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Journal of Psychological Inquiry

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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

I am excited to share with you our next issue of the *Journal of Psychological Inquiry*. I'm certain you will find diverse and interesting articles within this issue.

In place of a typical Editorial, I have asked the Founding Editor of *JPI* to enclose a few remarks regarding the passing of an influential supporter of the *Journal*, Elizabeth A. Dahl (1934-2008). Beginning in the 2006 issue of *JPI*, one manuscript has been selected in each issue of the *Journal* in recognition for outstanding research. This award, named the Elizabeth A. Dahl, Ph.D. Award for Excellence in Undergraduate Research, is given in honor of Dr. Dahl (see Dr. Mark Ware's Editorial in Volume 11(1)). As Dr. Ware indicated in his Editorial, students receiving this award are given a certificate that states:

"This award recognizes the distinguished contributions of Dr. Dahl, who for 25 years as faculty member and chair of the Psychology Department at Creighton University, challenged, guided, and supported numerous undergraduate students in the design and execution of research, and the scholarly communication of results."

My condolences are extended to the Dahl family, and my appreciation to Dr. Mark Ware for sharing this memorial with our readers.

Susan R. Burns
Managing Editor

Elizabeth A. Dahl Memorial

I could describe Betty's professional life as a teacher, adviser, and administrator. Instead I will illustrate two of the ways in which Betty developed a different culture in Creighton's Psychology Department.

When Betty joined us in the early 1970s, there had never been a female faculty member in the department (there were very few women the college) **and** research involving undergraduate students was almost non-existent. Betty sought a teaching position in the department while supporting Carl's practice, raising four children, and teaching part time at John F. Kennedy College in Wahoo, Nebraska. Oh and she was pursuing a doctoral degree at the University of Nebraska – Lincoln.

The four men in the department were not accustomed to having a female colleague; much less a woman with an active family life, but Betty quickly won us over with her charm, skill, and undeflatable work ethic. During her 25-year ca-

-reer, the department became female and family friendly. Now, 6 of the 12 full time faculty are women, and we empathize and support faculty who must attend to family affairs during the workday.

Betty had a broad vision for teachers of psychology; she didn't just teach about research methods and findings, but rather she actively engaged students in original scholarly investigation. She was responsible for creating a culture of involving students in research in the context of a department that had no graduate program (and still doesn't) and at a time when few undergraduate programs encouraged students to do research; incidentally that attitude has changed dramatically in the last 5-10 years. Betty believed that whether students planned to attend graduate or professional school or to enter the world of work immediately following graduation, research (problem solving) skills were invaluable and eminently transferable.

During the last two decades of her career, Betty sponsored 75 students who made 50 presentations in 10 different venues, including the American Psychological Association, the Southwestern Psychological Association, the Great Plains Students' Psychology Convention, and the National Building Family Strengths Conference. Bertrand Russell, the British philosopher, could have been describing Betty when he wrote - individuals can't be good teachers unless they have feelings of warm affection toward their students and a genuine desire to impart to them what they believe to be of value.

Betty could not have anticipated her impact following retirement. In 1996, the first issue of a new psychology journal appeared. The *Journal of Psychological Inquiry* was and is only one of three refereed journals in the United State devoted to publishing the research of undergraduate students. The inaugural editorial described the journal's emergence and identified one person in particular when it stated, "Betty Dahl's dedication to encouraging and supporting undergraduate research provided inspiration for the journal." In marking the journal's 10th anniversary the editorial announced the commencement of the Elizabeth A. Dahl, Ph.D., Award for Excellence in Undergraduate Research.

Still further impact of Betty's "culture of involving students in research" is revealed in the Psychology Department's archives. In the decade following Betty's retirement, 105 Creighton students have authored or co-authored 88 publications **and** 336 Creighton students have made 234 presentations at psychology conventions. American author and historian, Henry Brooks Adams's statement applies to Betty; he said that teachers affect eternity – they never know where their influence stops.

Mark E. Ware
Founding Editor

Instructions for Contributors

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

1. Manuscripts must have an undergraduate as the primary author. Manuscripts by graduates will be accepted if the work was completed as an undergraduate. Graduate students or faculty may be co-authors if their role was one of teacher or mentor versus full fledged collaborator.
2. Manuscripts must (a) have come from students at institutions sponsoring the Great Plains Students' Psychology Convention and the *Journal of Psychological Inquiry* or (b) have been accepted for or presented at the meeting of the Great Plains Students' Psychology Convention, the Association for Psychological and Educational Research in Kansas, the Nebraska Psychological Society, the Arkansas Symposium for Psychology Students, or the ILLOWA Undergraduate Psychology Conference. The preceding conditions do not apply to manuscripts for the Special Features Sections I, II, or III.
3. Send original manuscripts only. Do not send manuscripts that have been accepted for publication or that have been published elsewhere.
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.
6. The *Journal* requires five (5) hard copies, and one electronic copy (CD-rom) of the manuscript in near letter quality condition using 12 point font.
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2/06

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Comparing Two Misinformation Paradigms: Peer False Information versus Authority Leading Questions

Adam D. Carton and Courtney A. Clippert

Western Illinois University

Research has demonstrated that both leading questions from an authority figure and false information from one's peers create false memories. This study compared these two paradigms to assess their relative influence. Each participant viewed an ambiguous video clip from the television show "Cops" in the presence of a confederate. One independent variable was manipulated: source of false information (confederate provided bogus information about the video) vs. leading questions (questionnaire distributed by the researcher). We found that leading questions from an authority created more false memories than false information provided by a confederate. One possible explanation for this finding is that participants may be more likely to subscribe to false information provided by an authority figure rather than from a peer.

Much goes into what a person accepts as a memory. Indeed, as Loftus (1979) suggested, both a priori and post-hoc judgments bias what a person remembers from an event. The implications of this phenomenon effect the judicial arena because witnesses are not immune to the effects of misinformation. The misinformation effect involves the integration of misleading information provided by another person into one's own memory of an event (Loftus). The misinformation effect is generally studied using two paradigms: leading questions, which are questions that suggest a preferred answer (e.g., Loftus & Palmer, 1974), and false information provided by another person about an event after it has occurred (e.g., Itsukushima, Nishi, Maruyama, & Takahashi, 2006; Mudd & Govern, 2004).

The misinformation effect is important because of the potential ramifications of creating false memories. Consider the example of a child who is the plaintiff in a sexual abuse case: because it has been shown that children can be especially misled by suggestive tactics, such as interview bias (Bruck & Ceci, 1997; Ceci, Bruck, & Battin, 2000), much care should be taken to investigate the post-hoc information that the child has received. Otherwise, if the child's susceptibility to the misinformation effect is exploited, the defendant may go to prison on a bogus charge or found not guilty erroneously.

Previous research on the topic of false memory often aims to recreate the process of witnessing an event, receiving post-event information from outside sources, and recalling the event sequentially to show the social aspect of memory. Metaphorically, visual stimuli in a clinical setting can be said to represent a "crime" or an objective event to be

"witnessed," whereas post-event information provided by confederates or researchers can represent conversations between jurors, interrogation by lawyers, suggestive newspaper articles, and so forth.

Several studies have examined the effect of false information provided by confederates on memory (e.g., Itsukushima et al., 2006; Mudd & Govern, 2004; Wright, Self, & Justice, 2000). When participants received bogus information about a situation, they falsely remembered stimuli that were not there (e.g., Loftus, Donders, Hoffman, & Schooler, 1989; Manning & Loftus, 1996; Roediger, Meade, & Bergman, 2001). This phenomenon is aligned with Asch's (1955) assertion that people are subject to group influence. In some studies, participants were exposed to false information via social interaction (e.g., Mudd & Govern, 2004; Roediger et al., 2001), whereas participants in other studies were exposed to false information via written information (e.g., Betz, Skowronski, & Ostrom, 1996; Itsukushima et al., 2006; Manning & Loftus, 1996) or audio/visual information (Itsukushima et al., 2006). Although all forms of false information provided by a confederate have been shown to affect memory, Itsukushima and colleagues juxtaposed the effects of post-event written false information against audio/visual false information and found the former to be more conducive to false memories than the latter.

Misinformation provided by researchers in the form of leading questions is both common and effective. Perhaps the most compelling and well-known application of this paradigm is the classic work done by Loftus and Palmer (1974). In their study, participants viewed film clips depicting a traffic accident. Following these clips, participants were questioned about the speed of the vehicles depicted. Some participants were asked, "About how fast were the cars going when they hit each other?," whereas others had the same question with more suggestive verbs, such as "smashed," "collided," "bumped," and "contacted," in the place of the word "hit." Researchers found that each word produced a different mean speed estimate from the participants (i.e., "contacted" produced the lowest mean speed, whereas "smashed" produced the highest). These results indicate that changing a single word in a question can have a significant effect on the answer to that question.

Kristine M. Kelly (KM-Kelly2@wiu.edu) from Western Illinois was the faculty sponsor for this research.

Contact Information for authors:
Adam D. Carton (AD-Carton@wiu.edu)
Courtney A. Clippert (CA-Clippert@wiu.edu)

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

A number of factors can either facilitate false memories or act as a buffer against them (Loftus, 1979; Roediger et al., 2001; Zaragoza & Mitchell, 1996). Stimulus ambiguity is one such factor that is conducive to false memories because, just as participants who have a solid recollection of an event are more likely to reject bogus information, those who have an unclear initial memory of the stimulus are more open to suggestion (Loftus, 1979; Roediger et al., 2001). Also, if the person who provides the false information is perceived to be knowledgeable, then the misinformation effect is more likely to occur (Roediger et al., 2001; Smith & Ellsworth, 1987). Furthermore, if participants are warned that a confederate may have falsely recalled the stimulus, or if the confederate suggested obvious misinformation, participants are more likely to regard the information as nonsense (Baxter, Boon, & Marley, 2006; Roediger et al., 2001).

Research has investigated both leading questions and false information provided by a confederate separately (e.g., Itsukushima et al., 2006; Loftus & Palmer, 1974; Walther et al., 2002), but no research has directly compared the two procedures. The relative influence of these two paradigms is important because the ramifications of false memory have the potential to be severe (e.g., people who are falsely accused could be charged, convicted, and sentenced), and it may be useful to understand which of the two is more conducive to false memories so that it can be controlled for in a judicial setting. As noted by Loftus (1974), there are laws detailing when leading questions are permitted. If leading questions are legally forbidden in some cases, and if co-witness social contagion (i.e., conversations between witnesses) is shown to have an effect on memory, should there be laws controlling the contact between witnesses? If the effect of false information provided by a peer is as powerful in inducing false recollection as the effect of a leading question given by an authority figure, then the answer is a resounding "yes."

