-making. Despite their individual differences, all of these models use methods similar to what Jonathan Haidt (2001) calls the social intuitionist approach. This view contends that humans will use fast affective processes in the majority of moral decisions they make and will often rely on in-depth cognitive processes for after-the-fact justification, resolution of a conflict between multiple intuitions, and social justification. The *feelings-as-information model* describes the various forms of information that intuitions generate and how intuitions can be influenced (Beer, Knight, & D’Esposito, 2006; Chartrand et al., 2006; Keltner, Ellsworth, & Edwards, 1993; Martin, Harlow, & Strack, 1992; Pham, 2004; Schwarz & Clore, 1983). The *cognitive conflict model* focuses on disagreements between intuition and cognition (Cushman, Young, & Hauser, 2006; Greene et al., 2004; Koenigs et al., 2007; Valdesolo & DeSteno, 2006). The *somatic marker hypothesis* investigates automatic assessment of stimuli and how visceral reactions, or affective responses, are involved (Damasio, 1994; Naqvi, Shiv, & Bechara, 2006; Overman et al., 2006), and is used by Haidt as evidence to support his approach (2001). The *Event-Feature-Emotion Framework* (Moll, Zahn, de Oliveira-Souza, Krueger, & Grafman, 2005) connects several of these models to develop a more comprehensive system of emotion as it relates to reason and decision making, taking into account the social aspects of this theory.

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Feelings-as-Information Model

With the prevalence of emotions, or affective feelings, in moral and non-moral decision making, it is important to understand all of the roles that feelings can play in making decisions. In accord with the somatic marker hypothesis (Damasio, 1994), research supports the role of emotions in determining direction and strength of attitudes towards an event, person, or object (Pham, 2004). These feelings can also serve to alert an individual to any situational factors that would require the use of certain rules of thought. For example, Schwarz's rule of cognitive tuning (Schwarz & Clore, 1983) suggests that positive affective states will decrease the amount of cognitive effort produced by an individual whereas negative affective states will do the opposite, largely because these emotions signal to organisms that their environment is either safe or threatening, respectively (Chartrand et al., 2006). Similar effects were also found with specific emotions, independent of valence.

There is also significant research into interpretation of this information. One important question is whether the emotions provide information directly or derive information from cognitions that typically accompany the emotions. Research by Keltner et al. (1993) and Martin et al. (1992) has suggested that the emotions a person experiences carry their own form of information. The influence of emotion was seen when participants unconsciously mimicked facial expressions or body postures typical of what people would assume when actually feeling those emotions, such as smiling when happy or clenching one's hands when angry. This research has significant implications for moral research because it indicates a way of investigating the effect of specific emotions on particular moral decisions by implementing incidental arousal. One example is the research of Valdesolo and DeSteno (2006), which used video clips to create specific affective states before participants responded to a moral dilemma. The main problem with this procedure is that some moral problems could potentially elicit emotions of their own accord, making it difficult to distinguish the effects of incidental arousal from that produced by the dilemma itself (Thiele & Wann, 2008).

Despite popular belief, feelings are beneficial to decision-making. In most cases, affect involves very fast processing that can allow individuals to react to urgent matters where in-depth contemplation would only serve to hinder them. As can be seen in some of Damasio's (1994) patients, the ability to use these rapid judgments is highly beneficial and can be debilitating when lost. Judgments from feelings are also very consistent between individuals, and sometimes are more consistent than judgments that arise from cognition (Pham, 2004). This result suggests that cultural similarities in moral decisions might be due to similar emotional dispositions between members of a given culture.

Affect also motivates thought, enhancing attention and working memory to allow a person to search for evidence to support a particular feeling (Damasio, 1994). However, this

effect is not necessarily good because people tend to search only for confirming evidence (confirmation bias) and they often try to avoid any disconfirming evidence. There is also a significant limit to affect when attempting to make predictions about future expectations or recalling past experiences, as affect is focused primarily on the present time (Pham, 2004). Because of these, and other limitations, emotions are hardly sufficient on their own in order to make good decisions, but they are a necessary element in good decision-making (Damasio, 1994; Pham, 2004).

Overall, the feelings-as-information hypothesis illuminates how the emotions can influence moral reasoning; however, there is little information regarding the neural basis of these functions. Beer et al. (2006) investigated the role of the lateral orbitofrontal cortex and the inferior frontal gyrus in determining relevance of emotional information to a particular scenario, possibly describing a system that can differentiate between incidental and relevant affect. The somatic marker hypothesis, as described later in this paper, contributed much to the neural basis of feelings-as-information, but only explicitly defines the role of favorability in judgment.

Cognitive Conflict Model

The work of Greene and colleagues (2004) has identified the roles of emotive and non-emotive processes in moral reasoning by examining the differences in moral judgments about dilemmas. These dilemmas generally have similar consequences, such as the death of one person versus that of many people, yet these consequences follow from different actions. Researchers used non-utilitarian and utilitarian moral decisions to model the separation between emotive and non-emotive cognitions, respectively. Utilitarian moral decisions are any decisions that follow the rule "Do that act X that benefits the greatest number of persons." A common example of the dilemma that Greene provides is the difference between the "Trolley" and "Footbridge" dilemmas, where a person is forced to choose if it is morally permissible to save the lives of five people at the expense of one life (Greene et al., 2004).

In the Trolley dilemma, individuals imagine that they are walking by some trolley tracks and see a trolley coming down the tracks. Further down the tracks are five people tied down. The trolley cannot slow down in time to avoid killing these five people. However, there is a fork in the tracks between the trolley and the five helpless people, and by pulling a switch one can change the track the trolley will follow, saving the lives of the five people. The only consequence is that one other person has been tied down to the other set of tracks and will be killed if the switch is pulled (Greene et al., 2004).

By comparison, the Footbridge dilemma produces the same trade-off of five lives to one, but the mechanism of causing harm to the one person is different. Instead of walking along the tracks and standing next to a switch, one is walking on a footbridge over the tracks and standing next to

a very large person. With the trolley coming along too quickly to stop, and with the lives of the five people in jeopardy, the only choice to save the five people is to push the large person off the bridge and in front of the trolley. That person will die upon being hit, but their girth will slow the trolley down enough to save the lives of the five people. The dilemma itself is only different in that the participant is physically pushing another person into harms way, where the Trolley dilemma only caused harm to another person as a result of pulling the switch to save the five other people (Greene et al., 2004).

Yet this difference between the two dilemmas seems to be enough for most people to consider the utilitarian approach acceptable in the Trolley dilemma but horridly wrong in the Footbridge dilemma. This finding has led Greene et al. (2004) to distinguish between personal and impersonal moral dilemmas in an attempt to explain the difficulties of specific judgments. Personal moral dilemmas must meet all of three criteria: deliberate action by the participant, action resulting in harm to a person, and recognition of the victim as a separate moral agent, effectively summed up by the three-word phrase “ME HURT YOU.” With personal moral dilemmas, Greene considers there to be two types of response: emotive responses and cognitive responses, where the former tend to be focused on the more emotional non-utilitarian responses of avoiding causing direct harm and the latter focus on the utilitarian ideal of benefiting the greatest number of people (Greene et al., 2004).

Greene’s research has suggested the involvement of key areas of the brain that both recognize instances where conflict between emotive responses and cognitive responses exist and try to establish control of the cognitive response. These areas are the dorsolateral prefrontal cortex (DLPFC) and the anterior cingulate cortex (ACC). According to this research, the ACC serves to recognize points where conflicts between more emotive and more cognitive responses to a dilemma occur, whereas the DLPFC aids in allowing the cognitive response to take precedence over the emotive response (Greene et al., 2004).

The notion of personal and impersonal moral dilemmas appears to correspond to specific moral principles such as the “intention principle” and the “contact principle” investigated by Cushman et al. (2006). The intention principle states that it is morally worse to cause harm to another person as a means to a goal than it is to cause harm to another that occurs as a side effect of a goal, whereas the contact principle states that using physical contact to harm another person is worse than causing equivalent harm without physical contact. Both principles appear to be in use when thinking about personal or impersonal moral dilemmas, and both appear to provide adequate explanations for the differences in judgments about these dilemmas. Another issue with Greene’s research is its reliance on the idea of utilitarianism, which lacks clear definition within cognitive processes (Moll et al., 2005). Utilitarianism is also culturally problematic, as there is the potential for chance in what constitutes a benefit due to

different preferences exhibited by members of different cultures.

Somatic Marker Hypothesis

Damasio’s book *Descartes’ Error: Emotion, Reason, and the Human Brain* (1994) sets forth the somatic marker hypothesis with supporting research based on several individuals with damage to the ventromedial prefrontal cortex (VMPFC). Using measures of galvanic skin response (GSR), emotion eliciting stimuli, and economic game tests, Damasio investigated the experience of emotion and its role in decision-making.

Initial experiments illustrated that participants with damage to the VMPFC still exhibited physiological arousal in response to unconditioned stimuli, such as a sudden and unexpected noise. However, these same participants differed from other individuals when presented disturbing pictures that required complex, learned emotions to be fully appreciated. The difference, in this case, was not due to lack of recognition, as all prefrontal-damage participants were able to recognize and describe the emotional content of the images, but was due to the lack of an ability to experience the emotion directly upon viewing the images (Damasio, 1994).

The somatic marker hypothesis argues for a model of learning, recognizing, and anticipating various affective markers based on the functioning of two specific structures within the brain: the amygdala and the VMPFC. The amygdala works as the initial receiver and interpreter of emotion-inducing stimuli, responding to rewards and punishments and encoding this information into memory, whereas the VMPFC takes this information and uses it in attempts to represent potential emotions that could result from specific choices, generating visceral feelings of preference or unconscious choices that appear without any experience of desire or aversion (Naqvi et al., 2006).

Of all affective models, the somatic marker hypothesis is among those with the greatest heuristic value, as a large amount of research regarding decision-making has tested it. One major research area has been the investigation of risk-assessment. One example of these investigations is the research on the Iowa Gambling Task (IGT), a four-deck card game wherein money is given to participants (for experimental purposes only), who then draw cards from the different decks to try and gain as much additional money as possible (Damasio, 1994; Overman et al., 2006). Out of the four decks, two provide a net gain (the advantageous decks) and the other two provide a net loss (the disadvantageous decks). The two advantageous decks give small rewards but also provide smaller risks with lower losses. The two disadvantageous decks, however, provide larger rewards at the risk of higher losses. Normally, participants will start out drawing cards equally from all decks and then, after encountering significant losses from the two disadvantageous decks, will shift to drawing cards almost exclusively from the two advantageous decks. These participants will also exhibit antici-

patory GSRs when making the decision to draw a card from one of the disadvantageous decks, even before they have become consciously aware of the risk of that deck. However, patients with VMPFC damage neither adapted their strategies to avoid the disadvantageous decks nor did they exhibit the anticipatory GSRs before drawing from a disadvantageous deck (Damasio, 1994).

Although the somatic marker hypothesis has focused largely on risk assessment and general decision-making, there have been attempts to connect this model and the process of moral decision-making. Of particular note is the research conducted by Koenigs and his colleagues (2007), illustrating the effect of VMPFC damage on moral reasoning ability in a task much like those of Greene (2004). In their research, they presented non-moral, impersonal moral, and personal moral dilemmas to participants with no brain damage, patients with damage to parts of the brain other than the VMPFC, and patients with VMPFC damage. The participants then made judgments of permissibility. On average, the patients with VMPFC damage endorsed significantly more utilitarian responses to the personal moral dilemmas than either of the other two groups, suggesting that the emotional strength of the non-utilitarian decisions was hindered by the lack of emotional simulation and judgment that would have been provided by the VMPFC.

Also of particular interest to the moral application of the somatic marker hypothesis is the research by Overman et al. (2006), which investigated the use of Greene-style personal moral dilemmas presented during an IGT and how contemplating these dilemmas influenced gender-related ability on the task. Prior research with the IGT has shown that men tend to perform slightly better than women as women tend to draw more cards from one of the disadvantageous decks longer than men. Along with difference in behavior, there is a difference in activation patterns of the brains of men and women when doing the IGT, with men showing greater levels of activation in the right DLPFC, the right lateral orbital prefrontal cortex (orbital PFC), and the right parietal lobe and women showing greater levels of activation in the left medial orbital PFC. According to Greene's (2004) research, the DLPFC becomes significantly more active when a person contemplates a personal moral dilemma than when a person contemplates an impersonal moral dilemma or a non-moral dilemma. Activating this region of the brain through contemplation of personal moral dilemmas might eliminate gender differences in the IGT by activating in women the areas that are significantly more active in men during the IGT. In their design, Overman et al. divided their participants into a control group and two contemplation groups. The researchers presented impersonal and personal moral dilemmas to the contemplation group participants as they performed the IGT. Women showed a marked improvement on the IGT when contemplating personal moral dilemmas. However, this experiment was not a direct test of the somatic marker hypothesis, as the subject of interest in this research was not the VMPFC, but several other prefrontal cortex (PFC) structures.

This difference in focus raises questions about the influence of somatic markers on risk assessment and moral reasoning, including what role any judgments of irrelevant or relevant affect may have on the process (Beer et al., 2006) and what might occur when two or more conflicting preferences emerge (Greene et al., 2004).