In a laboratory setting, participants and confederates are equal, (as are witnesses and co-witnesses in a courtroom setting), implying that one does not have authority over the other. Researchers in a laboratory setting, however, have some authority over the participants, just as lawyers who interrogate witnesses have authority over them. People are more likely to believe an interviewer who seems well informed (Roediger et al., 2001; Smith & Ellsworth, 1987) and who has a firm rather than friendly demeanor (Baxter et al., 2006). It seems reasonable then, to assume that the effect of misinformation presented by an equal (i.e., a fellow participant or witness) would not be as effective as misinformation presented by an authority figure (i.e., a researcher or examining lawyer who seems knowledgeable). Therefore, we predicted that participants would be more easily misled when presented with leading questions from a researcher than with false information from a confederate.

Method

Participants

Participants were 24 undergraduate students at a mid-sized Midwestern university ranging in age from 19 to 43 years ($M = 22$ years). The sample consisted of 17 women and 7 men. The majority (92%) of the participants identified themselves as Caucasian, with 8% of the participants identifying themselves as either African American or Hispanic. Participants were predominantly juniors (71%) and were enrolled in psychology courses. They received nominal credit in their courses in exchange for their participation. All participants were treated in accordance with the ethical guidelines set forth by the American Psychological Association.

Materials

A one-min ambiguous video clip from the television show "Cops" (episode #1906 Drug Arrests #2) was used. In the episode, a suspicious man on a bicycle is shown riding in traffic erratically. When a police officer approaches him, he runs away to an apartment complex where he is followed on foot, wrestled to the ground, and handcuffed. During the clip, the officer makes no indications as to why the man is running or being arrested. Our goal in this study was to supply misinformation about why the man was arrested: because there was an outstanding warrant for his arrest (information not mentioned in the video).

Three questionnaires adapted from Mudd and Govern (2004) were used. The description questionnaire asked participants to describe everything they could remember from the clip about several topics (e.g., the weather, the bicycle, and the suspect). This questionnaire was a manipulation check; it was distributed before any bogus information was given to participants, and it assessed whether they already believed the false information (i.e., that the man was arrested for an outstanding warrant) to be true. The pre-suppositional questionnaire asked questions regarding the video in a yes-or-no format. This questionnaire contained the leading question: "Did the man with an outstanding warrant have a beard?"

The target questionnaire queried participants on their memory of the video. The critical item on this questionnaire was: "What crime was committed by the suspect in the video?" Possible responses to this question were: (a) *I don't remember*; (b) *suspect had illicit substances*; (c) *suspect had an outstanding warrant*; (d) *no information was given about the nature of the crime*; and (e) *other (please specify)*.

Procedure

Participants were randomly assigned to one of two groups created by manipulating type of misinformation: leading question (contained in a questionnaire provided by the researcher) vs. false information (bogus information about the video provided by a confederate). Each participant was

tested individually in the presence of a confederate who was posing as another participant in the study.

After the participant and the confederate signed an informed consent form, they were seated in desks approximately six feet from a laptop computer and were told that the purpose of the study was to investigate perception of television shows. They then watched the one-min video clip depicting an ambiguous police chase.

Upon completion of the video segment, the researcher handed the participant and the confederate the description questionnaire to access their recall of the video clip and to collect demographic information. Next, the participant was exposed to misinformation from either the researcher or the confederate.

In the “leading question” condition, the researcher administered the pre-suppositional questionnaire containing the leading question and then stepped out of the room ostensibly to retrieve other study materials. In the “false information” condition, the researcher stepped out of the room, whereupon the confederate initiated a conversation about the video. The confederate asked the participant what crime he or she thought the suspect committed in the video. After the participant answered the question, the confederate replied that he thought the man had an outstanding warrant.

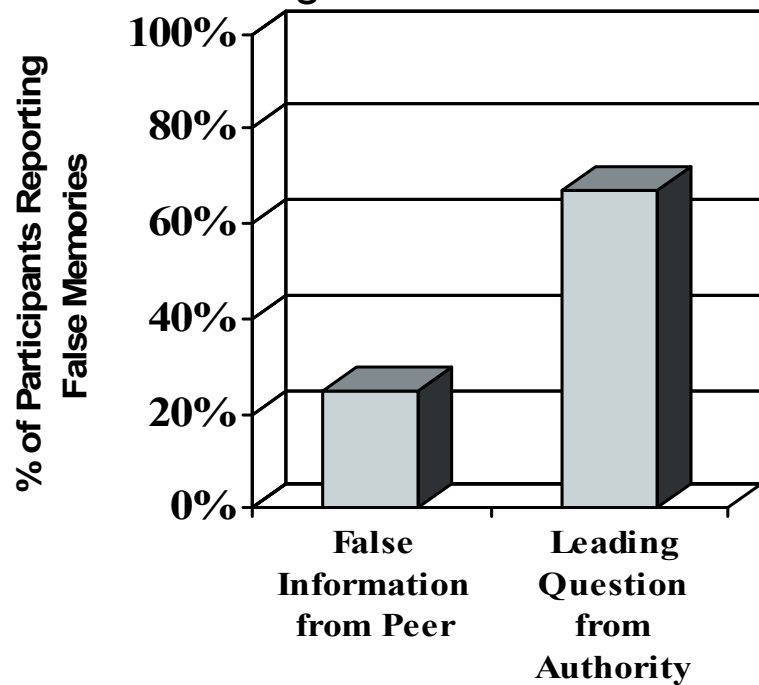
Upon returning to the research room, the researcher distributed the target questionnaire. As soon as the participant and the confederate finished responding, the researcher collected the questionnaires and debriefed the participant.

Results

Our hypothesis was that leading questions from the researcher would produce more false memories than false information provided by a confederate. The number of false memories generated by the two procedures was tallied. As Figure 1 shows, participants who received leading questions chose “outstanding warrant” more often (67% of the 12 participants in that condition) than those who received false information from a confederate (25% of the 12 participants in that condition). The two conditions were compared using a chi-square analysis with misinformation condition (leading question vs. false information) as the independent variable and whether or not the participant endorsed “outstanding warrant” as the reason for the target’s arrest as the dependent variable. The analysis revealed a significant difference between the conditions on the target item, $\chi^2(1, N = 24) = 4.20, p = .04$.

Discussion

This experiment compared two procedures for generating false memories: leading questions provided by an authority figure with those of false information provided by a peer. The results supported the hypothesis that leading questions would produce more false memories. Thus, participants who



were exposed to leading questions from an authority figure reported significantly more false memories than their counterparts who were exposed to false information from a peer. Figure 1. Number of false memories as a function of type of misinformation

These results suggest that information provided by authority figures (e.g., attorneys, judges, etc.) may be more powerful than information from other sources. Clearly, even young adults in college are vulnerable to suggestibility. This finding implies that interrogation techniques, eye witness testimonies, and cross examinations should be inspected with great scrutiny because any person can fall prey to false information. A person well-versed in the creation of false memories can easily plant pre-suppositional information into their questions to achieve egregious ends.

One possible reason why leading questions were more effective than false information may be because they were not only presented by an authority figure, but they were also presented in written format. As previous research demonstrates, written misinformation is highly effective in producing false memories (Itsukushima et al., 2006) and may be retained better in memory. Also, participants may feel that it is less likely for a questionnaire to contain bogus information than for a peer to be wrong in his/her assumptions. Indeed, one participant, upon debriefing, stated that he did not suspect that bogus information would be placed on a tangible questionnaire, and thus chose “outstanding warrant” on the target item.

Although our hypothesis was supported, the study was not without limitations. The most striking drawback was the sample size. We were only able to recruit 24 participants. Also, there was little diversity in our participant pool; almost

90% of our participants were Caucasian, and there were more than twice as many women in our study than men. Another drawback was the potential confound given that the independent variable was either administered via verbal misinformation or written misinformation. Thus, the difference between the two groups could be due to the type of message (leading question vs. false information), the messenger (authority figure vs. peer), or the format by which the information was received (written vs. oral.) Nevertheless, our findings are aligned with previous research that demonstrated the effectiveness of leading questions on false memories (e.g., Loftus & Palmer, 1974), of misinformation provided by an authority figure (Roediger et al., 2001; Smith & Ellsworth, 1987), and of written vs. verbal misinformation (Itsukushima et al., 2006).

Given that, in the courtroom, misinformation is usually presented orally as opposed to being written, future research should investigate the manner in which false information is provided by the researcher. Instead of misinformation provided by the researcher being administered via a presuppositional questionnaire, it should be, just as it would be in the courtroom, administered verbally. Future research should attempt to clarify the relative causal contributions of the information format, messenger, and type of information presented. Another interesting approach that should be taken in future research is to test whether a male or female confederate would have greater effect on false memories.

References

- Asch, S. E. (1955). Opinions and social pressure. *Scientific American*, *193*, 31-35.
- Baxter, J. S., Boon, J. C. W., & Marley, C. (2006). Interrogative pressure and responses to minimally leading questions. *Personality and Individual Differences*, *40*, 87-98.
- Betz, A. L., Skowronski, J. J., & Ostrom, T. M. (1996). Shared realities: Social influence and stimulus memory. *Social Cognition*, *14*, 113-140.
- Bruck, M., & Ceci, S. J. (1997). The suggestibility of young children. *Current Directions in Psychological Science*, *6*, 75-79.
- Ceci, S. J., Bruck, M., & Battin, D. B. (2000). The suggestibility of children's testimony. In D. F. Bjorklund (Ed.), *False-memory creation in children and adults: Theory, research, and implications* (169-201). Mahwah, NJ: Lawrence Erlbaum Associates.
- Itsukushima, Y., Nishi, M., Maruyama, M., & Takahashi, M. (2006). The effect of presentation medium of post-event information: Impact of co-witness information. *Applied Cognitive Psychology*, *20*, 575-581.
- Loftus, E. F. (1974). Reconstructing memory: The incredible eyewitness. *Psychology Today*, *8*, 116-119.
- Loftus, E. F. (1979). The malleability of human memory. *American Scientist*, *67*, 312-320.
- Loftus, E. L., Donders, K., Hoffman, H. G., & Schooler, J. W. (1989). Creating new memories that are quickly accessed and confidently held. *Memory & Cognition*, *17*, 607-616.
- Loftus, E. F., & Palmer, J. C. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, *13*, 585-589.
- Manning, C. G., & Loftus, E. F. (1996). Eyewitness testimony and memory distortion. *Japanese Psychological Research*, *38*, 5-13.
- Mudd, K., & Govern, J. M. (2004). Conformity to misinformation and time delay negatively affect eyewitness confidence and accuracy. *North American Journal of Psychology*, *6*, 227-238.
- Roediger, H. L., III, Meade, M. L., & Bergman, E. T. (2001). Social contagion of memory. *Psychonomic Bulletin & Review*, *8*, 365-371.
- Smith, V. L., & Ellsworth, P. C. (1987). The social psychology of eyewitness accuracy: Misleading questions and communicator expertise. *Journal of Applied Psychology*, *72*, 294-300.
- Walther, E., Bless, H., Strack, F., Rackstraw, P., Wagner, D., & Werth, L. (2002). Conformity effects in memory as a function of group size, dissenters and uncertainty. *Applied Cognitive Psychology*, *16*, 793-810.
- Wright, D. B., Self, G., & Justice, C. (2000). Memory conformity: Exploring misinformation effects when presented by another person. *British Journal of Psychology*, *91*, 189-202.
- Zaragoza, M. S., & Mitchell, K. J. (1996). Repeated exposure to suggestion and the creation of false memories. *Psychological Science*, *7*, 294-300.

Health Messaging: A Content Analysis of Gender and Ethnicity in Magazine Advertisements

Rachel Cho, Heather Kruse, Jessica Jacaway, Megan Pinkston and Linda Garavalia*

University of Missouri-Kansas City

Although cardiovascular disease is the leading cause of death in the United States, until recently the media often underrepresented women and minorities when depicting heart disease. The purpose of this content analysis was to evaluate the characters within heart health-related advertisements in the top 10 most read magazines. Characters in advertisements were coded for ethnicity, gender, and age group, and magazines were divided into women's and general interest categories. Results indicate that White females were portrayed the most in the advertisements, and that Whites were represented more than Blacks. Persons of ethnicities other than White or Black were not represented. As expected, younger individuals were not as prevalent as middle-aged characters, but older aged individuals were even less well represented than the preceding two categories.

Cardiovascular disease is the leading cause of death in the United States. Over 40% of Blacks aged 20 years and older have heart disease (American Heart Association; AHA, 2008a) whereas 35% of same age Whites have heart disease (AHA, 2008e). For all women, the prevalence of heart disease is 36.6% (AHA, 2008f) and 37.5% for men (AHA, 2008c). Until recent years, heart disease was portrayed primarily as a disease affecting men (Ahmed, Grace, Stelfox, Tomlinson, & Cheung, 2004), which may reflect the fact that men have greater risk for heart disease than women for various reasons relating to lifestyle choices (Abel, 2005). However, although the prevalence of heart disease in men is greater, approximately equal numbers of men and women die from the disease each year (AHA, 2008f).

The lack of representation of women in the heart health-related media could contribute to women believing they are not at risk, causing them to misdiagnose the symptoms and delay seeking treatment or failing to take appropriate action, thus increasing mortality rates (Lefler & Bondy, 2004). Minorities are also portrayed less often and, moreover, minorities perceive that they are portrayed less frequently than their White counterparts. Perceptions such as these could contribute to riskier health behavior and less preventive care in these groups (Cline & Young, 2004). However, the AHA implemented an ongoing rigorous campaign, the Go Red campaign, in 2003 to create greater awareness of the disease in women and ethnic minorities (AHA, 2006).

Brodie, Kjellson, Hoff, and Parker (1999) found that Whites, Blacks, and Latinos preferred magazines, second only to television, as the preferred source of health information. However, Kahn (2001) reported that both articles and information found in magazine advertisements were the most highly regarded source of health-care information for women. Furthermore, 94% of the women surveyed regularly

read at least one of the top 50 magazines. Regardless of age, survey participants spent about an hour a week reading magazines. Of specific relevance to our study, half of the women reported that direct to consumer advertising helped with their understanding of prescription medication and helped them feel more comfortable talking to their doctors about prescription medication.

Despite having a White target audience, Mediamark Research (2000) found that many Black and Hispanic American women read mainstream White-oriented magazines. Reflective of the targeted audience but not reflective of changing population demographics and the overall readership, White-oriented magazines included more depictions of White faces than Black faces in health advertisements (Duerksen, et al., 2005). Brodie et al. (1999) also found that a majority of Blacks felt that Black people and families were underrepresented in health media. Although Whites currently make up the majority of the U.S. population, the U.S. Census Bureau (2005) projected that, by the year 2050, half of the population will be non-White minorities. Thus with this growth in minority population, minority readership of White-oriented magazines is likely to increase. The danger is that if the media continues to show mainly older White men as victims of heart disease, other groups may not think of themselves as vulnerable when, in fact, they are equally vulnerable (AHA, 2008b).

Because the media is so frequently used as a source of health information, examining the characteristics of health-related messages is important. In particular, the present study focuses on messages for individuals at risk for heart disease. Clarke and Binns (2006) found that many of the messages concerning heart disease aligned well with the medical model of health and disease. In the medical model, health and longevity are based primarily on the individual's promotion of good health behaviors. The focus on the individual's responsibility often ignores the relationship between the incidence of heart disease and ethnicity. According to the AHA (2008d) minorities have greater inherent risk and prevalence of heart disease.

Failing to acknowledge distinctions in risk that are related to ethnicity can result in misperceptions of individual risk for ethnic minorities. If ethnic minorities are infrequently portrayed in health messages, members may develop inaccurate perceptions of risk. According to Bandura (1986), these perceptions are influenced by the characteristics of live and symbolic models presented in advertisements. Individuals

*Faculty Sponsor and Corresponding Author:
Psychology Department, UMKC48 25 Troost, Suite 124
Kansas City, MO 64110; garvalial@umkc.edu

who are exposed to the advertisements are differentially affected; an individual is more likely to act on the message in the advertisement if he or she perceives him/herself to be similar to the model portrayed in the advertisement (Rosenthal & Bandura, 1978).

The purpose of the present study was to describe the demographic characteristics (i.e., gender, ethnicity, and age group) of models in heart health-related magazine advertisements because of the potential impact of model characteristics on reader behavior. Magazines were chosen for analysis because of their wide readership, relative permanence, ability to be read, and tendency to be found in a number of environments (Clarke & Binns, 2006). Because of the recent Go Red campaign, we expected to find women and minorities represented in heart health-related advertisements. Our research question examined whether representation is consistent with the incidence of the disease in the U.S. population.

Method

The 2005 circulation figures from the Magazine Publishers of America (2006) online fact sheet were used to determine the top ten circulating titles (see Table 1). Five magazines were women’s interest and include *Family Circle*, *Ladies’ Home Journal*, *Woman’s Day*, *Better Homes and Gardens*, and *Good Housekeeping*. The other five magazines were general interest and include *AARP Magazine*, *AARP Bulletin*, *National Geographic*, *TV Guide*, and *Reader’s Digest*. The magazines have varying rates of publication; therefore, in order to sample equally across magazines, only issues available for purchase in the first week of February 2007 were selected.

Advertisements were chosen as the focus of the content analysis because of their intended influence on behavior. Also, they can generally be viewed quickly and without ex-

tensive reading while perusing a magazine. Advertisements that mentioned or depicted heart attack, cardiovascular disease, cholesterol, blood pressure, and other heart health-related terms were identified in each magazine. Our analyses also included advertisements that displayed the American Heart Association logo. Advertisements meeting the above inclusion criteria were considered heart health-related ads.

The use of human characters was another inclusion criterion as it was a necessary condition for evaluating the prevalence of minorities and women in heart health-related advertisements. Animated characters in these ads were not considered human characters. In order to accurately code the demographic characteristics of actors, it was necessary for characters’ faces to be visible. Thus, human characters whose backs were turned, leaving the face hidden, were not coded.

Heart health-related advertisements meeting all inclusion criteria were coded on three variables: ethnicity, gender, and age group. Coders assigned the ethnicity they believed was best reflected by the character. Age groups were established as young adult (20 to mid 30-years-of-age), middle-age (mid 30 to 65-years-of-age), and old-age (65 years and older) based on categories commonly used in developmental psychology (Erikson, 1963). Younger age groups were not included as rates of cardiovascular disease for these groups tend to be much lower and largely congenital (AHA, 2007). Heart health-related advertisements were identified by the first author. Three coders rated each advertisement with regard to gender ($r = 1.0$), ethnicity ($r = 1.0$), and age group ($r = .75$). Inter-rater agreement was perfect for gender and ethnicity, but raters were less consistent in categorizing advertisement characters into age groups.

Results

The magazines that had the least number of advertisements

Table 1
Top ten magazines publication information

Magazine	Rank ^a	Publisher	Readership ^a	Total Pages
AARP Magazine	1	AARP	22,675,665	102
AARP Bulletin	2	AARP	22,075,011	44
Reader’s Digest	3	The Reader’s Digest Association, Inc	10,111,073	234
TV Guide	4	TV Guide Magazine Group, Inc	8,211,581	82
Better Homes and Gardens	5	McGraw-Hill	7,600,982	224
National Geographic	6	The National Geographic Society	5,403,984	166
Good Housekeeping	7	Heath Communications, Inc	4,634,763	186
Family Circle	8	McGraw-Hill	4,226,370	252
Ladies’ Home Journal	9	McGraw-Hill	4,122,460	182
Woman’s Day	10	Fachette Filipacchi Media US, Inc	4,048,009	164

^aRank and readership in 2005

Table 2
Top ten magazines publication information

Magazine	Number of ads	Number of pages	Percent of total pages of ads
AARP Magazine	40	45	44.12
AARP Bulletin	26	24	54.54
Reader's Digest	57	92	39.32
TV Guide	8	10	12.20
Better Homes and Gardens	104	132	58.93
National Geographic	22	25	15.06
Good Housekeeping	76	93	50.00
Family Circle	136	147	58.33
Ladies' Home Journal	79	109	59.89
Woman's Day	85	111	67.68

and the lowest ratio of advertisement pages to total pages were *TV Guide* and *National Geographic*. The magazines with the greatest number of ads were *Family Circle* and *Better Homes and Gardens*. These magazines also had the most total pages. However, *Woman's Day* and *Ladies' Home Journal* had the greatest ratio of ad pages to total pages, followed by *Better Homes and Gardens* and *Family Circle* (see Table 2).