Event-Feature-Emotion Complex Framework

In an attempt to create a framework that incorporates cultural and context-specific knowledge to make predictions of moral reasoning and behavior, Moll et al. (2005) analyzed clinical and experimental work within moral psychology and moral neuroscience and developed a comprehensive model called the Event-Feature-Emotion Complex (EFEC) framework. This model describes moral reasoning with three components: structural event knowledge, social perceptual and functional features, and central motive and emotive states.

Structural event knowledge, as described by Moll et al. (2005), is the set of all learned events and event sequences (or event sequences, as a single event is a sequence that consists of one part) that people have experienced during their life. This set of information is context-specific, with only prototypically relevant event sequences being involved with any perceptual and cognitive processes being used at the time. Structural event knowledge draws on an earlier model: the Structured Event Complex model (Huey, Krueger, & Grafman, 2006). According to this model, structured event complexes are neural representations of event sequences that involve planning and executing behaviors with novel sequences represented in more anterior sections of the PFC, over-learned processes being represented in more posterior segments, and socially relevant sequences being represented within the ventral PFC.

Social perceptual features are the sets of semantic knowledge and representations people use to understand various cues from their environment, including cues from the various individuals within a person's social environment, such as facial expressions, body positions, gestures, and prosody. Working alongside perceptual features are functional features, sets of semantic knowledge and representations used to recognize and understand human actions. Neuropsychological research on these processes suggests the importance of the superior temporal sulcus (STS) in representing perceptual features and the anterior temporal lobe in representing functional features (Moll et al., 2005).

The EFEC framework defines central motive and emotive states as the net activity of limbic and paralimbic structures involved in monitoring and influencing various biological functions related to motivation (Moll et al., 2005). Several structures within the limbic and paralimbic systems exert control over behaviors, both directly and through interactions with the PFC and other cortical regions.

The EFEC framework has the advantage of being able to identify the effects of specific neural dysfunctions on moral

behavior and reasoning, predicting specific malfunctions based on prior research and clinical practice as well as several models of moral decision-making, including those reviewed earlier in this article. Some predictions from this model include the impairment of social behaviors from damage to ventral PFC sectors, with VMPFC damage impairing adherence to social norms that have been well established, impairment of recognition and perception of body postures and facial features with posterior STS damage, and loss of basic emotive responses with limbic dysfunction (Moll et al., 2005). Although these predictions are supported by research and form a much more informative model, there are still some areas that are not covered, such as the determination of relevant information or the mediation of conflict between two or more different intuitive responses, factors the feelings as information and cognitive conflict models describe, respectively (Beer et al., 2006; Greene et al., 2004; Keltner et al., 1993; Schwarz & Clore, 1983).

Potential Problems with Moral Research

There are several limitations in the above models. A major problem with current research is its narrow scope with respect to two major areas: cultural influence and scenario presentation. Most research has limited morality to western liberal definitions, focusing primarily on issues of harm avoidance and fairness (Haidt, 2008). Another major limitation of moral research has been in the dichotomy between proposed models concerning complex reasoning and visceral reactions, with little attempt, until recently, to consider interdependency between the two as being likely (Monin et al., 2007).

Culturally, most moral research has focused almost exclusively on western liberal cultural views. There has been little research into the moral behavior of groups whose views differ significantly from those commonly expressed by researchers of moral psychology. One major example is the significant skewing of scenario content. Researchers have been preoccupied with investigating the morals of harm-avoidance and altruism, only two areas involved in morality. Although Haidt (2008) has suggested there are five areas, with researchers paying scant attention to purity, respect for authority, and loyalty to the in-group. These last three areas are decidedly less emphasized among western liberal moral codes, but are prevalent among both conservative groups and much of eastern culture.

Another important case of cultural bias is found in the analysis of utilitarian versus non-utilitarian judgments. The notion of utilitarianism strongly depends on both what "benefit" is being debated in the dilemma and on the cultural view of the person responding to the dilemma. Different cultures will not always put the same amount of emphasis on providing a specific benefit to the greatest number of people, and it is highly unlikely that a culture would view utilitarian actions as being moral in all possible situations (Moll et al., 2005).

Past research has also limited the types of moral scenarios investigated and a large part of that limitation is due to the researcher's theoretical perspective (Monin et al., 2007). Researchers investigating more cognitively-active models have tended to ask their participants to think about a moral dilemma and to provide a recommendation about what should be done. On the other hand, researchers emphasizing the role of affect in morality have generally measured the reaction times, brain activities, and judgments of their participants to emotionally-charged depictions of situations with questionable moral status. Although both approaches are valid, they are limited in the types of moral behavior and decision-making that they can explain.

Many of the current researchers have called for the development of models that incorporate emotion and cognition as interdependent processes (Greene et al., 2004; Haidt, 2008; Moll et al., 2005; Monin et al., 2007) or for additional research to help delineate what rolls these processes play in decision making (Pham, 2004). These models should attempt to investigate not only emotion or cognition as used in moral decision making but any interactions that might occur in making a moral decision, such as how incidental emotions can both shape moral decisions and justifications for those decisions at the time of decision and afterward. In addition to this integration of processes in moral psychology, there is also a need to investigate several other areas of moral decision making and behavior that have yet to receive significant attention, including lay understanding of morality, real-life application of morals, and self-images regarding an individual's morality.

Conclusions

As indicated by these models, the processes of moral reasoning and decision making are complex. The nature of moral reasoning as both a cognitive process and a social-emotional process will continue to generate complex models of interaction that could require many years of research to evaluate sufficiently. Much current research has focused both on western participants and liberal models of morality, especially in the case of utilitarian and non-utilitarian moral judgments. Utilitarianism specifically defines moral acts as those that provide benefit for the greatest number of people, yet the exact benefit is not specified. Although most cultures might have some moral code for some situations that resembles utilitarianism, it is unlikely that these codes would be universal. Therefore, proper investigation using utilitarian judgment as a dependent variable would require investigation of several cultures to determine cultural influences.

There is also need for research that more closely investigates the interdependency of emotive and cognitive processes. Although most current research suggests the need to develop a theory that describes these processes as interdependent, there is still little research that directly investigates the interactions between emotion and cognition as they apply to this problem. The nature of affective cognition is complex enough that development of a theoretical formula with sig-

nificant predictive value would likely require many years of research for adequate empirical support.

Obviously, none of these criticisms invalidate the current research. What is currently known will serve as a standard for comparison and will help in the development of a final framework that would apply to a more general model of human moral behavior. However, this research is clearly inadequate, especially considering that morality is not only about reasoning and making decisions, but also concerns acting upon those decisions and rationalizing the consequences. If we are to develop a comprehensive model of human moral behavior and decision making, we need to examine thoroughly the cultural and content factors that influence it.

In addition to the need for cultural expansion in research, there are several areas of emotional influence and general moral reasoning that remain unexamined. Although incidental affect does influence decision making and may do so differently than affect relevant to the proposition, there has been little research on the difference between incidental affect and decision-relevant affect. Most research has also focused on single instances of an emotion and has not investigated the role of chronic affective states in decision-making processes. This type of research could determine the role of affect when influenced by incidental sources, relevant but inescapable sources, or relevant sources that can be changed or removed through interaction with the source (as might be the case with some moral dilemmas).

It is important to investigate not only the reaction to the moral dilemma but the rationalization that follows, examining how emotions influence post-reaction cognitions, either directly or through rationalizing prior emotional reactions. We need to also investigate moral decisions about non-absolute moral dilemmas, that is moral dilemmas with a risk of some consequence associated with an action as opposed to a certain consequence. Such a dilemma would mention a possibility that a person might die if a specific course is followed as opposed to the certain death of a person following a specific course that is present in the moral dilemmas used currently. Non-absolute moral dilemmas are more realistic than the more traditional dilemmas used by Greene et al. (2004), Valdesolo and DeSteno (2006), and other researchers, and would provide a more accurate view of the way people reason in everyday life. Such research could also expand on the connections between general risk assessments and moral decision making, such as identifying what makes judgments concerning the loss of money different from or similar to judgments concerning the loss of life.

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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. In this volume, two students debate the controversial issue of condom distribution in high schools, another does an analysis of the film 'Lars and the Real Girl,' an additional student presents a psychological analysis of a popular reality television show, and finally, a group of students examine the attachment style, drug use, and personality characteristics of John Lennon.

Controversial Issues

The Solution to Unprotected Teenage Sex: High School Condom Distribution

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In the United States, the average age of first sexual intercourse is 17 years old, and by 19 years old, more than 7 in 10 students report having engaged in sexual intercourse (Guttmacher Institute, 2006). Although the current rate of teenage pregnancy in the United States is the lowest in recorded history, it continues to be one of the highest among developed countries (Strong, Yarber, Sayad, & DeVault, 2008), with nearly 750,000 women between the ages of 15 and 19 years becoming pregnant each year (Guttmacher Institute, 2006). Pregnancy is not the only potential consequence of unprotected sexual activity. The number of teenagers in the United States acquiring sexually transmitted infections (STIs) is increasing, with close to four million teenagers contracting an STI each year (Strong et al., 2008). Consistent and correct condom use would greatly reduce their risks of becoming pregnant or acquiring an STI. However, due to a variety of factors including embarrassment about purchasing condoms and lack of condom accessibility, many teenagers continue to engage in unprotected sexual activity (Guttmacher, Lieberman, Ward, Freudenberg, Radosh, & Des Jarlais, 1997). One way to address these issues is for high schools to implement condom availability programs in addition to the schools' existing sexuality education pro-

grams. With roughly 17.5 million American teenagers enrolled in high school (Davis & Bauman, 2008), schools have the unique ability to reach a large majority of the youth population. For this reason, school sexuality education programs are of particular importance when addressing the issues of teenage pregnancy and teenage contraction of STIs. In addition to providing students with access to accurate information about sex, STIs, and proper contraceptive use, schools making condoms available to their students can reduce or eliminate several factors that often lead students to continue engaging in unprotected sex.

Opponents of high school condom availability programs often claim that allowing schools to distribute condoms encourages teenagers to engage in sexual activity, and many then suggest that abstinence-only programs are the only effective means for reducing teenage pregnancy. However, after reviewing studies of schools that make condoms available to their students, Kirby (2002b) reports that students' rates of sexual activity did not increase significantly in any of the schools where condoms were made available, and the results of several studies demonstrate that abstinence-only programs have not been effective in reducing teenage sexual activity over the long term. For example, teenagers who took a virginity pledge reported using condoms at first sexual intercourse less frequently than those who had not taken the pledge, and their rates of STIs were equal to the rates of those who had not taken the pledge (Bleakley, Hennessy, & Fishbein, 2006). After reviewing ten studies that were said to have shown the effectiveness of abstinence-only programs in reducing teenage sexual activity, Kirby (2002a) reports that at this time there is no strong evidence that any abstinence-only program delays teenage sexual activity or reduces the rate of teenage pregnancy.

Some opponents also argue that it is the parents' role, not school educators' role, to provide adolescents with condoms. Therefore, to avoid infringing on the parents' rights, schools typically do not allow students to participate in the condom availability programs without parental consent. Kirby and Brown (1996) found that 81% of schools with condom availability programs in place required some form of parental consent before students could participate in the programs. Health behavior models predict that school condom availability programs can effectively increase students' condom use if the programs reduce or eliminate the financial and availability barriers to students' condom acquisition, create an atmosphere that promotes condom use, and change the students' perceptions about condom use among their classmates (Kirby & Brown, 1996). Also, a number of studies provide evidence that condom availability programs lead to increased condom usage among teenagers and do not lead to increased sexual activity.

A study conducted by Guttmacher et al. (1997) compares the sexual behavior of students in New York City high schools, where condom availability programs were in place, to the sexual behavior of students in Chicago high schools, where condom availability programs were not in place. Students in 12 randomly selected New York City schools and 10 randomly selected Chicago schools completed surveys measuring their “knowledge, attitudes, and behaviors related to sexual activity, condom use, and HIV risk reduction” (Guttmacher et al., 1997, p. 1428), and the responses of the two groups of students were then compared. The distinction is made between continuing students and new students because in the New York City schools, the continuing students had significant exposure to the schools’ condom availability programs while the new students had not. The results of the study indicate that among continuing students, condom use at last intercourse was significantly higher in New York City than in Chicago, and the proportions of new students and continuing students who were sexually active at both the Chicago and New York City schools were the same. Therefore, the condom availability programs led to increased use of condoms and did not lead to increased sexual activity (Guttmacher et al., 1997).

Schuster, Bell, Berry, and Kanouse (1998), asked students in a Los Angeles area high school to fill out a survey, much like that used by Guttmacher et al. (1997). Students reported their sexual behaviors, their knowledge, and their attitudes about sexual behaviors before a condom availability program was put in place, and then again one year after the implementation of the condom availability program. Male students who reported using condoms every time they engaged in sexual intercourse increased from 37% to 50%. The percentage of young men reporting condom use the first time they engaged in sexual intercourse also significantly increased from 46% to 56%. Additionally, students without sexual experience reported greater anticipation of using a condom when they became sexually active. Among both young men and young women percentages increased from 62% to 90% and from 73% to 94% respectively. Despite changes in reported condom use, the researchers found no significant changes in the percentages of students who reported engaging in sexual activity as a function of the condom availability program.

School condom availability programs are further supported by the findings of Blake et al. (2003), who used voluntary surveys to compare the sexual behavior and condom use of randomly selected students from Massachusetts high schools that did and did not have condom availability programs in place. The researchers found that adolescents in schools where condoms were available were more likely to receive instruction on proper condom use and were less likely to report lifetime or recent sexual intercourse than were adolescents in schools where condoms were not available. Additionally, sexually active adolescents in schools where condoms were available received a greater range of HIV instruction and were twice as likely to use condoms as were adoles-

cents in schools where condoms were not available (Blake et al., 2003).

The results of this study were similar to the previously mentioned studies in that they demonstrate an increase in condom use among teenagers exposed to a school condom availability program, but this research also made note of the students’ increased instruction on condom use and HIV. Greater exposure to such information is likely to result not only in increased condom use, but also in condoms being used more often and used properly. Correct use of condoms increases the condoms’ effectiveness in preventing pregnancy and exposure to STIs. For example, condoms used exactly as they are designed to be used are 98% effective at preventing pregnancy. However, as used by the typical person, condoms’ effectiveness at preventing pregnancy drops to 85% (Strong et al., 2008). Therefore, research indicates that increasing students’ knowledge about condoms and how to properly use them should result in more frequent and effective use, resulting in fewer teenage pregnancies and lower rates of teenage STIs (Blake et al., 2003).

In addition, research indicates that abstinence-only programs not only lack strong scientific support but strong public support as well. As Bleakley et al. (2006) report, the majority of American adults believe that abstinence-only programs are ineffective in preventing unplanned teenage pregnancies and disagree that educating teenagers about condom use encourages teenagers to engage in sexual intercourse. Abstinence-only programs received the least support and the most opposition overall, and most American adults prefer some form of comprehensive sexuality education over abstinence-only programs, regardless of the adults’ political ideologies (Bleakley et al., 2006). These findings indicate that public opinion is aligned with the previously discussed studies. These studies consistently reported that students attending schools with a condom availability program in place report using condoms more frequently than students attending schools without such a program. These programs not only eliminate barriers to condom use, such as lack of accessibility and financial resources, they also create an educational and social atmosphere that is supportive of condom use (Blake et al., 2003), leading students to feel more comfortable using condoms. The results of these studies provide strong support for the argument that school condom availability programs are the best method for reducing rates of teenage pregnancy and teenage contraction of sexually transmitted infections.

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Programs involving condom distribution in schools could be construed as openly accepting of sexual behavior in adolescents. This structure prevents students from a sexual education that emphasizes the relationship aspect of sex as well as the dangers of sexual involvement, especially that of a casual nature (Delattre, 1992). Even if the sexual education programs encourage the use of condoms, it does not mean that schools should pass out condoms. In a telephone survey from a Midwestern state, 71% of respondents believe parents should decide what information schools should give to students about condoms (Yarber, Milhausen, Crosby, & Torabi, 2005). Less than half believed schools should make condoms available to students without parental permission (Yarber et al., 2005). These findings indicate that schools should be sensitive to the wishes of parents regarding sexual education, especially in considering the distribution of condoms.

There are other social factors that can contribute to teens engaging in sexual behavior. Research on the subject has shown that drug and alcohol abuse among teenagers are predictors for early initiation of sexual intercourse (Costa, Jessor, Donovan, & Fortenberry, 1995). This research should be recognized by schools to add to the depth of their existing sexual education programs as well as drug and alcohol prevention programs. Many schools are bursting at the seams with high enrollment and budgets have historically been stretched too thin already. Why should schools burden themselves with the financial responsibility of providing condoms to all of its students? Taxpayers' money could be used for more fruitful causes by increasing financial support for alcohol and drug prevention programs.

In addition to overlooking drug and alcohol abuse, schools are ignoring other important social aspects of sexuality in teens by treating sex only as a health issue. For example, results from a study by Hynie, Schuller, and Couperthwaite (2003) showed how even carrying a condom can have social consequences by changing people's perceptions of women. In a study using vignettes of women committing identical behaviors, women who were carrying condoms were perceived as being more willing to engage in sexual behaviors as well as having a higher intention to do so than women who did not carry condoms (Hynie et al., 2003). By simply passing out condoms at school, The wrong message could be sent, putting the girls and young women in an uncomfortable situation of being pressured to engage in sexual activities before they fully make the decision themselves.

Another social consequence of distributing condoms is the underlying message that the school condones sex. Adolescents may be affected by this message, and their decision to have sex can result in consequences of an academic nature. Billy, Landale, Grady, and Zimmerle (1988) found that the self-reported grades of white boys drop significantly after having sexual intercourse. For white girls, future academic achievement also lowers after having sexual intercourse, which can result in decreased motivation to apply to college (Billy et al., 1988). Sexual intercourse clearly plays an im-

Keep Condoms Out of School

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One of the most pressing issues relating to human sexuality in our society today is related to sexual education in schools. Schools commonly provide teens with health information related to sex, sexually transmitted diseases, and the risk of pregnancy. The current issue is debating whether schools should provide condoms to students. Essentially, by labeling the debate over providing condoms as a health and safety issue one ignores the social and moral factors regarding sexuality, especially in adolescents. In this case, schools need to avoid promoting sexual activity among students. However, it is surpassing the boundaries of a school's role to provide the means to having "safe sex." The government has provided millions of dollars to fund abstinence programs in schools, and schools should use these resources to offer programs that also educate students about the physical risks, as well as the social effects, of having sex as a teenager.

portant role in both male and female students in more ways than simply health. Therefore, it is the responsibility of the school to recognize the issue as sensitive and complex, and consider all facets of the decision to provide condoms to students, especially when it can have a negative effect on the grades of the students.

Schools are undertaking an extremely difficult task in promoting condom use for safe sex. Unless they are used consistently, students are putting themselves at more of a risk. As a contraceptive, condoms have their weaknesses. Even if schools are teaching students how to use condoms properly, they cannot promise full effectiveness as it is up to the individual student to follow these steps consistently. User error accounts for a significant decrease in condom effectiveness: using the condom improperly, too late, or not keeping it on long enough (Strong, Yarber, Sayad, & DeVault, 2008). Improper and inconsistent condom use puts teens at risk for both pregnancy and STD's while maintaining the belief that they are practicing safe sex. As evidence of this, up to 20% of unmarried women under the age of 20 years who use condoms as the main method of contraception report becoming pregnant within a year (Fu, Darroch, Haas, & Ranjit, 1999).

Abstinence programs in schools can be a more positive influence on students as compared to comprehensive sexual education programs because they take more emotional wellness factors into account than simply those concerning health and contraception. Abstinence programs can better inform students about the relationship aspects and psychological consequences of engaging in sexual intercourse as teenagers. By ignoring these important messages of the emotional investment of a sexual relationship and being able to trust someone they are sexually active with, comprehensive programs are taking away the true importance of the issue and discouraging teens from treating the issue as a moral one (Delattre, 1992).

Abstinence programs, although they may vary in structure, are fully supported by the federal government. In the 2008 fiscal budget, the federal government allocated \$204 million to teaching abstinence in schools (Department of Health and Human Services, 2007). Abel and Greco (2008) describe a unique abstinence program used in two southeastern schools called FAME, which stands for Family Action Model for Empowerment. Not only does this program promote abstinence, but it also encourages active communication between parents and children about sexuality. The program consists of psychoeducational instruction in class, along with programs after class that get the students involved in possible interests. The motivation for this program is to increase self-esteem and help students combat peer pressure, which might be an influence contributing to early initiation of sexual behaviors or the use of drugs or alcohol. The program discusses the values of abstinence, encouraging both parents and children to discuss it more openly (Abel & Greco, 2008). A study of the program's effectiveness shows significant increases in the appreciation of the choice of abstinence, self-esteem, ability to resist peer pressure, and family communi-

cation (Abel & Greco, 2008). Programs like this can get to the root of the social issues faced by teens in school, and help to combat pressures or other influences that might lead teens to engage in risky behaviors.

It is wrong for schools to provide condoms to students. Even in the efforts of preventing teen pregnancy and the transmission of STD's, schools are limiting teenagers by offering false security in condoms, as well as not taking into account the research that indicates the lack of consistent use, especially among adolescents. Abstinence is the only fail-safe way to prevent pregnancy and STD's, and schools should be promoting it over any form of contraceptive use. Schools can use government funds to teach students that sex is not just a health issue; it is an important decision that has emotional and social aspects. Schools should provide programs that address these additional aspects of sex, encourage abstinence, and work to decrease alcohol and drug abuse. By providing condoms, schools are promoting sexual activity without guaranteeing consistency or effectiveness of contraception, and putting teens at more risk.

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Psychological Analysis — Dramatic Guy and Doll: Lars Lindstrom in the Film *Lars and the Real Girl* James Pfeifer

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In the 2007 film *Lars and the Real Girl* (Cameron, Aubrey, Kimmel, & Gillespie, 2007), the title character Lars Lindstrom shocks and bewilders his small Canadian community when he purchases a life-sized toy doll from an adult website and masquerades her as his girlfriend. To the extreme dismay and embarrassment of his brother, Lars fully believes that his doll, Bianca, is a living person with whom he is sharing a loving and cooperative relationship. Lars' patterns of cognition and behavior initially suggest the presence of a psychotic disorder, but the bizarre nature of his delusion suggests he does not fulfill the requirements for such diagnosis. Upon further investigation, Lars' conduct can be more accurately explained and interpreted as a self-administered treatment or coping mechanism for an underlying personality disorder.

Lars meets all the general criteria for a personality disorder, defined by the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (2000) as "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment" (p. 689). In order to receive a diagnosis of a personality disorder, an individual must fulfill two or more diagnostic criteria from section (A) and all diagnostic criteria described in sections (B) through (F). In the beginning of the film, Lars clearly demonstrates patterns of emotional restriction and inaccessibility that are inconsistent with cultural norms (Criterion A2), which lead to severe detachment from interpersonal relationships (Criterion A3). This pattern of behavior is consistent across the majority of his social interactions (Criterion B) and causes significant impairment in social functioning (Criterion C). Though the

approximate onset of the behavior is never shown, the pattern of behavior has been steady and constant for quite some time (Criterion D), and cannot be accounted for by other pre-existing mental disorders (Criterion E) or the effects of a substance or medical condition (Criterion F; APA, 2000).

The nature of Lars' behavior suggests that he suffers specifically from a schizoid personality disorder, which is characterized by detachment from social interaction and hindered emotional availability and expression (APA, 2000). For diagnosis, evidence of this behavioral tendency must be demonstrated by four or more diagnostic criteria from section 301.20 A:

(1) neither desires nor enjoys close relationships, including being part of a family (2) almost always chooses solitary activities (3) has little, if any, interest in having sexual experiences with another person (4) takes pleasure in few, if any, activities (5) lacks close friends or confidants other than first-degree relatives (6) appears indifferent to the praise or criticism of others (7) shows emotional coldness, detachment, or flattened affectivity (APA, 2000, p. 697).

The pattern of behavior must also be independent of other mental conditions described in section 301.20 B (APA, 2000). Though some diagnostic cues are subtle or assumed, the character of Lars Lindstrom is an exemplar of an individual suffering from a schizoid personality disorder.

Lars Lindstrom leads a solitary life—not by necessity or circumstance, but by choice. Though he is presented with ample opportunity for social inclusion by those at work, at home, and at his Sunday church service, Lars still displays a palpable tendency toward solitude. His consistent avoidance of everyone in his community suggests that he does not enjoy, desire, or pursue intimate relationships with anyone, and therefore has no close friends or confidants. He chooses to live alone in the garage behind his brother's house (which was actually left to both Lars and his brother upon their father's passing). There are several vacant rooms in the house, yet Lars ignores invitations from his brother and sister-in-law to move into the house.

Although Lars lives in such close physical proximity to his brother and sister-in-law, he goes to extreme lengths to avoid interaction with his family, often blatantly ignoring their many attempts at hospitality. In one specific instance, Lars cowers just out of sight as his sister-in-law approaches his window, hoping to appear as if he is not home so he can avoid conversation with her. He repeatedly refuses to accept invitations to share dinner with the two, and only obliges after his sister-in-law ambushes him as he returns from work, physically pins him down on the snowy driveway and forces him to accept her offer.

Several diagnostic criteria were confirmed during the scene in which Lars shares dinner with his brother and sister-in-law. Lars slumps in his chair, stagnant and emotionless, quiet except for diminutive responses to his sister-in-law's inquiries. The three sit in near-silence around the table as

Lars rearranges the food on his plate. At the conclusion of the dinner, once Lars had returned to the garage, Lars' brother and sister-in-law discuss Lars' tendency toward solitude and emotional detachment. Lars' sister-in-law expresses genuine concern for Lars and the amount of time he spends alone.

In schizoid personality disorder, the penchant for isolation is not motivated by fear of rejection or inadequacy. Isolationism is also a distinguishing behavior of avoidant personality disorder, whose sufferers choose to isolate themselves to avoid embarrassment, criticism, and rejection. Lars' environment, however, provokes little apprehension and is generally encouraging and accepting. His muted emotional expression implies that he is neither interested nor concerned with others' judgments.

Lars' practice of emotional indifference spans across all of his social relationships, and is especially relevant in interactions in which sexual possibilities are suggested. In a conversation with his psychiatrist, Lars expressed his discomfort with physical intimacy, explaining that a physical gesture as simple as a hug "...does not feel good. It hurts...like a burn. Like when you go outside and your feet freeze and you come back in and then they thaw out. It's like that. It's almost exactly like that" (Cameron et al., 2007).