Reader's Digest and *Ladies' Home Journal* were the magazines with the greatest percentage of heart health-related advertisement pages per total pages. *Reader's Digest* was the magazine with the greatest ratio of heart health-related advertisements to total number of advertisements. The magazines that had the next greatest percentage were *Good Housekeeping* and *Ladies' Home Journal*. *Reader's*

Digest also had the greatest total number of heart health-related advertisements with 16 ads. *TV Guide*, *National Geographic*, and *AARP Bulletin* had no heart health-related advertisements. Among the magazines that did have heart health-related advertisements, *AARP Magazine*, *Better Homes and Gardens*, and *Woman's Day* had the fewest number. These three magazines also had the lowest ratio of heart health-related to total advertisements and lowest ratio of heart health-related advertisement pages to total pages (see Table 3).

In the magazines examined, there were a total of 57 heart health-related advertisements in seven magazines. The vast majority of advertisements were for medication or food and drink. The remaining advertisements were publicizing an event or creating heart health awareness. Although there

Table 3
Prevalence of heart health related advertisements by magazine

Magazine	Number of ads	Number of pages of ads	Percent of total ads	Percent of ad pages	Percent of total pages
AARP Magazine	3	7	7.50	8.89	3.92
AARP Bulletin	0	0	0	0	0
Reader's Digest	16	32	28.07	34.78	13.68
TV Guide	0	0	0	0	0
Better Homes and Gardens	5	7	4.81	5.30	3.12
National Geographic	0	0	0	0	0
Good Housekeeping	10	12	13.16	12.90	6.45
Family Circle	9	14	6.62	9.52	5.55
Ladies' Home Journal	9	17	11.39	15.60	9.34
Woman's Day	5	7	5.88	6.31	4.27

Table 4
All heart health-related advertisements (n = 57) in magazines

Number of ads	Number of ads with characters	Number of characters	Number of women in target magazine	Number of men in target magazine
57	28	37	5	2
Ads with human characters			8	10
Ads with no human characters			9	10
Ethnicity			1	0
Non-Hispanic			16	6
Hispanic			9	7
Age			0	6

were 57 heart health-related ads, only 28 met the inclusion criteria of having a human character. *AARP Magazine* had heart health-related advertisements, but none had human characters. Only six magazines had advertisements that met all inclusion criteria – all five of the women’s interest magazines and *Reader’s Digest* (see Table 4).

In heart health-related advertisements, women were the primary characters. Nineteen of the 20 characters in the advertisements in the women’s interest magazines were women. Eleven of the 17 characters in *Reader’s Digest* were women also. All characters were either White or Black. No other ethnicities were observed. Black women were well-represented in the women’s interest magazine advertisements, making up half of the characters. In *Reader’s Digest*, they were less well-represented; five characters were Black, and 12 were White. In all heart health-related advertisements, middle-age individuals were the most frequently represented with 26 of the 37 total characters appearing to be middle-age. Old-age individuals were the least represented ($n = 3$; see Table 5).

Examining combinations of the three characteristics of

ethnicity, gender, and age group revealed that Black middle-age women were the most frequently represented with 12 of the 37 characters belonging to this group. White middle-age women ($n = 10$) were the next most prevalent type of character. The least represented characters were Black young adult men, Black middle-age men, Black old-age women, and White old-age men. Individuals in these groups were not portrayed in any of the heart health-related advertisements (see Table 6).

Discussion

The leading cause of death in the United States is cardiovascular disease for men, women, and minorities (AHA, 2008b). Even though heart disease affects men and women equally, men are more frequently portrayed as victims of heart disease than women (Ahmed et al., 2004). Whites are also portrayed more frequently than minorities, despite greater prevalence of heart disease in these groups (Cline & Young, 2004). Recently, however, AHA and other health organizations have targeted women in prevention and educational messages related to heart health (AHA, 2006). We asked the question, are the demographic characteristics of

Table 5
Characteristics of men and women in heart-related ads

	Women in target magazine	Men in target magazine
Gender		
Female	19	11
Male	1	6
Ethnicity		
Black	10	5
White	10	12
Age		
Young adult	2	6
Middle age	16	10
Old age	2	1

Table 6

Classification of demographic characteristics of models in heart health-related advertisements

	Number of characters in women's interest magazines	Number of characters in general interest magazines
Black young adult female	0	1
Black young adult male	0	0
Black middle age female	9	3
Black middle age male	0	0
Black old age female	0	0
Black old age male	1	1
White young adult female	2	4
White young adult male	0	1
White middle age female	7	3
White middle age male	0	4
White old age female	1	0
White old age male	0	0

individuals portrayed in heart health-related advertisements consistent with the incidence of the disease in the U.S. population?

Considering the prevalence of heart disease, one would expect the representation of characters in heart health-related advertisements to reflect these trends. However, whereas some groups were very well represented, others were not. In general, White women and Black women were portrayed equally in heart health-related advertisements in women's interest magazines, which is reflective of readership patterns. Inconsistent with population statistics was the lack of representation for non-Black ethnic minorities.

Because women are the target audience for the women's interest magazine, the predominance of female characters in the advertisements reflected the target audience. Although White women are the primary target audience, many Black women also read these magazines (Mediamark Research, 2000). When general interest magazines are also considered, Black middle-age women were the most widely represented group when compared to other groups. However, White women were more prevalent overall and Whites were represented more than Blacks. As expected, younger individuals were not as well represented as middle-age characters, but old-age individuals were even less well represented. This finding is surprising, because older individuals are more likely to experience heart disease. One plausible explanation for the under-representation of older individuals is that they have a higher likelihood of being aware of potential health problems, such as heart disease, because of their older age. Thus leading advertisers to focus advertising messages on a younger target audience who may be more influenced to take action by the information presented in the ads. Consistent with this explanation, *AARP Magazine* and *AARP Bulletin*

had very few heart ads.

The presence of relevant models in heart health-related advertisements is vital to impacting women's health behaviors. As demonstrated by Bandura (1986), models who are similar to readers will have more of an impact on behaviors than models who are dissimilar in age or ethnicity. Thus, if an advertisement is to be influential, it must contain models similar to the information consumers. Our findings are encouraging in that the models were representative of the readers targeted by each of the magazines.

When interpreting the findings, however, limitations of the study must be considered. *Reader's Digest* had a special AHA Know Your Heart section for the February issue that may not have been included in other issues. This section most likely contributed to the large number of heart ads found in that magazine. The character representation of the other issues may have greatly differed from February's character representations; therefore, these findings may not be representative for that magazine. In the women's interest magazines, the same few heart advertisements tended to appear in the magazines. The same advertisers may be placing the majority of advertisements in the top selling women's magazines (see Table 7).

This study is also limited in that only heart health-related advertisements were examined. No articles or public service messages were included in the analyses. Thus, the overall heart health-related content of the magazines was not measured. This limitation may affect the representativeness of the data relative to the overall content of magazines. This study also did not look at the publications for other months. The magazines might have increased or decreased the number of heart health-related ads in other issues. Also, because half of

Table 7.

<i>Advertisement Data</i>		
	<i>Advertisement Name</i>	<i>Magazine*</i>
<i>Drug</i>	Zetia	RD, FC
	Coreg	RD, LHJ
	Vytorin	RD, GH, BHG, FC, LHJ
	Bayer	RD, FC
	Grestor	RD, WD, GH, FC, LHJ
	Tylenol	RD, GH
	Plavix	GH, BHG, FC, LHJ
<i>Food and Drink</i>	Cheerios	AM
	V8 Juice	AM, RD, WD, GH, FC, LHJ
	Campbell's	RD, GH, LHJ
	Quaker Oat	RD, WD, GH, BHG, FC, LHJ
	Promise Butter	RD, WD, FC
	Triscuit	RD, LHJ
	Smart Start	WD, BHG, FC
	Healthy Choice	BHG
<i>Awareness</i>	Eatbetteramerica.com	AM
	Know Your Heart	RD
	Day of Dance	GH

**Table Abbreviations:*

AAPR Magazine (AM), Reader's Digest (RD), Family Circle (FC), Good Housekeeping (GH), Better Homes and Gardens (BHG), Woman's Day (WD), Ladies' Home Journal (LHJ)

the top circulating magazines are women's interest magazines and the other half general interest, men's interest magazines were not examined and findings may be different for men's magazines.

Future research should investigate the prevalence of heart health-related advertisements across time to address issues of generalizability. Past research has identified differences in advertising based on ethnicity and showed that magazines that targeted minority females marketed different products than magazines with a general female readership (Kean & Prividera, 2007). More in-depth analyses of heart health-related messages across magazines targeting all ethnicities and age groups will be an important future endeavor. Finally, as women regard magazines as their top source of health-care information (Kahn, 2001), magazine publishers and advertisers should continue to include heart health-related advertisements and education for their readers and future research should document this goal.

References

- Abel, B. (2005). *Men and heart disease: Take lifestyle cues from women*. Retrieved February 6, 2008 from <http://healthlink.mcw.edu/article/1031002509.html>.
- Ahmed, S. B., Grace, S. L., Stelfox, H. T., Tomlinson, G., & Cheung, A. M. (2004). Gender bias in cardiovascular advertisements. *Journal of Evaluation in Clinical Practice, 10*, 531-538.
- American Heart Association. (2006). *Go Red*. Retrieved February 20, 2007 from <http://www.goredforwomen.org/>.
- American Heart Association. (2007). *Diseases, conditions and treatments*. Retrieved February 20, 2007 from <http://americanheart.org/presenter.jhtml?identifier=3028667>.
- American Heart Association. (2008a). *African Americans and cardiovascular diseases: Statistics*. Retrieved February 1, 2008, from <http://www.americanheart.org/downloadable/heart/1197933296813FS01AF08.pdf>.
- American Heart Association. (2008b). *Heart disease and stroke: Statistics*. Retrieved February 1, 2008, from http://www.americanheart.org/downloadable/heart/1200082005246HS_Stats%202008.final.pdf.
- American Heart Association. (2008c). *Men and cardiovascular diseases: 2008 update*. Retrieved February 1, 2008, from <http://www.americanheart.org/downloadable/heart/1199829909674FS07MN08.REV.pdf>.
- American Heart Association. (2008d). *Risk factors and coronary heart disease*. Retrieved February 1, 2008, from <http://www.americanheart.org/presenter.jhtml?identifier=500#heredity>.