Initially, there are several short-lived interactions instigated by a prospective love interest, Margo. Margo makes several forward attempts to set up opportunities to spend time alone with Lars. Obviously uncomfortable with the idea of an intimate relationship with Margo, he shies away from conversations and adamantly refuses her invitations for advancement. Later, when a co-worker suggests the possibility of a budding relationship between Lars and Margo, he does not respond and instead turns and leaves the room to avoid the conversation.

Lars' difficulties with interpersonal relationships are crippling to his ability to contribute as a functioning member of society. His diagnosis of a schizoid personality disorder exists independently of a diagnosis of schizophrenia, a mood disorder, a psychotic disorder, or a pervasive developmental disorder. Also, Lars' symptoms developed without the influence of a pre-existing physiological disorder or general medical condition.

Lars' case is unique however, in that he emerges from the protective seclusion of his disorder and actively initiates self-treatment through development of delusional patterns of cognition and behavior. Lars presents a life-sized toy doll as his companion and proceeds to interact with her as if she were a living person. The doll, Bianca, has a life story, a healthy appetite, and several hobbies, all provided vicariously by Lars. He also holds regular conversations with the doll, both publicly and privately. By posing a toy doll in place of an intimate partner, Lars is able to rehearse healthy social interaction and displays of emotion. His unconventional means of treatment are ultimately effective at providing social skills

training, increasing feelings and displays of intimate affection and promoting community integration, which are the primary behavioral goals for treating schizoid personality disorder (Slavik, Sperry, & Carlson, 1992). Further research supports that individual cognitive-behavioral outpatient therapy, similar to Lars' self-administered treatment, is the recommended approach for reducing the symptoms of schizoid personality disorder (Verhuel & Herbrink, 2007).

At the suggestion of Lars' psychiatrist, Lars' family and community embrace and welcome the doll as if she were a real person. This behavior provides Lars with the necessary support and encouragement to develop confidence in his ability to connect and communicate with people in a healthy way. Eventually Lars becomes comfortable enough in his new role as a functioning member of society that he is able to let go of his coping device, and effectively removes the doll from his life by diagnosing her with a terminal illness and allowing her to die.

Lars and the Real Girl (Cameron et al., 2007) offers fascinating insight into the diagnostic symptoms and therapeutic evolution of a character afflicted with schizoid personality disorder. With the aid of an unconventional social training tool and the support of a community, Lars is able to successfully develop appropriate social skills and integrate into society as a healthy and stable individual.

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Jon and Kate Plus Eight: Kate Gosselin's Obsessive Com- pulsive Personality Disorder

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Kate Gosselin is the mother of five-year-old sextuplets and eight-year-old twin girls, and a self proclaimed "Germ-a-Phob" and "Control Freak." She, her husband Jon, and their kids are featured on a show called "Jon and Kate Plus Eight" on *The Learning Channel* (Stocks, 2007). During their first season of taping the show, they had an episode called "Housekeeper Hunt," in which Kate tries to find a housekeeper. After a brief description of Kate's cleaning behaviors, I will describe the episode and support an argument for Kate meeting criteria for a personality disorder.

Kate spends most of a normal day cleaning her house because she is a stay-at-home mom. She states that she has a routine of cleaning responsibilities that must get done each day. In the kitchen she cleans the wood floor on her hands and knees three times a day. However, sometimes she uses a mop if she is short on time. Kate even mopped the floor in a nice dress right before Jon and she went on their Valentine's Day date. She also wipes down the table and the six high-chairs after every meal and craft time. In the kitchen Kate makes sure to clean the sink, counters and stove once a day, but more if they become dirty. She has started to get her twin girls, Maddie and Cara, to help with the counter cleaning. In the other areas of the house, Kate has Jon vacuum, dust, and Windex everything at least once a week in order to remove all of the finger prints that the children leave. In the playroom, Kate insists she and the children clean up the toys and messes every time they are finished using the room.

During the previously introduced episode, Kate interviewed housekeepers to assist her in keeping the house clean, allowing her to increase her time with the children. The first interview was with a cleaning company who was going to supply a Hispanic woman who did not know English very well. During this interview Kate told the cleaning woman that she believes she has Obsessive Compulsive Disorder (OCD). According to the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition-Text Revision* (APA, 2000), OCD is characterized by obsessive thoughts and compulsive behaviors to relieve the thoughts. In order to be diagnosed with OCD, one needs to show specific criteria. The obsessive characteristics need to include: (1) persistent and recurrent thoughts, impulses, or images that are deemed as intrusive and inappropriate that lead to anxiety or distress; (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems; (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with another thought or action; (4) the person recognizes that the obsessive thoughts, impulses, or images are a product of their own belief. The compulsive

characteristics need to include: (1) repetitive behaviors (e.g., hand washing) or mental acts (e.g., counting) that the person feels driven to perform in response to the obsession; (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some unrealistic event or situation; however, the behaviors or mental acts are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive. By this definition from the *DSM-IV-TR* (APA, 2000), Kate has mistakenly misdiagnosed herself. Using the Axis One diagnosis tends to be a common mistake for those who do not have sufficient information about the differences between OCD and Obsessive Compulsive Personality Disorder (OCPD).

The DSM uses a Multiaxial Assessment comprised of five axes. Kate believed that she had OCD which is classified on Axis One. Axis One disorders are classified as Clinical Disorders and are normally listed as primary treatments. OCPD is listed on Axis Two. Axis Two disorders include personality disorders and mental retardation. Each of the axes looks at different classifications for disorders.

I believe Kate could be diagnosed with Obsessive Compulsive Personality Disorder (OCPD), which is categorized by a need for perfection that is to the point of interfering with daily life. OCPD involves the occurrence of eight different personality traits which include rigidity, miserliness, perfectionism, overattention to detail, excessive devotion to work, inability to discard worn or useless items, hypermorality and inability to delegate tasks (APA, 2000). In order to be classified with OCPD, one must exhibit the behaviors for a long period of time. Kate, in a previous interview, stated that she has always been obsessed with cleanliness and organization and can remember acting in this manner as a teenager.

In the particular episode, Kate was hunting for an appropriate housekeeper that could meet up to her standards. During her second interview, Kate's OCPD behaviors were shown when she said that she was impressed with the woman's acknowledgment of the dust on the baseboards in the basement playroom. Kate said that the baseboards were one part of her home that she would have liked to clean better. During her third and final interview, Kate was very impressed with the woman's philosophy on cleaning. The interviewee believed in "cobbing" the corners of every room at least once a week. However, to Kate's displeasure, she refused to clean the floors on her hands and knees. Kate did not find that acceptable for her hired housekeeper.

In the end, Kate chose to give the first interviewee a trial run at cleaning the house. On the first day, Kate gave her a list of areas that needed to be cleaned and a list of expectations for the housekeeper to follow. This list included cleaning the garage, the children's playrooms and the children's bedrooms including making their beds after every time they were used. While the housekeeper was cleaning, one of the sextuplets, Hannah, pooped in her bed and underwear. This incident sent Kate into a frenzy about needing to give Hannah a bath, and it was a good thing the housekeeper was

there because Kate required the bathtub to be scrubbed down after Hannah's bath. After the housekeeper finished cleaning an area, Kate followed her around to check what the woman had done. As she followed, Kate was shocked by the things that the woman forgot to clean. These areas included: not dusting or vacuuming underneath the clothes hamper that sat in the corner of the sextuplet's room and not dusting underneath the books that sat on a shelf underneath the television. It was then that Kate decided that the housekeeper was not meeting the required standards that Kate had set during the interview process.

This episode, as well as many others in the series, allows viewers to see that Kate has Obsessive Compulsive Personality Disorder. According to the *DSM-IV-TR* (APA, 2000) Obsessive Compulsive Personality Disorder is "characterized by a fixation on things being done 'the right way'." This dedication to orderliness and perfection often leads to a problem completing normal daily tasks. In Kate's case, her cleanliness often interferes with her playtime with the children or even alone time with Jon. If one looks at the *DSM-IV-TR*, Kate exceeds the minimum requirement of four out of eight of criteria for the disorder. The first of her qualifications is that she is "preoccupied with details, rules, lists, order, organization or schedules to the extent that the major point of the activity is lost." Kate displays this often. In this episode, Kate shows this by closely watching over the housekeepers rather than spending time with her children, which was the intent of getting a cleaning assistant in the first place. The second criterion is that the individual, "shows perfectionism that interferes with task completion." Kate often forgets that her children will make messes and because of this she does not allow for the mess to continue, which stops the children's play. The third criterion is that the individual is, "excessively devoted to work and productivity to the exclusion of leisure activities and friendships." As stated earlier, Kate is preoccupied with cleaning the house, and she forgets to take time and play with the children or spend time with her husband. Even when she does get the chance to play with her children, Kate still has the desire to watch over the housekeeper's work and critique it. The fourth criterion for Obsessive Compulsive Personality Disorder that Kate meets is that she is "reluctant to delegate tasks or to work with others unless they submit to exactly his or her way of doing things." Kate shows this by the way she has trained Jon and the twins to clean to her standards.

In this episode, Cara is shown helping Kate clean the counters, but as she is doing so, Kate tells her how to do it. Kate says, "Make sure you scrub all the hard, stuck on spots." This behavior shows the amount of strictness towards cleaning practices Kate has. The fifth criterion that Kate meets is that she "adopts a miserly spending style towards both self and others; Money is viewed as something to be hoarded for future catastrophes." It is understandable that with eight children, money cannot be spent wildly, but Kate is rigid in her routine of coupon-cutting and buying in bulk when things are on sale. She once said that she hopes to

never pay full price for anything. The final criterion the Kate shows is "rigidity and stubbornness." Kate is set in her ways and makes sure that the daily routine is hardly altered. Kate's stubbornness is also seen when she and Jon have conflicts. She is reluctant to change her viewpoint, even when it is apparent that she is wrong. Even though Kate meets six criteria, she fails to meet two others. The first unmet criterion requires that the individual "is over-conscientious, scrupulous, and inflexible about matters of morality, ethics or values." It is unknown through the course of the show whether or not Kate meets this criterion. The second unmet criterion is, "unable to discard worn-out or worthless objects even when they have no sentimental value." Kate does not meet this criterion because she believes that if the kids do not use it or it has lost its purpose, it needs to be thrown out except for sentimental keepsakes. Nonetheless, Kate meets six of the criteria, though she only needs four criteria, for the OCPD diagnosis

Kate is a busy mother, who is able to successfully balance care for eight kids under the age of six. However, during the episode entitled "Housekeeper Hunt", Kate shows her obsessive-compulsive personality as well as in other episodes in the series. She is obsessed with cleanliness, and it interferes with her bonding time with the children. Kate tried to hire a housekeeper, but none met the standards she set. Her high standards and her desire for perfectionism meet the criteria for Obsessive Compulsive Personality Disorder.

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Conducting Psychological Analysis—Current Events

Attachment Style and Personality Traits and Substance Abuse of John Lennon

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Throughout John Lennon's life he dealt with a rocky relationship with his mother, living with his aunt, losing his mother completely, and having a range of relationships and

experiences with men and women (Coleman, 1992; Goldman, 1988). Through this paper, we intend to take a look at his personality and attachment style related to those experiences previously mentioned in an attempt to find an explanation for his repeated substance (drugs and alcohol) abuse. We propose that Lennon's combination of traits in the Five Factor Model of Personality and an anxious/ambivalent attachment style were the root of his substance abuse as related to his life experiences.

Flory, Lynam, Milich, Leukefeld, and Clayton (2002) studied the relationship between the traits of the Five Factor Model (FFM) and certain forms of substance abuse. These researchers found that individuals likely to engage in marijuana abuse were low in Agreeableness and Conscientiousness but higher than average in Openness to New Experience. Extraversion was unrelated to marijuana abuse but was, along with low Agreeableness and Conscientiousness, positively correlated with alcohol abuse. These findings are in line with a 1998 study that found high Neuroticism was linked with low Agreeableness and Conscientiousness; people with this combination of traits showed more frequent instances of the abuse of multiple substances (Quirk & McCormick, 1998). More recently, the pattern of high Neuroticism combined with low Agreeableness and Conscientiousness was found to highly correlate with substance use disorders, as well as teen aggression (Anderson, Tapert, Moadab, Crowley & Brown, 2007).

While it is impossible to prove John Lennon had a low level of Agreeableness, examining his life provides many examples that would illustrate his level of this trait. A person high in Agreeableness would exhibit traits such as being "appreciative, forgiving generous, kind, sympathetic and trusting" (McCrae & John, 1992, p. 178). Lennon demonstrated low Agreeableness throughout his life. Numerous examples included his verbal and physical bullying, a temper so violent that he would injure close friends, and his purchase of a guitar against the wishes of both his mother and aunt (Coleman, 1992). Lennon refused to compromise with others, as seen within his relationship with the Beatles. For example, while recording, the other members of the group requested that his wife, Yoko, leave the sound booth. Lennon refused. Earlier in Lennon's relationship with Paul, Lennon refused to ask Stuart Sutcliffe to leave the band even though Stuart was not up to the level of musicianship that Paul and John shared. In addition, although his Aunt Mimi repeatedly asked Lennon to stop using drugs he never heeded her. He would even respond with a verbal attack (Coleman, 1992).