- American Heart Association. (2008e). *Women and cardiovascular diseases: Statistics*. Retrieved February 1, 2008, <http://www.americanheart.org/downloadable/heart/1199816973854FS10WM08.pdf>.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Brodie, M., Kjellson, N., Hoff, T., & Parker, M. (1999). Perceptions of Latinos, African Americans, and Whites on media as a health information source. *The Howard Journal of Communications, 10*, 147-167.
- Clarke, J.N. & Binns, J. (2006). The portrayal of heart disease in mass print magazines, 1991-2001. *Health Communications, 19*, 39-48.
- Cline, R. J. & Young, H. N. (2004). Marketing drugs, marketing health care relationships: A content analysis of visual cues in direct-to-consumer prescription drug advertising. *Health Communication, 16*, 131-157.
- Duerksen, S. C., Mikail, A., Tom, L., Patton, A., Lopez, J., Amador, X., et al. (2005). Health disparities and advertising content of women's magazines: A cross-sectional study. *BMC Public Health, 5*, 1-10.
- Erikson, E. H. (1963). *Childhood and society* (2nd ed.). New York: Norton.
- Kahn, C. (2001). How the media influences women's perceptions of health care. *Marketing Health Services, 21*, 12-17.
- Kean, L. G. & Prividera, L. C. (2007). Communicating about race and health: A content analysis of print advertisements in African American and general readership magazines. *Health Communication, 21*, 289-297. Abstract retrieved from PsycInfo article database.
- Lefler, L., & Bondy, K. (2004). Women's delay in seeking treatment with myocardial infarction. *Journal of Cardiovascular Nursing, 19*, 251-268.
- Magazine Publishers of America. (2006). *Average circulation for top 100 ABC magazines*. Retrieved January, 17, 2007, from http://www.magazine.org/circulation/circulaion_trends_and_magazine_handbook/16117.cfm.
- Mediamark Research. (2000). *Magazine total audiences: Fall 2000*. New York: Mediamark Research Inc.
- Rosenthal, T. L. & Bandura, A. (1978). Psychological Modeling: Theory and practice. In S.L. Garfield & A.E. Begia (Eds.), *Handbook of psychotherapy and behavior change: An empirical analysis* (2nd ed.). New York: Wiley.
- U.S. Census Bureau. (2005). *Race and Hispanic origin in 2005*. Retrieved February 6, 2008 from <http://www.census.gov/population/pop-profile/dynamic/RACEHO.pdf>.

The Junction Between Psychopathy and Substance Abuse

John O. Gunderson

Creighton University

Although much research has been performed on psychopathy in recent years, little of the research focuses directly on psychopathy and substance abuse. This paper investigates the overlap between these two disorders and concludes that the two often occur together. Antisocial actions comprise a large part of psychopathy and a large numbers of crimes are committed while under the influence of alcohol and other psychoactive substances (Greenfield, 1998). As a result, these two disorders appear strongly linked.

Hervey Cleckley (1941) clarified many issues in regard to the so-called *psychopathic personality* in his book *The Mask of Sanity*. In his seminal work on psychopathy, Cleckley briefly examined the drinking habits of psychopaths as a small part of his overview of their personality features. Cleckley said that although not all psychopaths drink alcohol and some rarely partake in drinking, “considerable overindulgence in alcohol is very often prominent in the life story” (p. 355). Cleckley explained that whereas under the influence of alcohol, a psychopath engages in inappropriate behaviors such as “a peculiar sort of vulgarity, domineering rudeness, petty bickering, or buffoonish quasi-maulings of wife, mistress, or children, and quick shifts between maudlin and vainglorious moods” (p. 356). Cleckley wrote that “it is very likely that the effects of alcohol facilitate such acts and other manifestations of the disorder” (p. 356). *The Mask of Sanity* was an early attempt to describe psychopathy and later served as a basis for Robert Hare to develop the Psychopathy Checklist (Bodholdt, Richards, & Gacono, 2000). In the years following Cleckley’s book, more research has been devoted to both psychopathy and substance abuse. This paper seeks to examine these two constructs separately and then to explore the relationship between substance abuse and psychopathy.

A Description of Psychopathy

Psychopathy is an often misunderstood personality construct. Many people equate people who suffer from psychopathy (also known as psychopaths) with murderers and serial killers, but these assumptions are often wrong. Psychopathy is more of a general personality pattern than a major mental illness defined solely by antisocial behavior. In this way, it differs from Antisocial Personality Disorder (ASPD), with which psychopathy is often confused. However, whereas most psychopaths could be diagnosed with ASPD, ASPD is not the same as psychopathy. Psychopathy includes personality characteristics such as flat affect, impulsivity, and grandiose sense of self-worth, while ASPD is diagnosed based primarily on antisocial behaviors and not on personality characteristics (Hare, 1991). Psychopathy is much more narrowly defined construct. For example, roughly 25% of prison inmates could be diagnosed with psychopathy where as almost 80% of prison inmates could be diagnosed with ASPD (Huss & Langhinrichsen-Rohling, 2000).

A diagnosis of psychopathy is most often made through the administration of the Psychopathy Checklist-Revised (PCL-R; Hare, 1991). The PCL-R is largely based on Cleckley’s (1941) description of the behavioral and personality traits of the psychopath (McDermott et al., 2000). Since its development as the successor to the Psychopathy Checklist, the PCL-R has been among the most commonly employed assessment tools used for psychopathy. The PCL-R consists of 20 items, scored on a scale of 0-2. A score of 0 means that the trait is not present in the individual being assessed, a score of 1 means that the trait might be present, and a score of 2 means that the trait is present (Hare, 1991). Items can also be omitted if they do not apply to an individual. Total scores on the PCL-R range from 0-40, with the diagnosis of psychopathy generally made at 30, although for research purposes, the cutoff is sometimes made at 25 to increase size of the pool of potential participants.

Items on the PCL-R are typically broken down into two separate factors, Factor 1 and Factor 2. Factor 1 of the psychopathic personality is the Interpersonal/Affective part of the disorder and is composed of a set of personality features: superficial charm, feelings of grandiosity, pathological lying, shallow affect, a lack of empathy towards others, a tendency towards conning and manipulative behavior, and poor behavior controls (Hare, 1991). Factor 2 deals more with antisocial actions. Early behavioral problems, impulsive behavior, failure to accept responsibility for one’s actions, many short-term marital relationships, juvenile delinquency, and criminal versatility correspond to the items of Factor 2 (Hare, 1991). Psychopathy appears to be the single best predictor of violence across a variety of different violent offenders (Huss, Covell, & Langhinrichsen-Rohling, 2006). Surprisingly psychopathy and ASPD tend to share Factor 2 features, but Factor 1 comprises the core features of psychopathy and largely distinguish it from ASPD (Huss et al., 2006). Furthermore, Factor 2 features of psychopathy are often present when a person is either under the influence of psychoactive substances or seeking to become under their influence.

The Problem of Substance Abuse and Dependence

Substance abuse is one of the most common mental health problems in society (Carson, Butcher, & Mineka, 2002). Pathological substance use is often divided into substance abuse and substance dependence. Substance abuse can be defined as pathological use of a substance (usually alcohol, barbiturates, amphetamines, heroin, or marijuana), whereas substance dependence is more severe than substance abuse, resulting in a noticeable physiological need for larger

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and larger amounts of the substance to obtain the desired effects (Carson et al., 2002). Dependence also involves increased tolerance when using psychoactive substances and the experience of withdrawal symptoms, such as sweating, tremors, and tension when the person has not been exposed to the drug for an extended period of time (Carson et al., 2002).

Alcohol is currently the most abused psychoactive substance in the United States. Regier et al. (1990) found a lifetime prevalence of 13.5% for alcohol abuse or dependence. In substances other than alcohol, a lifetime prevalence of 6.1% was found among the general population. Marijuana (4.3%), amphetamines (1.7%), and barbiturates (1.2%) make up most of this lifetime prevalence of abuse or dependence among other psychoactive substances.

The Relationship of Substance Abuse and Antisocial Behavior

People who abuse one substance also are more likely to abuse or be dependent on other substances and are more likely to suffer from other mental disorders, such as antisocial personality disorder. For example, within the 13.5% of people who suffer from either alcohol abuse or dependence, 36.6% can be diagnosed with another personality disorder (Regier et al., 1990). Among these people diagnosed with another personality disorder, 21.5% suffer from either abuse or dependence on a psychoactive substance other than alcohol. Approximately, 56% of prison inmates have abused or been dependent on alcohol and 53.7% of prisoners have abused or become dependent on some other psychoactive substance. These high rates are noteworthy when examining psychopathy and substance abuse together, because although psychopaths only make up about 1% of the general population, they make up a disproportionately large segment of the prison population (Bodholdt et al., 2000).

ASPD is one of the most common psychological diagnoses made in injecting drug users (IDU; Darke, Kaye, & Findlay-Jones, 1998). ASPD has a lifetime prevalence of approximately 4% of the population (Brooner, Herbst, Schmidt, Bigelow, & Costa, 1993), but anywhere from 35 to 61% of IDU suffer from ASPD (Darke et al., 1998). Studies involving populations of methadone maintenance (MM) patients showed significantly more patients meet the criteria for ASPD than in the general population. Among a population of MM patients in a community-based program, about half of the patients met ASPD criteria (Darke et al., 1998). In the same study, about two-thirds of a population of MM patients incarcerated met the criteria for a diagnosis of ASPD. Despite these findings regarding ASPD, no significant differences were found among the groups (methadone patients in the community, prison methadone patients, and non-heroin prisoners) in psychopathy (based on PCL-R score).

Most of the literature available supports at least a "general association between substance abuse and antisocial personality characteristics" (Gerstley Alterman, McLellan, &

Woody, 1990, p. 175). Some studies have demonstrated that genetic factors and factors in the environment may play a role in causing both ASPD and substance abuse disorders. For example, Cloninger's 1987 study (as cited in Gerstley et al., 1990) revealed evidence that early-onset alcoholism is related to antisocial behaviors both in childhood and adolescence.

In Regier et al.'s (1990) study, 83.6% of the people who suffered from ASPD also suffered from either substance abuse or dependence. These people were 29.6 times more likely to suffer from a substance abuse disorder than those who were not diagnosed with ASPD. In contrast, only 16% of the individuals diagnosed with ASPD had no past instances of substance abuse (Regier et al., 1990). In addition to this high comorbidity between ASPD and substance abuse, substance abuse also has a tendency to be worse among those who suffer from ASPD. Those with ASPD are 21.1 times more likely to suffer from substance dependence than those without ASPD. This relationship was also demonstrated in Greenfield's (1998) report regarding alcohol and crime. When examining violent, property, drug, and public order crimes committed by those under the influence of alcohol, self-report estimates put the average blood alcohol content (BAC) of these offenders at least twice the standard legal limit, .08. The average BAC of those who committed these types of crimes and were put on probation is .16, of offenders in jails is .19, and of criminals of these types that were under the influence of alcohol at the time of their offense that were placed in state prisons .27 (Greenfield, 1998).

Furthermore, those with ASPD are 3.2 times more likely to be diagnosed with substance abuse-only than those without ASPD (Regier et al., 1990). Among those diagnosed with substance abuse disorders, 14.3% also suffer from ASPD. People who abuse substances are 21 times more likely to suffer from ASPD, and 17.8% of people who suffer from abuse of a substance other than alcohol have comorbid ASPD, and they are 13.4 times more likely to suffer from ASPD than those who suffer from abuse of a substance other than alcohol (Regier et al.). The association between ASPD and substance abuse disorders is so strong that of the different populations and different mental disorders studied in 1990 by Regier et al., only ASPD had a large enough comorbidity association with substance abuse to have statistical significance.

A review of the literature suggests that ASPD has a negative association with the effectiveness of treatment for substance abuse patients when compared to substance abuse patients who do not also suffer from ASPD (Alterman, Rutherford, Cacciola, McKay, & Boardman 1998). Woody, McLellan and Luborsky (1985) concluded that this finding may not be the case in patients who also suffer from other major mental illnesses. As a result, new treatments need to be developed for people who abuse substances and also suffer from ASPD. Woody et al.'s study suggests these new treatments may aid treatment of antisocial individuals with

substance abuse problems. This study found that among ASPD individuals, a relationship exists between the ability of the therapist and the patient to form a positive relationship and the effects of the treatment program.

Role of Psychopathy and Substance Abuse

In addition to the research examining ASPD and substance abuse, there has been some examination of substance abuse among psychopathic individuals. Hart and Hare (1989) found that psychopaths were slightly, but not significantly, more likely to suffer from comorbid substance abuse. Smith and Newman (1990) repeated Hart and Hare's study and found significantly higher rates of comorbidity of psychopathy and both alcohol and drug use disorders than were found by Hart and Hare (1989).

Alterman et al. (1998) found that psychopathy was the most powerful predictor for program non-completion in a seven month methadone maintenance program. In addition, they found that positive urine samples could be predicted by psychopathy in cocaine abusers, and urine samples containing benzodiazepines could be best predicted by psychopathy. Interestingly, in this study, ASPD was not significantly correlated with any certain outcomes regarding treatment. Alterman and colleagues identified psychopathy as effective at predicting risk-taking behavior. These highly impulsive, poorly constrained, risk-taking types of personalities that are prone to substance abuse are very similar to those traits characterized by Factor 1 of psychopathy. Furthermore, personalities marked by high impulsivity, poor constraint, and sensation-seeking are associated with earlier onset, higher consumption, and greater persistence of alcohol abuse (Chassin, Pitts, & Prost, 2002). In fact, this relationship has been demonstrated to be so strong that some researchers have postulated that the substance abuse and psychopathic characteristics can be traced back to a common factor that leads to both sets of behaviors (Carson et al., 2002).

Smith and Newman (1990), studying the co-occurrence of psychopathy and substance abuse found that substance abuse is significantly related to Factor 2 of psychopathy but not to Factor 1. Similar findings were reported by Hart and Hare (1989). Whereas total PCL-R scores were found to have a low to moderate correlation with substance abuse, Factor 2 was found to be "highly correlated" with substance use disorders. In fact, when Smith and Newman (1990) performed regression analyses on data regarding substance abuse with variance in PCL-R scores removed, Factor 1 was found to have an inverse relationship with substance abuse. These findings by Smith and Newman are echoed in findings by Hart and Hare (1989). Smith and Newman suggested that "substance abuse appears to be symptomatic of general deviance from an early age" (1990, p. 437).

Substance abusing psychopaths exhibit psychopathy in different ways within different populations of people (McDermott et al., 2000). For example, substance abusers tend to show developmental behaviors, such as early behav-

ioral problems, juvenile delinquency, and impulsivity, less commonly than other aspects of the antisocial lifestyle. These findings offer a potential explanation for the high comorbidity of the two disorders. McDermott et al.'s findings point to a potential factor that may cause the two disorders. The findings also suggest a different kind of antisocial individual. Perhaps there are two types of psychopaths – early- and late-onset. If a split between early- and late-onset psychopathy were found to exist, these differences in substance abuse patterns could be a diagnostic criterion. Hare's (1991) findings provide further support for this proposition, because juvenile delinquency is an important factor of psychopathy, and "early behavior problems" is one of the items on the PCL-R.

Implications of Comorbid Psychopathy and Substance Abuse

There are serious implications for the junction of psychopathy and substance abuse. A report by the Bureau of Justice Statistics (cited in Greenfield, 1998) estimated that approximately 36% of convicted offenders committed their offense following the consumption of alcohol. People who abuse their partners are often under the influence of alcohol. Greenfield (1998) found that approximately 66% of domestic violence victims report that alcohol was a factor in the crime. A combination of drugs and alcohol is involved about 20% of violent crimes when the assailant is under the influence of alcohol. Around 80 to 90% of offenders have substance abuse problems when the numbers from both alcohol and other drugs are combined (Greenfield, 1998). Issues regarding offenders using alcohol and other drugs are a significant enough problem that assessment for alcohol and drug problems has become a part of the processing of criminals. In addition, a disproportionate number of offenders have psychopathic personalities (Bodholdt et al, 2002). Hemphill, Hart, and Hare (1994) cite a study performed by Abrams that found prison inmates suffering from concurrent disorders, such as psychopathy and substance abuse, are at a higher risk to recidivate upon their release from prison.

Furthermore, it is also important to distinguish Factor 2 aspects of psychopathy from the more behavioral or antisocial characteristics on Factor 1. Some of the Factor 1 features (e.g., grandiosity, shallow affect, and lack of empathy) sometimes can be seen in people following periods of substance abuse. If a person is exhibiting these Factor 1 personality features, the factors may be construed as evidence of a potential diagnosis of psychopathy even if the personality features are present due to the recent consumption of psychoactive drugs. The presence of these factors due to the recent consumption of psychoactive drugs increases the risk of an inappropriate diagnosis of psychopathy, especially if a person has been abusing substances from a very early age. However, it has repeatedly been shown that presence of Factor 2 features alone are more strongly correlated to increased substance abuse than a diagnosis of psychopathy using both factors. Because Factor 2 by itself is highly correlated with sub-

stance abuse, Hemphill et al. (1994) make the recommendation that if a person scores high on Factor 2 of the PCL-R then that person should be assessed for substance abuse problems.

Care should be exercised when putting a substance abusing psychopath into treatment, however. Treatment in general for psychopaths has been shown to be difficult to implement successfully and there are issues with putting psychopaths in substance abuse therapeutic communities also. Rice and Harris (1997) found that these sorts of insight-oriented treatments can increase the psychopath's violence in the future. As of now, there is no empirically supported treatment model for psychopathy. If a successful treatment program can be found for psychopathy, then past research on substance abuse may suggest useful techniques for treating psychopaths with comorbid substance abuse problems. Programs that match patients with comorbid drug abuse and mental disorders have shown to be potentially effective treatments for this population of cocaine abusers (Regier et al., 1990) and could potentially be used with psychopathy and substance abuse.

In addition to this increased research necessary in the realm of treatment, research on substance abuse needs to be focused on psychopaths rather than on those with ASPD. Although these data on ASPD are important, they do not provide the definitive answers that research conducted solely on psychopaths would in terms of psychopathy and substance abuse. The most important research conducted on individuals with ASPD that needs to be replicated on psychopaths are the studies done examining percentages of people who have ASPD and a substance abuse disorder. Whereas this research would certainly be difficult to perform, because only approximately 1% of the general population suffers from psychopathy, it is important, because although research on ASPD can shed some light on psychopathy, the two disorders vary significantly.

Conclusion

Throughout the history of psychopathy research, from Cleckley's (1941) *The Mask of Sanity* to Hare's (1991) present-day research, substance abuse has consistently been observed to be related to the psychopathic personality. In particular, the link between the Factor 2 features of psychopathy and substance abuse seems to be especially apparent. Even though psychopaths make up a very small percentage of the population, it is important to continue to research the connection between psychopathy and substance abuse because of the dangers that this small percentage poses to the rest of the population. Furthermore, it is important to discuss this connection because there are no empirically supported models of treatment for psychopathy, and treatments in this area could potentially pave the way for psychopathy treatments in general.