McCrae and John (1992) consider Conscientiousness to be the trait "that holds impulsive behaviors in check" (p. 197). Throughout Lennon's life it was his impulsive and spontaneous actions that seemed to flourish. It has been suggested by multiple authors that Lennon liked to buck the system and challenge authority (Coleman, 1992; Goldman, 1998). However, instead of creating well thought out arguments to question authority he would act in ways that were outside of the societal standards. For example, during his school days he

would attend classes with his uniform worn in an inappropriate fashion. He would also be disruptive both in class and at school activities such as sporting events. While with his first band, he booked a performance at a church festival in his area. Before the concert was supposed to start he began to drink heavily. Instead of planning or rehearsing for his upcoming performance he indulged himself impulsively (Coleman, 1992). Without any thought to the consequences or any attempt to inhibit himself, Lennon used substances even when he had not planned to do so. Even later in life the task of planning aspects of Lennon's life would fall to others, such as Yoko (Goldman, 1988).

Though it was an accepted practice to hide one's emotions in Lennon's family, he often did not hold back when experiencing intense negative emotions. This behavior is consistent with a high level of Neuroticism (McCrae & John, 1992). Cynthia Lennon (2005), ex-wife of John, discussed how John displayed these negative emotions relatively frequently around the women in his life. He had a tendency to express his feelings of sadness and anxiety through anger. For example, Lennon (2005) indicated that on more than one occasion, John physically attacked another man because he believed the man had danced with Cynthia when she was his girlfriend. During several of these parties, this jealousy would be his only justification before he started a physical fight with an individual. After one particular incident he even slapped Cynthia (Lennon, 2005). The events leading up to his physical acts were relatively minor, and yet Lennon behaved as though they were highly threatening to his relationship. These violent acts were a way for him to express his anxiety about the possibility of being left by these women (Doumas, Pearson, Elgin & McKinley, 2008).

The same pattern emerged in his relationship with Yoko. According to Ono, Lennon was a compulsively jealous individual with a "huge inferiority complex" (Giuliano & Giuliano, 1996, p. 22). On one occasion he forced her to follow him into the men's room because he did not want to leave her alone in the studio with other men. Ono also reported that "[Lennon] didn't even like me knowing the Japanese language, because that was a part of me that didn't belong to him. After a while, I couldn't even read any papers or magazines in Japanese" (Giuliano & Giuliano, 1996, p. 22). Some of these acts may seem minor, yet the jealousy Lennon apparently felt caused him to react as though there was a large threat directed towards him. The intense emotions that were experienced by Lennon often led him towards hostile behavior. These behaviors, along with the "huge inferiority complex" (Giuliano & Giuliano, 1996, p. 22), that Ono believes Lennon had, are consistent with traits of drug users identified by Gunthey and Jain (1997). Their work found that drug addicts, as compared to non-addicts, tended to be more hostile and often experienced issues with inferiority, along with other negative emotions. Lennon also used destructive outlets to deal with sadness. After his mother died, he entered a downward spiral. Lennon stated, "I was in a sort of blind rage for two years. I was either drunk or fighting" (Kane,

2005, p. 42).

Openness to Experience, according to McCrae and John (1992), is “seen structurally in the depth, scope, and permeability of consciousness, and motivationally in the need for variety and experience” (p. 198). Lennon commonly exhibited intellectual curiosity as he “spent many spare moments reading. He was the most well-read of the Beatles, pouring over newspapers, magazines, and, a novel” (Kane, 2005, p. 141). That is, Lennon was constantly pouring over new information and expanding his knowledge base. Lennon’s independence of judgment can be seen in his choice to keep Stuart in the band or let Yoko remain in the sound booth during recordings. As an artist, writer, lyricist and musician his creative imagination is unquestioned. This clear Openness to Experience contributes to an understanding of his drug abuse, as shown by Flory et al. (2002). Additionally, this curiosity led Lennon to experiment with drugs he thought might continue to open his mind. Lennon thought that even though he had a negative first experience with LSD that it might have an enlightening effect and so he wanted to experiment with it some more (Coleman, 1992).

People high in Extraversion often display characteristics of being “active, assertive, energetic, enthusiastic, outgoing, and talkative” (McCrae & John, 1992, p. 178). Whereas Lennon may not have been the most conforming person, he was routinely part of a group. When the Beatles formed, it was common practice to name bands after their lead singer followed by a band name. Lennon did not want to be out in front, he simply sought to be part of the band even if he was the driving force. Although Lennon bullied younger children through much of his childhood, he always kept a gang with him as well. Lennon can be seen as assertive, active, and talkative. Kane described Lennon’s behavior on airplane trips as “restless and rarely mellow” (2005, p. 140). He also explained how Lennon was mischievous and hyper during the long trips. As a lyricist he expressed his views to the world confidently, as well as through interviews and press releases (Goldman, 1988). Much of Lennon’s substance use was in groups, which also ties into his Extraversion. He was introduced to new substances by people he knew and using drugs with the group excited him. Whereas he enjoyed solitary moments, there is no evidence that he wanted to avoid people. Even when he went to India to find enlightenment, he went with a group (Goldman, 1988).

The pattern of traits Lennon exhibited can be seen from the above examples. Although it is impossible to determine his exact traits now, we can clearly see from the information detailed above that Lennon was not dramatically different from the trait profile related to substance abusers. Research has shown this combination of traits is a good predictor of abuse of multiple substances (Anderson et al., 2007; Flory et al., 2002; Quirk & McCormick, 1998).

Another variable that may have contributed to Lennon’s substance abuse was his attachment style. Although there is no way to completely assess Lennon’s attachment style,

qualitative data explained below indicates that Lennon developed an anxious/ambivalent attachment style. Furthermore, past research has shown that this insecure style of attachment is strongly correlated with, and acts as a predictor for, substance abuse (Van der Kolk, Perry, & Herman, 1991).

Bowlby defines an insecure attachment style, where the individual has a positive view of others and a negative view of themselves, as anxious resistant attachment. According to Bowlby, this type of relationship occurs when “the individual is uncertain whether his parent will be available or responsive or helpful when called upon” (Bowlby, 1988, p. 124). This style (a.k.a., as anxious/ambivalent) is seen in individuals whose early relationships are inconsistent. Commonly this style arises from “a parent being available and helpful on some occasions but not on others” (Bowlby, 1988, p. 124). Although the individual is uncertain that those he cares for will be there when he needs them, he always desires their attention.

When the individual begins to form adult romantic relationships, the attachment style is expressed. “The anxious/ambivalent lovers experienced love as involving obsession, desire for reciprocation and union, emotional highs and lows, and extreme sexual attraction and jealousy” (Shaver, Hazen & Bradshaw, 1989, p. 80). Throughout their lives these individuals seek a secure relationship base, but they need constant reassurance even if they are in a relationship with a secure individual. In a relationship, an anxious/ambivalent tends to overreact with extreme emotional highs and lows. Obsessive attention is devoted to worrying that his/her partner will realize he/she is not worth loving. To guard against being abandoned, anxious/ambivalent persons constantly search for signals that his/her partner’s have become disinterested, just as their parents did (Shaver et al., 1989).

As Goldman (1988) indicates, Lennon’s childhood was one of inconsistent parenting. Although he was born into a household filled with family and attention, he would later be neglected. When John Lennon was born his mother and father moved in with his mother’s family, including her parents and one of her sisters. Shortly after John’s father returned from military service he left to work as a ship steward. John and his mother moved to a new home close to John’s Aunt, Mimi. Without money to afford a babysitter, and with Mimi refusing to watch John during the nights, John’s mother would wait until he fell asleep to go out for the night. When he would awaken during the night he would find himself alone and in the dark. While his mother was out drinking and socializing he would scream until the neighbors would come to comfort him. This change from being mollycoddled to being isolated was his first experience in parental inconsistency (Goldman, 1988).

John’s childhood would continue to be unstable. First, his mother would bring home strange men. Then his father was arrested and his wages were suspended for the six months it took him to return home. Without her husband’s income, John’s mother was forced to curb her life of relative

luxury. By this time, John's mother was involved in another relationship that John's father found out about and ended. Unfortunately, shortly after John's father left to work again, John's mother continued her extramarital relationship. Eventually his father made plans to immigrate to New Zealand and offered John the option of coming with him. Even though John agreed to go with his father, his mother stepped in and took him back. After his father left, his mother entrusted John to his Aunt Mimi. Though John had wanted to go with his father, his mother claimed guardianship and then abandoned him, an inconsistent approach that further pushed John into an anxious/ambivalent attachment style (Goldman, 1988).

Based on Shaver et al. (1989), attachment styles can show themselves in adult romantic relationships. Lennon displayed certain characteristics in his romantic relationships that are consistent with an anxious/ambivalent attachment style. For example, when Lennon forced Yoko to follow him into the men's room he was exemplifying his extreme jealousy. Towards the end of his life, Lennon would show erratic emotional changes in his relationship with Yoko. A clear example of his emotional turbulence was his change from happily talking with Yoko in the morning to dragging her to the stove by her hair and threatening to light it on fire simply because she moved his tea (Goldman, 1988). These two instances are supportive of an anxious/ambivalent attachment style in his adulthood because his behavior towards Ono contradicted how he often said he felt about her (Guiliano & Guiliano, 1996).

The following studies show a strong positive correlation between insecure attachment and self-destructive behavior. Gratz, Conrad, and Roemer (2002) reported that insecure attachment was a significant predictor for self-destructive behavior in later life. This finding supports an earlier study by Van der Kolk, et al. (1991). Van der Kolk and colleagues found a significant positive correlation between the severity of childhood attachment disruptions and the severity of later self-destructive behaviors. The terms "deliberate self-harm" as well as "self-destructive behavior" usually encompass only those behaviors that are done purposefully and cause either permanent damage or alteration to the body. These terms are also commonly used when discussing attempted suicides.

Substance abuse and addiction have fallen into the category of self-destructive behavior in the previous studies (Gratz et al., 2002; Van der Kolk et al., 1991). Khantzian (1989) discusses how drug abuse is a way for addicts to take control of their lives, much like with other forms of self-destruction. Studies have also been performed that examine the connection between substance abuse and attachment style. For example, Walsh (1995) reported that individuals exhibiting weak parental attachments were more likely to be involved in lifetime illicit drug use than individuals with strong parental attachments. Caspers, Cadoret, Langbehn, Yucuis, and Troutman (2005) also found that illicit substance use was significantly more prevalent among individuals with

an insecure attachment style.

John Lennon's personality traits and his attachment style clearly contributed to his substance abuse. In reviewing his public and private behaviors, he demonstrated personality traits that include high Neuroticism, Openness to Experience, and Extraversion, and low in Agreeableness and Conscientiousness (McCrae & John, 1992). Lennon also demonstrated an anxious/ambivalent attachment style (Shaver et al., 1989). The combination of traits and attachment style he exhibited have been known to be predictors of substance abuse, which appear true for Lennon as seen by his life experiences (Anderson et al., 2007; Caspers et al., 2005; Flory et al., 2002; Quirk & McCormick 1998).

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Psychologically Speaking

An Interview with

Janet Carlson

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& Richard L. Miller

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Miller: The *Journal of Psychological Inquiry* publishes undergraduate student research. In addition, there is a Special Features section that serves a variety of purposes. It is a forum for student essays on topical issues and also features, from time to time, articles that provide information of interest to both faculty and students related to the research process. We have asked you for this interview in order to explore your thoughts on the role of undergraduate research in teaching. The audience that this interview is designed primarily for are students and, secondarily, for faculty, with particular emphasis on the scholarly component of teaching and learning and how that relates to students conducting research and subsequently presenting and publishing the results of that research. The two students who will be talking with you are both undergraduates from the University of Nebraska at Kearney. Tawnee Applegarth is a senior, majoring in psychology with a minor in biology. After graduation, she intends to pursue a teaching endorsement in biology. Jessica Obermier is a junior, majoring in psychology with a minor in special education. She intends to pursue a graduate degree in school psychology.

Applegarth: To begin with, can you tell us about yourself; were there any childhood experiences that shaped your career choice?

Carlson: I grew up in the northeast primarily in upstate New York and I did my undergraduate work in upstate New York at Union College. After that, I completed my doctoral work downstate at Fordham University, where I earned my Masters and Ph. D. in Clinical Psychology. I think the most important influence for me when I was an undergraduate was taking a course in Experimental Psychology where we replicated some of the classic studies in perception and sensation in the first semester and in the second semester we trained a real rat to do a whole variety of things. This was my Junior year, and I had been a biology major until then. After that experience, I decided I wanted to be a Psychologist instead. So that was

when I changed course a little bit. I had completed so many credits in Biology I still had the major in Biology, but it was a Psychology and Biology major, so that was really a very important event for me. The faculty member who taught the course, Dr. William C. Huntley, had studied with many of the greats at Harvard and was very influential in shaping that experience for me. He made it very rich for me and helped me kind of “see the light.”

Applegarth: What was the reaction of your family and friends when you chose Psychology as a major?

Carlson: Well my friends were fine, because my friends were mostly engineers so I was already doing something they were not doing because of my major in biology, so my friends were fine and supportive. A couple of them thought “Oh good, you can help us with our problems.” I think my family has been somewhat mystified by what psychologists do. I remember my brother saying something like “you should go to medical school, if you want to be your own boss you should be an MD not a PhD.” He’s an MD, by the way. And my parents had no college experience; they had graduated high school, so I was a first generation college student. I don’t think they really knew what a Psychologist *does* whereas they knew what an MD *does*. So they didn’t know how you could make a living and be happy being a Psychologist. I think it was just a little difficult for them to wrap their minds completely around my choice.