References

- Alterman, A. I., Rutherford, M. J., Cacciola, J. S., McKay, J. R., & Boardman, C. R. (1998). Prediction of 7 months methadone maintenance treatment response by four measures of antisociality. *Drug and Alcohol Dependence, 49*, 217-223.
- Bodholdt, R. H., Richards, H. R., & Gacono, C. B. (2000). Assessing psychopathy in adults: The Psychopathy Checklist-Revised and Screening Version. In Gacono, C. B., *Clinical and forensic assessment of psychopathy: A practitioner's guide* (pp. 55-86). Mahwah, N.J.: Lawrence Erlbaum Associates Publishers.
- Broner, R. K., Herbst, J. H., Schmidt, C. W., Bigelow, G. E., & Costa, P. T. (1993). Antisocial personality disorder among drug abusers: Relations to other personality diagnoses and the five-factor model of personality. *The Journal of Nervous and Mental Disease, 181*, 313-319.
- Carson, R. C., Butcher, J. N., & Mineka, S. (2002). *Fundamentals of abnormal psychology and modern life*. Boston: Allyn and Bacon.
- Chassin, L., Pitts, S. C., & Prost, J. (2002). Binge drinking trajectories from adolescence to emerging adulthood in a high-risk sample: Predictors and substance abuse outcomes. *Journal of Consulting and Clinical Psychology, 70*, 67-78.
- Cleckley, H. (1941). *The mask of sanity* (5th ed.). St. Louis: Mosby.
- Covell, C. N., Huss, M. T., & Langhinrichsen-Rohling, J. (2007). Empathic deficits among male batterers: A multidimensional approach. *Journal of Family Violence, 22*, 165-174.
- Darke, S., Kaye, S., & Findlay-Jones, R. (1998). Antisocial personality disorder, psychopathy and injecting heroin use. *Drug and Alcohol Dependence, 52*, 63-69.
- Darke, S., Kaye, S., Findlay-Jones, R., & Hall, W. (1998). Factor structure of psychopathy among methadone maintenance patients. *Journal of Personality Disorders, 12*, 162-171.
- Gerstley, L. J., Alterman, A. I., McLellan, A. T., & Woody, G. E. (1990). Antisocial personality disorder in patients with substance abuse disorders: A problematic diagnosis? *American Journal of Psychiatry, 147*, 173-178.
- Greenfield, L. A. (1998). *Screening and assessment for alcohol and other drug abuse among adults in the criminal justice system* (TIP #7). Rockville, MD: Center for Substance Abuse Treatment.
- Hare, R. D. (1991). *The Hare Psychopathy Checklist-revised*. Toronto: Multi-Health Systems.
- Hart S. D. & Hare, R. D. (1989). Discriminant validity of the Psychopathy Checklist in a forensic psychiatric population. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 1*, 211-218.
- Hemphill, J. F., Hart, S. D., & Hare, R. D. (1994). Psychopathy and substance abuse. *Journal of Personality Disorders, 8*, 169-180.

- Huss, M. T., Covell, C. N., & Langhinrichsen-Rohling, J. (2006). Clinical implications for the assessment and treatment of antisocial and psychopathic domestic violence perpetrators. *Journal of Aggression, Maltreatment, & Trauma, 13*, 59-85
- Huss, M. T., & Langhinrichsen-Rohling, J. (2000). Identification of the psychopathic batterer: The clinical, legal, and policy implications. *Aggression and Violent Behavior, 5*, 403-422.
- McDermott, P. A., Alterman, A. I., Cacciola, J. S., Rutherford, M. J., Newman, J. P., & Mulholland, E. M. (2000). Generality of Psychopathy Checklist-Revised factors over prisoners and substance-dependent patients. *Journal of Consulting and Clinical Psychology, 68*, 181-186.
- Regier, D. A., Farmer, M. E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders with alcohol and other drug abuse: Results from the epidemiologic catchment area (ECA) study. *JAMA, 264*, 2511-2518.
- Rice, M. E., & Harris, G. T. (1997). Cross-validation and extension of the Violence Risk Appraisal Guide for child molesters and rapists. *Law and Human Behavior, 21*, 231-241.
- Smith, S. S., & Newman, J. P. (1990). Alcohol and drug abuse-dependence disorders in psychopathic and nonpsychopathic criminal offenders. *Journal of Abnormal Psychology, 99*, 430-439.
- Woody, G., McLellan, A. T., & Luborsky, L. (1985). Sociopathy and psychotherapy outcome. *Archives of General Psychiatry, 42*, 1081-1086.

Special Features

Richard L. Miller and Robert F. Rycek

University of Nebraska at Kearney

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, one student of analysis of children's fairy tales from an evolutionary perspective, and an additional student presents a psychological analysis of a popular television drama.

Psychological Analysis — Dramatic

Evolutionary Fairy Tales: Human Mating in the Grimm Fairy Tales

Rebecca King
Knox College

One of the most prevalent themes in the Grimm fairy tales is the quest for a lifelong romantic partner. Evolutionary psychology's theories of human mate selection provide an excellent framework for interpreting the mating "lessons" being taught by these fairy tales. David Buss found that the most important characteristics in potential mates for men are attractiveness and youth (Buss, 1989). Attractiveness in women is judged on symmetry, various facial features such as lips, eyes, cheek and jaw bones, and the hip-to-waist ratio, all of which indicate health and fertility (Rossano, 2003). Symmetry shows that a woman is unmarred by disease (Cunningham, Roberts, Barbee, Duren, & Wu, 1995; Gangestad, Thornhill, & Yeo, 1994). Larger lips, smaller jaw, high cheekbones, and wide eyes all indicate higher levels of estrogen in a woman (Johnson, 1999), and hip-to-waist ratio of 0.7 indicates optimal fertility and health (Singh, 1993). Men prefer youthful women for two reasons. First, a younger woman simply has longer to live and, hence, to produce more offspring. Second, younger women are also more likely to be sexually inexperienced, which would ensure the man of his paternity to the children she bears (Rossano, 2003). Premarital promiscuity is also very undesired by men (Buss, 1989).

Women prefer older men with good genes, plenty of resources, and a willingness to be a long term mate. Older men have this advantage because they already have resources and status within the community. Good genes, too, are selected because they will be passed on creating healthy and

successful offspring. Some of the features that make a man attractive are symmetry, a define jaw, chin, and cheekbones, and a proportionally larger nose. Symmetry is, again, a good indicator of health, and these facial features are signs of high testosterone levels and good virility (Gangestad et al., 1994; Langlois & Roggman, 1990). As human infants are quite helpless, women need help providing and caring for their children; thus, men who would invest in their offspring and help care for them are highly favored (Hrdy, 1999).

In Grimm's (1812/1987) fairy tales, stories that emphasize these mate selection criteria are everywhere. In most of the fairy tales that come to mind quickly (*Cinderella*, *Snow White*, etc.), the woman marries a handsome prince. The handsome prince is everything a woman could want. He is monogamous, and thus a good provider for offspring. He has the greatest resources in the land, and he has good genes. Usually these "good genes" are tested in some sort of fight or test.

Men also end up with first rate women in these stories. The virtues of beauty and maidenhood are emphasized to such an extreme in these tales that the prince usually does not even talk to the maiden before he wants to marry her. In the story of *Snow White*, she is not even alive, and the prince falls in love with her immediately. In *Cinderella*, the prince simply dances with her before deciding that no other maiden will do. He undergoes a test of his own while desperately searching for her throughout his kingdom.

Evolutionary mate selection principles are evident in many other stories as well. For example, the story of *Rapunzel*, the prince climbs up her hair and falls in love as soon as he sees her. He immediately asks if she will be his wife. She is young, beautiful, and being locked in a tower ensures her virginity. Even though Rapunzel had never seen a man before, it is clear to her that the Prince is a "catch." He is committed to her and her future offspring, and he has an abundance of resources. In true fitness-enhancing fashion, they waste no time reproducing, and by the end of the story, Rapunzel has twins. Similarly, in *Snow White*, although she lived with seven male dwarves, she never reproduced with any of them (perhaps their physical abnormality made them less than desirable). She could not have healthy, viable offspring with the dwarves. Meanwhile, the prince fell in love with her because of her beauty, and "death" has ensured her virginity.

One important exception to the "rules" of evolution occurs in the classic *Beauty and the Beast* story. These beauty-and-the-beast stories are about a woman marrying a hideous man. Rarely is it the other way around (i.e., a woman marrying a hideous woman) in the Grimm fairy tales, which may speak to the importance of beauty to each of the sexes in this

culture. The women in these stories appear to be marrying men with bad genes, and presumably would be handicapped in the evolutionary sense by this choice. Their offspring will be affected by these bad genes no matter how good his resources or how many hours he helps to care for these offspring. The bad genes affect the viability of the offspring, which is why many females, primates and humans alike, go for the “cads” rather than the “dads.” If the dads are not there for the mother and child physically or by offering resources, then it would be more desirable to be caring for more attractive offspring alone. This reason is why, even after a woman has secured a faithful “dad” she may risk losing him to mate with a “cad” to secure both good genes and devoted resources. This tendency is especially seen in primates, for ultimately, the more attractive offspring will be more reproductively successful, which is basically the “Sexy Son Hypothesis” (Hrdy, 1999).

According to the theories of evolutionary psychology, the quality of the potential offspring is the most important factor in mate selection. The higher the quality of the offspring the more reproductively successful the individual will be. High quality offspring ensure that the individual's genes will be passed on to future generations. However, in some situations, infant mortality rates may be so high that any infant who survives will be valuable. A dedicated, long term mate with plenty of resources who would help secure the survival of the infant might be a better investment than an uninterested, attractive mate in places where high infant mortality is a problem. Any offspring is better than no offspring at all.

In a beauty-and-the-beast story, *Bearskin*, a man makes a bet with a devil and promises not to clean or care for himself for seven years. Needless to say, after a few years, he looks like more of a beast than a man. However, to make this story a little more sporting, the devil gives him an endless supply of money. His hideous appearance causes the man to be scorned by everyone, though to beat the devil, the man must live virtuously despite the rejection of others. So he helps an old man by supplying him with money to save his home, and the old man thanks him by saying that one of his daughters will be his wife. The two older daughters scorn *Bearskin*, but the youngest says that if her father trusts him, he must be a good man, so she agrees to marry him.

This result does not make sense according to the Sexy Son Hypothesis. However, he does have good resources, so perhaps it is more likely that the youngest has decided to accept his resources in hopes that she might find a cad one day. Also vital when looking at these stories is to remember the function of these fairy tales, which was often to illustrate acceptable societal behavior and to pass on a sense of morality. The moral of this story, and of this society, may be that it is best and virtuous to listen to one's father. Also, the father has promised to give him one of his daughters, and it is important to maintain your family's reputation.

Also important to consider, in the eighteenth century in

Germany, child mortality rates were very high. The daughters in this story are poor as well, and thus, cannot hope for a mate who would provide them with much. Thus, although *Bearskin* has bad genes or is ugly (even if it is only temporary), he is wealthy and willing to marry. The virtuous, youngest daughter does what she must to secure a decent future for herself and her offspring. Luckily, in the end, *Bearskin* wins the bet with the devil and becomes handsome again, ensuring that they will have very viable offspring indeed.