Obermier: Was the work you did with Dr. Huntley the reason why you got interested in research, or was there something else?

Carlson: My interest in research really started after taking the experimental psych course, which was a two-semester course. The course was delivered in a very different way (from my previous experience). It was delivered as a recitation course where we would be asked questions. It was a small class, with maybe twelve of us in the class,

and you had to have read the material in advance because he called on YOU to explain “this figure” or to explain “this term” or whatever it was, so it was a different kind of learning. As well, we took exams according to an honors system. So when we were ready to take the exam over a period of days we would get the exam from the department secretary, go to a room and write out the exam and turn the exam in. We were treated like adults more so than in other courses. And I later did a three semester long thesis under Dr. Huntley’s direction that spun off of some of the things we had done in experimental psychology. The science piece of it was both very evident and very attractive to me.

Obermier: What did that research examine? Did you do the experiments specifically with rats?

Carlson: My thesis was actually on verbal learning, so it didn’t involve rats. It was built on what’s called the isolation effect, the effect that has to do with serial learning of a list of nonsense syllables. I recruited all my friends to learn this list of nonsense syllables. I had this big drum, on which the words went around so they each served as cues for the next syllable. The syllables were consonant-vowel-consonant nonsense syllables, and the idea was that things that were highlighted or presented in red type would be better remembered no matter where in the list they occurred.

Obermier: At the time was verbal learning a dueling theory with something else? Did you get involved in that?

Carlson: I think that serial learning was not at the forefront of psychological research at that time, but it was interesting to me. I thought there was something different to be learned from putting the highlighted syllables in different positions throughout the list. The von Restorff effect had shown that if you highlighted words in the middle of a list you would get a little upswing in the retention of those words. So the next question was, could you highlight earlier elements in the list or later ones and still see that upswing. And it worked, we did see that effect.

It was really the first opportunity that I had to take my work somewhere. There was a Psychology Conference not too far away in the state. Dr. Huntley encouraged me to submit my paper there and present, which I did. I remember none of it, because my anxiety was just through the roof, so I don’t know what I said, but I know I went, and did something. It was a nice opportunity. Dr. Huntley also encouraged me to submit the research to the New York State Psychological As-

sociation for competition for Undergraduate Research and I won top honors for it. It was really a nice kind of “I can do this” experience. Dr. Huntley was so helpful to say that “you can take this here” or “you can submit this there” and I knew my work wasn’t going to be published in *American Psychologist*, but it was going find a venue that was very satisfying and rewarding.

Obermier: It is definitely a confidence booster to see it on paper, when somebody else can read it. Because of how much Dr. Huntley helped you, do you take undergraduates under your wing and work with them? Or how do you use undergraduates in your research projects?

Carlson: I would love to do that. I am in a program right now where I am only teaching graduate students, so unfortunately I don’t have a great deal of exposure to undergraduate students at this moment. We do have some student workers that I try to draw into psychology. They are not psychologists but I keep trying to “show them the way.” I don’t think I have been successful just yet, but sometimes they have talked to me about their sense of being overwhelmed, or their sense of test anxiety and things like that. I think they have a different appreciation for psychology than maybe they had before they worked in the department and a little bit with me. But unfortunately I don’t have those contacts right now.

Obermier: Did you have contact with undergraduate students in previous institutions that you had worked at?

Carlson: Primarily when I was teaching in Galveston, I taught introductory psychology. That was the only course that I taught because I was a department head. I just taught intro, and in that context I was always on the lookout for those students who were on their way to College Station, considering a minor in Psychology, or even a major in Psychology, but there weren’t many of those. There were occasions where I encouraged students (based on the quality of their writing, and the quality of their conceptual thinking in Psychology) to think about majoring in Psychology or minoring in Psychology. Galveston is a special mission school, a Maritime Academy, so there was not a lot of “fruit to be collected” there but I remember a couple of students who really had a good command of the material in intro psych. You could just kind of see that if they were at this level now, they could certainly be effective and capable students in Psychology. So in my fantasy, they eventually did do that, even though I don’t know it for a fact!

Obermier: In your speech today, you talked about the idea

An Interview with Janet Carlson

that teachers aren't always teaching to students who are interested in the material. Do you find that frustrating? Are there different ways that you teach the material to students who are probably just taking the class because they have to?

Carlson: I mostly try to work on the examples that I use in class, to make them relevant to the work that the students are doing. In Galveston for example there were a lot of engineers, maritime system engineers who had very few electives, and they waited until their senior year to take one elective, and they took intro psych. This really made them a fish out of water because intro psych is not pitched at seniors; intro psych is pitched at freshmen/sophomores. The challenge there was to find examples that they could relate to, based on their work in maritime systems engineering, which has a lot to do with human factors, in which they might be able to develop an appreciation for the work of psychologists, and the relevance of some of the concepts. That was my main mission in those situations, to try to come up with examples and illustrations that would resonate with the students' experiences.

That was my main mission...to try to come up with examples and illustrations that would resonate with the students' experiences.

Applegarth: What are your future plans for research and teaching?

Carlson: Well I plan to keep teaching always, and most of my research now has become non-empirical scholarship primarily in the areas of assessment and ethical issues, but not empirical research. One study I would love to do would involve two pieces of survey research. One has to do with reading case vignettes and determining whether the behavior described is an ethical practice or an unethical practice. I think that the details of ethics are so complicated, and some of it is clear and straightforward. For example: "No sexual intimacies with clients," PERIOD end of story. But more often, the problematic cases that don't involve those tremendous lapses in judgment, are more complicated. Just like the slide that I showed in the presentation, with the case where you have a faculty member pressed into service to teach a course that they're not really competent to teach. Then on the other side of that you have students who can't graduate if they don't get that course. So usually ethical decisions involve com-

plex issues. I would like to do a piece of research that relates to assessment practices by trainees in psychology and the ways that they may approach the process, and surveying practitioners as to how they view instructional practices in these kinds of courses. Getting a read from the field of practitioners about the ethicality of certain practices in assessment training would help to shape instruction in assessment. So I would like to see that happen.

Obermier: Is there any particular reason why you're interested in ethics? Is this a new idea that is coming to the forefront, or did you have a personal experience, or did someone you know have an experience with a "lack of ethics."

Carlson: Well not me personally of course...well in some ways yes, I've seen things happen that just don't "pass the sniff test," in that you know it's not quite right, but it's still being done. Frankly, even in the very basic undergraduate courses in psychological testing, instructors sometimes have students using instruments that they really don't have the training to use. I think the faculty member thinks this will be "fun" to let students use Rorschach cards for example, and to me that's pretty obviously not a way to go. But I'd like to know the sentiments of others in the field, other teachers in the field, and practitioners as well.

Applegarth: You are the President-elect for the Society for the Teaching of Psychology. What do you bring to that position and what do you hope to accomplish during your term of office?

Carlson: Well one of the things I would like bring, and it sort of goes along with the principles of ethics and professional responsibility, is more transparency to the processes we use in the Society. That might take the form of things like posting our minutes from meetings online, so there aren't these secret things that happen. We don't mean it to be secret, it's just that we're not set up to be very transparent about how decisions are made within the Society. That's something that is important to me.

Another is to build on the community of teachers of psychology, in other words, to grow the membership. Based on the fact that you can be pretty involved in the society without actually traveling anywhere, using the electronic communications that are available and by accessing materials online. We've started doing workshops that are delivered as pod casts or even webinars and things like that. As a result, you can be pretty actively involved in the society without traveling to a meeting at all. Thus, if you're on a budget,

like many people will be in the coming years, you can still be involved. I would like to bring more members in who are real members, but who are not necessarily present at specific meetings. Growing the membership is something we are ready for, and I would like to do that.

I mentioned in my talk, that I directed the Office of Teaching Resources in Psychology for five years and the hits on our website are in the tens of thousands, but the membership in Division 2 (Society for the Teaching of Psychology) that sponsors the website on the teaching in psychology is only about three thousand. There are a lot of teachers of psychology accessing our information, and some of those might want to become members.

Applegarth: We learned that you have taught in New York, Connecticut, Texas, and now you're at UNL. We were wondering, why you kept moving around, because its just not usual for someone to teach at so many places, and have tenure at most of them.

Carlson: Well, I guess it comes down to the fact that both my husband and I are academics. We're both academic psychologists, and so my husband's track has been to move into administration and to higher levels of administration. So I am somewhat conventional in wanting to live in the same state with him, so when opportunities opened up for him, I would try to find a position in that general region, and so far it's worked out. We'll see what happens down the line, but very few of my changes in position were because of aspirations that I had.

My first year I taught at Fordham as a one-year replacement for a faculty member who died suddenly and they needed somebody for a year while they took on a search and so forth. I had just finished my degree, wanted to be an academic, and so they asked if I would take the position for a year and that was great. I got the position at Fairfield University because my husband and I were living in that part of the country. So that was a move I made because of me, we'll say. Then three years into that job, my husband took a position in upstate New York, in administration, so I went up there. Then I went down to Texas for a similar kind of reason and then I went to Nebraska. It's probably not normal, I think you're right.

Obermier: Do you think that being able to "get off the couch" and find something where your husband has been, has opened some doors for you or has it made you feel like there's some stuff that you would have rather not had to do, any bad experi-

ences?

Carlson: No, not really, and in fact it is probably a mixed blessing for me because I'm very much a homebody. I probably wouldn't have gotten off the couch unless somebody or something forced me, so in a sense it's probably a good balance. I would like to just stay put, but probably too much, so its a good counter-balance to have somebody who is a rolling stone, who wants to always be moving. At times there are frustrations associated with moving around, but for the most part it has been positive, a very positive experience, what with the exposure to different parts of the country, and people in different parts of the country that I wouldn't have had otherwise. So I consider that a real enrichment of my activities and my experiences.

Obermier: I suppose networking has been a little easier for you because of that.

Carlson: I think it has been. STP, the Society for the Teaching of Psychology, has been a really good support network that works wherever I'm living. It has been a big help for me to get connected and stay connected. And there are always some people I knew from places that I worked that I occasionally see at conferences and things like that. In that respect there is some kind of benefit to being several places, and moving several places.

STP, the Society for the Teaching of Psychology, has been a really good support network that works wherever I'm living.

Obermier: Going back into some of the research work that you've done, we've noticed that you've published test reviews. How did you get into that? Was it required of you, or something you just enjoy?

Carlson: There is pressure for faculty to publish. Some schools even have weighting systems for how much a certain thing counts. A co-authored article where you're not the first author is three points, where you are the first author is five points, things like that. So they have different ways of evaluating your work. Works that are invited, like test-reviews are not usually considered high-valence publications, but they still count for something. So when you're in a dry spell, or you think you might end up in a dry spell, where you're submitting to peer-reviewed journals but you don't know if the papers are go-

An Interview with Janet Carlson

ing to be accepted or not, I chose to seek out some opportunities that were more like invitations. For example in reviewing tests, you usually mention to an editor that you're interested in doing that. You send in your vita and they evaluate your credentials and decide if you are qualified and what test they might have you review. So it's more or less an invitation that you sort of initiate by asking to be inviting to serve as a reviewer. Then they send you a test to review and you can have a steady stream at that point, provided you write a good review, and you are on time, and things like that. If you do well, they keep you in the fold and keep extending invitations. It was sort of a way to have steady productivity in terms of publications. It is perhaps not the most worthy in terms of how promotion and tenure committees look at the work, but respectable, definitely respectable.

The Buros Mental Measurements Yearbook is the Cadillac of test review resources, compendia, and so forth. It is clearly a very respected and highly regarded outlet for test reviews. I think it has worked pretty well for me over the years.

Obermier: Because you work with graduate students now, do you have any advice to anybody who is thinking of going to graduate school? Perhaps something that you feel that students don't realize when they first get there?

Carlson: When I was at SUNY-Oswego, I was the admissions coordinator for our department. We had three masters programs, two of which were very meaty. The masters programs required at least 60 credit hours and people got credentialed as school psychologists or school counselors through those programs. I used to hold information sessions for interested applicants. There are some basic practical things to remember. For example, make sure your email address isn't suggestive in some way or another. And something we've come up against at UNL is that people sometimes have MySpace pages that essentially disqualify them from admissions. These are things that are a new problem compared to when I was admissions coordinator.

Another thing is, even though I trained in Clinical Psychology years ago, I find there is this sort of mysticism that goes with Clinical Psychology, that I'm not sure is really earned. There are a lot of ways to be in a helping profession in psychology and to do excellent work, that are sort of overlooked. People put too many eggs in the "Clinical Psychology" basket and I'm not sure it's really worthy of that. Working in school psychology, for example, where the market is fantastic,

and the hours and the schedule are good should be considered because you have more or less a school year calendar. I think that's very important work and over the years I have trained a number of school psychologists whom I would be very happy to have working in school districts where I had relatives attending. Sometimes it's hard to move students off the idea, the "tunnel vision" that they have, that they want to go to Clinical Psychology, but I would encourage people to look at psychology a little more broadly.

Sometimes it's hard to move students off the idea, the "tunnel vision" that they have, that they want to go to Clinical Psychology, but I would encourage people to look at psychology a little more broadly.

Obermier: Do you think there are any ways that we could do better in getting people more interested in such programs? Actually, what I want to do is go into school psychology. Kearney has that graduate program and I want to do that. I got interested mainly because of a presentation made by the graduate program chair in our Orientation to Psychology course. It's a weekly class for sophomores with a variety of speakers, and it was very beneficial.

Carlson: Oh, that's just great! The exposure to school psychology often doesn't happen until later. If you look in introductory books for example, a lot of them don't even mention the concept of school psychology, maybe because school psychology programs often are in Schools of Education rather than in Schools of Arts and Sciences. That difference is going to be a tough nut to crack no matter what. Advisors need to alert students more to what the opportunities are. Beyond that, we owe it to our students to send them on a quest to find material that relates to them, their interests, and what they really want to do. OTRP (Office of Teaching Resources in Psychology) has a couple of really great resources on careers in the helping professions with several different modules for doing just that. There is one resource by Drew Appleby that uses the Occupational Outlooks Handbook. He's got a numerous links to career options in Psychology and descriptions that link directly to that information. It's very informative and helpful for students and advisors alike. He lists about 130 different jobs that people do after

completing an undergraduate or graduate degree in psychology, and those that require graduate training are marked with asterisks. It's a very handy guide. The trouble is: how do you get that material into people's hands? If they are not looking, how do you wave the banner in front of them and say, "Look, there's all this stuff you can use."

There are a lot of resources, if you are somewhat pro-active, in finding the fit for yourself. The tough thing is that there are still some very capable, very qualified students, who just lack that self-start thing. That's always going to be a little bit hard when you say, how do you make people aware of what the opportunities are? There are ways to find it out. We would like to meet them half way, and not have to go "get them off their couches."

Obermier: I got really lucky, they came to me!

Carlson: Well, they came to you, but you followed up with them. Most undergraduate programs these days seem to have a careers course. But how well they develop it is the challenge. It is really hard to line up speakers, and to coordinate everyone's schedules so you can stick to what you want to do in the course outline. To deliver it in that way, sounds like the most effective way, but I bet there are a lot of programs that just don't do that.

Most undergraduate programs these days seem to have a careers course. But how well they develop it is the challenge.

Obermier: Do you have any advice for me about becoming a school psychologist?

Carlson: At what level is the training going to be? Is it a Specialist degree program?

Obermier: Yes, it will ultimately be a Specialists Degree, so it's a three year program with the internship.

Carlson: The market has been phenomenal for so many years. When I was at Oswego, 8 or 10 years ago, we had over 100% placement of our graduates in school psychology. In other words, 100% of our people would be employed and we would be getting calls from places saying "don't you have anyone who's finishing up?", "don't you have anyone at all?", "you mean, all your interns found positions already?" or "Couldn't we just have an intern, then?" There were students who were get-

ting signing bonuses for going to other states to accept employment. For a while, Iowa had a signing bonus. I haven't looked at the map lately, but I'm pretty sure the need is primarily in the Midwest, so if you're comfortable being here at home I think you will have a lot of opportunities.

Obermier: I'm always glad to hear what I want to go into has jobs available for me.

Carlson: I used to say to the School Psychology students at Oswego that you can end up doing a lot of assessment, and that is an important part of most School Psychologists' jobs, but it's not all they do. A number of School Psychologists go to training programs where they take substantial coursework in counseling or group work. If you know you want to be involved in counseling and those types of service deliveries as well, then you need to know that your program can provide the requisite training for that, so that when you are employed, you bring the skills to the job that allow you to do what you want to do.

Psychologically Speaking

A Lifetime of Teaching and Learning: An Interview with

Mark E. Ware

Irieri Herndon

Creighton University

Andrea McAllister

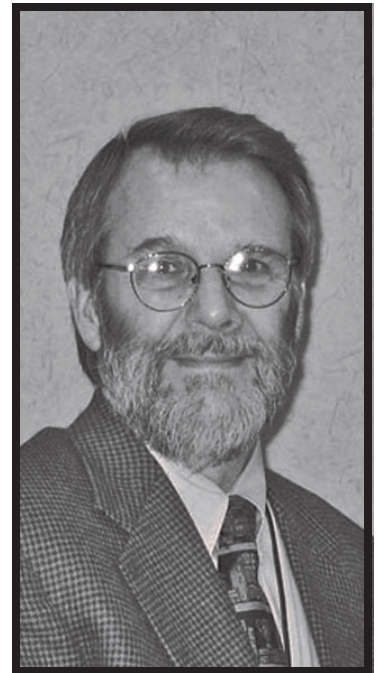
Nebraska Wesleyan University

Tareyn Moss

Morningside College

Jenna Rycek & Richard L. Miller

University of Nebraska at Kearney



Mark Ware is professor-emeritus of psychology at Creighton University, where he began in 1965 and retired in 2008. For over 40 years of teaching, he has demonstrated an unwavering commitment to teaching excellence.

At Bellarmine College, a small liberal arts school in Louisville, Kentucky, Mark showed an early interest in undergraduate research, conducting operant conditioning studies with rats. Mark attended Kansas State University and after two years joined the faculty at Creighton University. Some years later, he obtained his doctoral degree from United States International University and returned to Creighton.

Mark is a Fellow of the American Psychological Association and a Charter Fellow of the American Psychological Society. His service to the profession includes a 12 year tour of duty as associate editor for the journal, Teaching of Psychology, the only journal devoted to the teaching of psychology at all levels from pre-college to continuing education. Mark also chaired the Committee on Advising at the APA-sponsored National Conference on Enhancing the Quality of Undergraduate Education in Psychology.

Mark's scholarly work includes numerous publications of empirical articles. He is particularly pleased to have had many of his students co-author publications and presentations with him. Mark has also edited several books and book chapters, mostly on teaching issues.

Among his proudest recognitions, Mark includes selection for several teaching awards including the Robert S. Daniel Award for Teaching Excellence from the Society for the Teaching of Psychology (APA Division 2), the Award for Distinguished Teaching in Psychology from the American Psychological Foundation, as well as awards from the Nebraska Psychological Association, and Creighton University.

In 1994, Mark led a group of psychology educators in founding a nonprofit, tax-exempt corporation to produce this journal. The first issue appeared in March, 1996 and has been published regularly since that time. He served as th

journal's Managing Editor from its inception until his retirement last year, although as Founding Editor, he is still involved in helping articulate the ongoing vision of the journal..

Miller: As the Founding Editor of this journal and through your support of the Great Plains Students' Psychology Convention, you have touched the lives of students throughout the region. In recognition of that, I have invited students from four colleges and universities in our region to conduct this interview. Irieri Herndon is a senior at Creighton University who will be graduating with a major in psychology and a minor in applied ethics. For the next two years she will be part of the Inner City Teaching Corp (ICTC) in a Chicago inner-city school while attending Northwestern University to pursue a masters degree in education. Tareyn Moss is a senior at Morningside College who will be graduating with a BS in biopsychology. She will be going to graduate school at Western Michigan University to study applied behavior analysis. Andrea McAllister is a non-traditional student in her junior year at Nebraska Wesleyan University. She is married with two children. She is majoring in psychology and philosophy and plans to pursue a graduate degree in clinical psychology. Jenna Rycek is a junior at the University of Nebraska at Kearney, majoring in psychology with a minor in family studies, who plans on pursuing a doctorate in developmental psychology.

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

Ware: I don't think I can pinpoint an individual who influenced me. I started college as a Chemistry major and envisioned myself as becoming a rocket scientist, literally, but half way through the

year of organic chemistry, I decided that chemistry was no longer interesting to me. I was interested in the process of chemistry, the scientific method, but the content I found very boring. I struggled for an entire semester, second semester of sophomore year, trying to pick an alternative major. I was at a small liberal arts college, as opposed to a large university, and the variety of alternatives available was limited.

I went alphabetically through the various departments and got down to psychology and sociology. And sociology I just didn't understand. In fact I'm still not quite sure what sociology is and that's not a put down to sociology; it just says I don't understand it. But a student, and I don't remember who it was, said to me at about this time, "Did you know that psychology has a laboratory, and they have a course in experimental psychology?" I said, "Oh cool!" I even went to the classroom to see what this lab was like. I knew something about psychology because I had taken the introductory course. The combination of a more interesting content and the research component associated with psychology just drew me right in.

Had I been at a large university, one that had a wealth of majors, I could have easily ended up in engineering. Much of the research and work I have done in psychology had more to do with manipulation and application, as opposed to the theory and the practice components of the discipline. So, psychology was probably not the ideal fit for me, but at the school where I was a student, it was the best fit. So, that's how I got into psychology.

Herndon: What was the reaction of your family and friends to your choosing psychology as a career?

Ware: I don't recall that they had a reaction one way or another. I was in college. I was doing well, passing everything. And I don't recall that they said either "yay" or "nay." I think I was by then relatively independent in terms of my decision-making within college. So, they didn't have much to say about it.

McAllister: What was your favorite subject when you were a student?

Ware: Probably the most intellectually challenging was philosophy. The undergraduate school I attended required 18 hours of philosophy and about the same number of hours of theology, along with other liberal arts requirements. And it's not that I thought I was particularly good at philosophy, but I think for the first time in my life I was exposed to ideas and ways of thinking that were com-

pletely foreign to me. I recall one of the philosophy courses, metaphysics, I had. I, literally, did not have a clue what the instructor and the book were talking about until the last week of the semester. And for some reason everything just came together. At first I thought, "What in the heck are they talking about?" and then it finally fell into place.

There were also required history courses, and I guess I was very fortunate that the instructors I had in history were very interesting, and to this day cable TV's History Channel is one that I thoroughly enjoy. So, there's probably some latent interest in history and the fact that I have taught History of Psychology for many years is a further reflection of that interest.

Umm, I'm trying to think within psychology. I don't think it got any better than experimental psychology. Of the psychology courses, probably what I liked the most was the investigative component; asking questions, gathering data, and trying to answer those questions, as opposed to relying on dogma. Probably at that time in my life, I was becoming liberated from a dogmatic point of view about life and about the world. I found myself quite interested in finding an empirical basis to answer questions rather than relying on what some authority said.

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McAllister: Your education seems to have been influenced from all over the country. How do you think your own values and beliefs were shaped by those influences?

Ware: The undergraduate school I attended was a small liberal arts school, a Catholic liberal arts college in Louisville, Kentucky that was a little over a hundred miles from where I grew up. My older brother had gone to Notre Dame. Notre Dame in my mind was this huge university that was just something that I didn't think I could handle, socially and intellectually. So, I went to this small liberal arts school and really shined, really did well there. In a sense, I was avoiding a large, complex university and looking for something smaller, more intimate. By the time I graduated from college, or as I was approaching graduation, I was looking toward graduate school. I hadn't

An Interview with Mark Ware

thought of anything other than continuing school.

So, I applied and was accepted by three doctoral programs; one at Indiana University, another at the University of Louisville, and the third at Kansas State University. I decided to go to Kansas State University because I couldn't see differences among the three. Now, I know there are huge differences among them, but at the time I didn't know that. I went to Kansas State University because I saw it as an opportunity to travel. I'd never been as far west as the Mississippi River. I thought this was a chance to have someone pay me to go to school and travel. And so I went to Manhattan, Kansas for graduate school.

After two years of graduate school and not a very pleasant experience, I decided I didn't want to continue, but I did think I wanted to be a college teacher. And so, I applied for various positions. I was given offers at two schools and accepted one at Creighton. In 1965 it was possible to have an academic position at Creighton with only a master's degree. I went there and after about five years, the dean called me into his office one day and said, "If you want to make this your profession, you have to go back to school and get a doctoral degree." By then I was married and had two kids, but I started looking for graduate programs.

I believe at the time there were only two PhD programs in the country that had an emphasis in college teaching, and the one that I chose was United States International University (now called Alliant International University) in San Diego. Not only did they have course work that was geared for people who wanted to be college teachers of psychology, but they also required an internship in teaching; so that was a great match for me. It was with that in mind that my wife, two kids, and I packed a U-haul van with everything we owned and headed to Southern California.

I chose undergraduate and graduate schools because they met certain values that I had at the time, one of which was to be in a small more intimate environment. The second, other things being equal, was to travel west. And the third, the doctoral program, was one in which I would not have a traditional specialization (e.g., personality, social, or developmental). The program emphasized general psychology with an emphasis on teaching. I knew that teaching was what I wanted to do, and that program best met my aspiration in terms of career.

Ryceck: If you could do it all over again, would you do it differently?

Ware: Well, probably not because I'm very satisfied with the direction that my career took and what I was able to accomplish. So, in that sense no, I don't have any regrets and in that sense wouldn't do it any differently. But, in the sense that had I known at 19 or 20 years of age what I knew at 30 or 35 years old, then as I said earlier, I would have ended up in a field of engineering. So, that's kind of a qualified answer to your question.

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

Ware: Probably a driving force was a change in the culture at Creighton in the late 1970s that put a value on scholarship. Before that time, scholarship, at least in the College of Arts and Sciences was not a priority. The school was primarily a teaching institution. With the shift in culture, I saw that to be successful I needed to engage in those behaviors that were consistent with the culture. The impetus of the topics that I chose were ones that were close to my heart, that is what I could learn from research that could enhance my effectiveness as a teacher and adviser. So a great deal of the research that I did over the years has been with an emphasis on identifying variables to improve the quality of teaching and enhance advising skills.

The impetus of the topics that I chose were ones that were close to my heart, that is what I could learn from research that could enhance my effectiveness as a teacher and adviser.

Moss: What were your early research interests?

Ware: As an undergraduate, once I switched to psychology as a major and I found out about operant conditioning, I thought that it sounded like the grooviest thing in the world to work with rats. No faculty or students at the school were doing research. So, I asked if I could do research with rats using an operant conditioning paradigm. I was given support by the department by being given a room of my own and one Skinner box, as well as space for the cages for the numerous animals that I tested. I set out a program of research to examine temporal variables that impacted the length of extinction of the operant conditioning response of bar pressing. That was my start as an undergraduate. Subsequently the pilot research I did led to a

small grant that then allowed me to continue that research with a larger sample of animals.

In graduate school, my masters thesis, which was an operant conditioning model, had to do with verbal reinforcement and whether you could manipulate participants' responses by using verbal or nonverbal cues to reinforce their behaviors. So it was actually an extension of that operant conditioning model but using humans. Simultaneously, another graduate student and I were working with a faculty member, who at the time was very well known, by the name of Harry Helson. He wrote a book called, *Adaptation-Level Theory* (Helson, 1964). We manipulated variables that altered judgment of pitch; not very exciting stuff for most people, but it was certainly a test, a confirmation of this adaptation-level theory (Rubin, Ware, & Helson, 1966). So that's some of the earliest research I did as an undergraduate and then the two years as a graduate student.

Moss: Much of your research addresses educational issues. How did you become interested in researching better and more effective teaching tools?

Ware: As I mentioned earlier, my interest developed from the change in the culture at Creighton that placed a value on doing research, and my own inclination to try to be a more effective teacher by conducting investigations that would help me to accomplish that goal.

Herndon: Two of your presentations covered job searching. How has job searching changed from when you presented those papers in 1985 and 1986 to today's job market? Are there any techniques you described that are still being used? How has technology affected the job search?

Ware: I think the basic principles in job searching are the same now as they were then. Focusing just on the job search process, one of the important techniques has to do with networking and not relying, for example, on classified ads whether they be in newspapers or online. The research indicates those are the least effective ways to go about finding a job. Recall the old expression, "It's not what you know but who you know." That's an over simplification, but there is an element of truth in it. Through networking, you can make

contact with and facilitate informing the prospective employer about what it is that you have to contribute.

Has technology changed things? Absolutely. The down turn in the economy has certainly had a major impact on the job search, but the principles are the same. As part of the job search, an individual needs to identify his or her skills and values and match those to the demands or needs of the employer. That's the same whether the economy is down or up. Networking is also one element in that strategy to break through the barriers between the individual and the employer. The use of online resumes is something that an individual should not ignore. Students should not rely on this approach exclusively, but it costs virtually nothing, so go ahead and do it.

Herndon: It is known that you have studied and written about historical events in "Turn of the Century American Psychology." What were some of the ways that women impacted this field in the early days?

Ware: Let me just focus on one [woman] as an example. Leta Stetter Hollingworth was a Nebraska native. She was born in Chadron Nebraska. Some of her growing up years were in Valentine, Nebraska. She went to the University of Nebraska in Lincoln and was interested in literature. She wanted to be a writer. During the first couple of years after college, she did what many women of the time did and taught in school. Subsequently, she married, joined her husband at Columbia University in New York City, and eventually earned a doctoral degree at Columbia. By the time she completed her doctoral degree, she had published one book and nine scientific papers, all concerned with the psychology of women. Her doctoral dissertation had to do with whether women's menstrual periods were an impediment to successful behavior. She found that the menstrual period did not have any detrimental impact on performance. Hollingworth argued adamantly against the view that women had lesser abilities than men and had data to support her conclusion.

In a book on adolescence that she published, Hollingworth (1928) said in the introduction that readers would notice only a passing reference to G. Stanley Hall's views about adolescence and what reference there was to him was mostly of historical interest only. Her major professor Edward Thorndike was also an advocate for women being treated differently than men in the academic world, as was Lewis Terman. By the 1920s, these giants in early American Psychology no longer made reference to this secondary role

Through networking, you can make contact with and facilitate informing the prospective employer about what it is that you have to contribute.

An Interview with Mark Ware

for women. So that is an example of a major impact that one woman had on psychology.

McAllister: You have mentored a significant number of undergraduate research projects. How did you go about involving undergraduate students in your research?

Ware: Most of the students I sponsored were either from my History of Psychology course or Personality course. One requirement for the courses was that students had to do a major research paper. I encouraged those students who did a very good job on that assignment to revise and submit their papers as presentations at student conferences, but of course the paper had to be revised for a fifteen-minute, oral format.

There are two individuals who influenced me to encourage students to be involved in research, one of whom was Steve Davis from Emporia State University. The other was Betty Dahl from Creighton University. For me they were excellent models for what faculty could do to engage students in research. The *Journal of Psychological Inquiry* recognized Betty's broader influence by designating an award in her name – the Elizabeth A. Dahl, Ph.D., Award for Excellence in Undergraduate Research (Ware, 2006).

Virtually all 40 student presentations I sponsored were literature reviews; so it was that type of research, as opposed to empirical research. I didn't have the disposition or the time that it took to do an effective job on empirically based research projects. Much of a literary research project was a project much of which could be completed in the context of a course and then revised to present at a convention. Having seen two faculty members, one at Emporia State University and the other at Creighton University, do an outstanding job supporting students in doing research and presenting at conventions, I modeled my efforts after them.

Most of my sponsored student research occurred after 1986. One exception was a research project started in the late 1960s. The publication of that study (Ware & Butler, 1971) constituted the first publication from Creighton's psychology lab. Most historians of psychology formally date the establishment of psychology as a discipline to 1879 at Wundt's lab in Leipzig, Germany. That date marked the first publication from Wundt's lab. I like to think that the formal establishment of Creighton's psychology lab dates to 1971 with a publication that involved a student

McAllister: With regards to the undergraduate research you have sponsored, what were some of the most in-

teresting and most challenging aspects of working with your students.

Ware: I don't think I ever thought of it as interesting and challenging, I just I thought of it as an opportunity. This research was a way to provide students with an opportunity for a professional type of experience. Whether they decided to continue in graduate school in psychology, to go to professional school, or to proceed immediately into the job market, it seemed to me that the skills associated with doing the literary research in the first place and presenting it in a public forum would serve them well. I always thought of it more as providing students with an opportunity, rather than whether what they did was particularly interesting to me. It wasn't uninteresting but that wasn't my motivation and that wasn't what was driving me.

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Ryceck: Did your early undergraduate experiences shape the way you deal with the undergraduates now?

Ware: It definitely did. I think the theme that kept coming to mind again and again was what I didn't want to do as a teacher. I probably learned more about what I didn't like and therefore what I didn't think my students would like; so I tried to find alternatives to those practices. I didn't want to repeat what I thought were some pretty sloppy teaching practices.

I'm trying to think if there were any models that I had. I don't think I ever had someone whom I emulated, except for maybe one undergraduate psych professor. Students used to kid about him; we said he knew everything. That view was obviously as a 20 year old; you think older people know more than they really do. But this guy just seemed to know everything. Anything we asked about psychology, he seemed to know. Maybe in that sense, he was a model for me to try to learn

as much as I could. I don't think that observation impacted my teaching.

Rycek: What were some of those that you decided you didn't want to bring into your teaching?

Ware: Standing in front of the class reading out of a textbook was one. Someone who seemed disinterested in the topic and for whom teaching was a mechanical process. It really wasn't necessary for students to be in the room. Such faculty could have done the same thing in an empty room. They seemed to have no genuine interest in the topic or what was being learned. They seemed as though their behavior was more of a self-serving process. Those would be some of the things.

Moss: What are the advantages for faculty in working with undergraduates in research?

Ware: Well, undergraduate students can bring enthusiasm to the investigative process that faculty may have forgotten about. The excitement of students doing research can be contagious. It's also an opportunity for the faculty member to mentor undergraduates, who are just at the beginning stages of their careers, whatever direction that might take. There's the satisfaction that can be associated with seeing someone else succeed. Experiencing the challenges and the frustrations but then also the satisfaction once they've finished a project. The thought, "Yeah I did it." I recall a student whose voice cracked about every two seconds throughout her entire 15-minute presentation. My heart went out to her. Afterwards, when it was all over, I asked her how it went. She said, "I made it; I survived." I thought, "Damn that's good!" So there is an intellectual component, but there is also a personal component; the satisfaction that you can help a student by going through this process.

Moss: How can instructors increase the appeal of research to their undergraduates?

Ware: By getting them involved and making them a part of the process. When possible, let students identify the direction of the study and allow the project to take a different track than what the faculty member had in mind. The student's role might start with something as simple as doing the mechanical parts of the investigation. By being engaged with other students there can be social interaction taking place. Then students can take on progressively more responsibility, thereby helping them feel that they are part of the process rather than simply doing what nobody else wants to do.

Herndon: In what ways have you had an impact on your own students and what ways have they had an impact on you.

Ware: I'd like to think the impact I had on them was reflected in their taking advantage of the opportunity I provided. If it gave them a sense of personal satisfaction or if it helped them hone some skills that they were able to use later, regardless of their career pursuit. I think my satisfaction simply came in seeing them succeed. In the absence of that experience, they might have left college with something less than they could have had. I am terribly pleased to see students identify a project, see it through all the way, and in the end feel good about themselves.

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McAllister: You are a very successful person. What were some of the obstacles you had to face throughout your life and how were you able to overcome them?

Ware: I'll give one experience. In 1969 the dean called me into his office and said that I would have to return to graduate school and get a doctoral degree if I wanted a career as a professional educator. I was married and had two kids. So in 1970, we packed everything we owned in a U-Haul trailer, and with a four-year old and a two-year old, took off for California with little money and very little prospect for money. There's something to be said for youthful ignorance and blind stupidity, but getting the degree was something I wanted to do. We drove to California, and I entered the program. I managed to complete the program in a year and a half when the program should have taken at least two years.

I met a fellow graduate student who was the director of an extension campus of Chapman College at Miramar Naval Air Station, which was near where I was a graduate student. He was looking for part-time teachers, and I'd had five years teaching experience. I taught military personnel at the naval air station while going to graduate school and having a family at home. That was a big challenge, but I managed to get through it. In fact during that time, we qualified for food commodities from the Salvation Army. Each month we received flour and beans and canned meat, and a couple of other things, which

An Interview with Mark Ware

is probably the worst diet that people could have, but it was free. I learned a considerable amount about baking bread. Flour, plenty of flour, beans, and canned meat (the worst, no human should have to eat that) but what was the alternative? And the goal was to get the doctoral degree; that was difficult, but we survived.

Rycek: You served as Chair of the Department of Psychology at Creighton University. What are you most proud of accomplishing during that time?

Ware: I became chair at a crucial time in the planning and construction of a major building on campus; it's called the Hixson-Lied Science Building. There were the natural science chairs and me from the College of Arts and Sciences competing for space with several of the health sciences division of the university. We chairs had an understanding at the outset of what I think Abraham Lincoln said, "A house divided against itself cannot stand." We knew that we had to work together, because of the power and influence of the health sciences at Creighton, and we did! We accomplished that, and we worked collectively to identify our individual needs and then supported one another to make sure that we had a proposal for our spaces in this new building, as well as in the renovation of the building in which we were housed (i.e., the Rigge Science Building). We were able to accomplish that goal, and the Psychology Department's benefit was to acquire the entire third floor of this new building and an elaborate animal lab in Rigge. Prior to that we came from a hodgepodge of renovated rooms in the Rigge Science Building. Those were fine quarters, but there was neither rhyme nor reason to them, whereas in this new complex, with the aid of the Psychology faculty, we were able to develop a coherent design. The key to our success was all of those hours of chairs working cooperatively to acquire the spaces and the facilities that we thought we needed well into the 21st century. I am very proud of that accomplishment.

Moss: You are the founding editor of the *Journal of Psychological Inquiry (JPI)*. What prompted you to create *JPI*? Was your vision realized?

Ware: I tell you what, in the interest of time let me refer you to two editorials that appeared in *JPI* that describe quite a bit of the journal's origin (Ware 1996; 2007b), but I will answer your second question because that's asking about the current and future status of *JPI*. Through 2006, the journal published 79 empirical and literature review articles by 116 authors, as well as 95 Special Features articles by 118 authors. Finally, *JPI* has selected an outstanding managing editor (Ware, 2007a), who has done an unbelievable job of continuing the direction and the effort of the journal to provide a mechanism for publishing research of undergraduate students. That Managing Editor is Susan Burns from Morningside College. Under her leadership and the dedication of a fine editorial staff and reviewers, I am very confident that this cadre of psychology educators will continue and expand my vision.

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Invitation to Contribute to the Special Features Section—I

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

Evaluating Controversial Issues

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

Submit 3-5 page manuscripts. If accepted, the manuscripts will be published in tandem in the Journal.

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 to submit 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) hard copies and one (1) electronic copy (CD-rom) of the 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.

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) hard copies and one (1) electronic copy (CD-rom) of the 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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Department of Psychology
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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) hard copies and one (1) electronic copy (CD-rom) of the 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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