In the Grimm fairy tales, the principles of evolutionary psychology are commonly illustrated. Although they were not designed to teach us about our evolutionary tendencies, it is clear that these fairy tales reflect an intuitive understanding of our evolutionary history. Today, parents are often surprised by how gruesome the original fairy tales are, and Disney and other children entertainment marketers are often criticized for exploiting and selling attractiveness. However the themes that are “exploited” by modern media may be as much a consequence as a cause of our preoccupation with beauty and money.

References

- Buss, D. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tests in 27 cultures. *Behavioral and Brain Sciences*, 12, 1-19.
- Cunningham, M. Roberts, A., Barbee, A., Duren, P., & Wu, C. (1995). Their ideas of beauty are, on the whole, the same as ours: Consistency and variability in cross-cultural perception of female attractiveness. *Journal of Personality and Social Psychology*, 68, 261-279.
- Gangestad, S., Thornhill, R., & Yeo, R. (1994). Facial attractiveness, developmental stability, and fluctuation asymmetry. *Ethology and Sociobiology*, 15, 73-85.
- Grimm & Grimm. (1987). *The complete fairy tales of the brothers Grimm*. (Jack Zipes, Trans.). New York: Bantam. (Original work published 1812, 181, and 1857).
- Hrdy, S. B. (1999). *Mother nature: Maternal instincts and how they shape the human species*. New York: Ballantine Books.
- Johnston, V. (1999). *Why we feel: The science of human emotion*. Cambridge, MA: Perseus Books.
- Langlois, J., & Roggman, L. (1990). Attractive faces are only average. *Psychological Science*, 1, 115-121.
- Rossano, M. J. (2003). *Evolutionary psychology: The science of human behavior and evolution*. New Jersey: John Wiley & Sons, Inc.
- Singh, S. (1993). Adaptive significance of female physical attractiveness: Role of waist-to-hip ratio. *Journal of Personality and Social Psychology*, 65, 293-307.

Law & Order: Special Victims Unit, *Manic*

Sara E. Brady

University of Nebraska at Kearney

NBC's television series *Law & Order* has been a popular mainstay of American television culture for years. Although their stories are fictitious, they still reflect the current social problems of society. The episode of *Manic* from *Law & Order: Special Victims Unit* (SVU; Harbinson & Bee, 2003) highlights an important concern among the mainstream media and also practicing clinicians: should children be prescribed psychotropic medication? As this episode suggests, the answer to this debate not only involves the children, but schools, parents, psychotherapists, drug companies, and the courts. *Law & Order: SVU's, Manic*, allows its viewers to see how all sides of the debate are affected and also reminds us that, if we are not careful with the drugs given to children, tragedy can occur.

The main characters of the show are Elliot Stabler and Olivia Benson (played by Christopher Meloni and Mariska Hargitay), who are detectives in New York City's major case squad, SVU, which deals specifically with sex crimes. The episode begins with Stabler and Benson responding to a 911 call of two eighth grade boys found in a school gym, shot to death wearing nothing but shoes and socks. When attempting to apprehend the suspect, they found a young boy, Joey, crouched in the boiler room with a superficial gunshot wound to his head. Through detective work and the crime scene investigation, Stabler and Benson discovered Joey was the shooter. After killing the two boys, he attempted to kill himself, but his hand slipped from the force of the gunshot.

When Benson and Stabler attempted to gain a confession, Joey refused to cooperate and gazed down at the table pretending to be drawing something. The detectives presented Joey with a drawing they discovered in his bedroom. The drawing portrayed a dark figure holding a gun, looming over two dead boys in a gym. The drawing was dated in July, two months before the shooting. When asked who the dark figure was, Joey said, "Zoltar." Stabler asked Joey, "Are you Zoltar?" Joey yelled repeatedly, "Zoltar's gonna kill you," and attempted to injure himself by banging his head on the table.

Dr. George Huang (played by B. D. Wong), an FBI forensic psychiatrist, assists the detectives with their cases. Dr. Huang described Joey as a socially awkward loner who was a bully victim. He chose the victims of the shooting based on their athletic ability and degraded them by stripping their clothes. Based on the event, Huang said Joey was going through a psychotic break. The detectives showed Huang Joey's school reports that indicated that Joey had classic depressive symptoms of moodiness, irritability, and lack of attention. In addition to clinical depression, Huang speculated that Joey probably had Attention Deficit/Hyperactive Disorder (ADHD), which contributed to Joey's social anxiety. Zoltar was Joey's displacement mechanism, through

which Joey released anxiety. Joey used Zoltar to expel his fear and frustration, thus allowing him to avoid confronting his own anxiety. Benson asked Huang if the provision of the gun was enough to trigger violent behavior in Joey, but Huang said that was unlikely. The gun only provided the means for violence, but something else such as alcohol, drugs, lack of sleep, or other stressors would be enough to trigger the violent behaviors.

During the next interrogation, Joey told Huang that he could not sleep because pills put voices in his head. When Huang asked about the voices, Joey said they were telling him to do things. Stabler asked if he was referring to Zoltar. Joey fearfully stated, "No one messes with Zoltar." Stabler asked if his classmates mess with him, and Joey began to describe the bullying he experienced. Joey said Zoltar punished the boys with the gun and described how he shot the boys, disgraced them by taking off their pants, and then, attempted to kill himself.

During the trial, Assistant District Attorney, Alex Cabot (played by Stephanie March) discovered Joey's drug screening at the emergency room was positive for Aprtil, a drug used for depression. When Benson and Stabler tried to find the person who gave Joey the Aprtil, they discovered Joey's mother received many complaints from the school threatening to expel Joey if he was not medicated for his disruptive behavior. His mother sought opinions from the school counselor, psychiatrist, and other doctors who advised her to medicate her son for depression. Refusing to allow her son to be labeled with a psychological disorder she went to a psychotherapist who assured her that Joey was competent enough to be treated with psychotherapy alone. Benson and Stabler asked the therapist if he prescribed the Aprtil. The therapist told the detectives that he would never prescribe Aprtil to children, because physicians know very little about the effects such powerful drugs have on developing brains. The therapist told detectives that after two sessions, Joey's mother's HMO informed her that they would not pay for therapy sessions. However, because medication is cheaper than therapy, they would be willing to pay for Joey's medication instead.

When questioning Joey's mother, Cabot discovered that the day after the HMO stopped paying for Joey's therapy, she received a package of Aprtil. The package came with a letter on Tauscher-Leto letterhead (a major drug company) signed by her doctor soliciting her to try the new weekly version of the drug. Previously, Joey's mother had been treated with Aprtil when her husband divorced her. Since Joey's mother had been receiving calls at her new job about Joey's behavior, she gladly gave Joey the Aprtil. Unfortunately, Joey suffered a severe manic episode. Cabot assumed the Aprtil was a contributing factor in the manic episode, because Aprtil's clinical studies discussed at trial indicated 1.8% of participants suffered a manic side effect. In light of the new evidence, Cabot realized that Joey's manic episode and the deaths of his two classmates were not entirely Joey's fault. If Joey's mother had not been the victim of a shady

marketing scam, Joey's mother would not have given Joey the drug. Cabot decided to plead Joey out in exchange for rehabilitative treatment. For the justice of the two murdered boys, Cabot sought the responsible Tauscher-Leto drug representative who agreed to hand over documents confirming the direct Aprtil mailing scheme. The episode ends with the public arrest of the CEO of Tauscher-Leto for reckless endangerment and criminal diversion of prescription medication.

Although television can be a medium of misguided information, it can also be a reflection of current concerns. The television series, *Law & Order*, has typically pulled its storylines from current headlines found in the media, suggesting the episodes highlight current and relevant controversies. This particular *Law & Order: SVU* episode brings to light several societal problems with regard to psychotropic medications prescribed to children. First, are psychotropic drugs safe for developing brains? Second, does school policy contribute to the problem of the adverse effects of pediatric psychotropic drug use? Third, how can schools proactively deal with behavioral problems among children?

In the episode, Benson and Stabler interview the psychotherapist Joey saw for two sessions. The psychotherapist explained his stance against prescribing children psychotropic medication was because of the unknown effects they may have on developing brains. The drug, Aprtil, was portrayed as a selective serotonin reuptake inhibitor (SSRI). In the conclusion, corporate greed was the culprit of the crime. However, Joey's mother gave her son the full dosage of a drug originally prescribed to her. This episode portrayed SSRIs as harmful to children without explaining the difference between recommended dosages of children and adults. Despite this limitation, the episode still highlights concern of SSRI use in children.

Concern over the use of SSRIs in children caused the FDA to require a change in labeling that included a warning label for all age groups (Gibbons, Hur, Bhaumik, & Mann, 2006). According to Gibbons et al., the use of SSRIs has been linked with higher rates of suicide attempts; however, their study found the opposite. In their national survey, they discovered U.S. counties with higher pediatric prescriptions of SSRIs had lower child suicide attempt rates. The answer, then, to whether or not these drugs are safe for children is still being debated.

A second question the episode raises is whether or not schools contribute to the problem of overmedicating children. Joey's mother raised legitimate concerns of Joey being labeled and stigmatized for needing psychotropic medication. She also raised concerns of schools using psychotropic drugs as an instrument of school policy. Bauer, Ingersoll, and Burns (2004) suggest the problem does not lie with the enforcement of medication, but the lack of adequate school staff training for the dispensing of psychotropic drugs. Furthermore, they propose stricter policies on maintaining children's privacy by having clear guidelines regarding who

administers the drugs (i.e., teachers or counselors). If children's privacy is truly maintained, their teachers should not be administering their drugs. On the other hand, Efron (2006) emphasizes the counterproductive solutions from parents and teachers who attempt to only treat behavioral problems and not the long-term co-morbid disorders. He claims pediatricians are put under pressure by parents and teachers to offer a quick fix for the disruptive behavioral problems. If the behavior is not under control, the school is forced to remove the child from his or her current learning environment. Efron claims psychotropic drugs treat symptoms in the short-to-medium term, but fail to treat the co-morbid symptoms such as antisocial behavior, language deficiencies, and anxiety. Clearly, boundaries need to be established if schools want to proactively treat mental disorders in children.

Establishing school boundaries for prescribing psychotropic drugs is one solution to the third question of how schools can proactively treat behavioral disorders in children. Bauer and colleagues (2004) suggested better privacy policies and more stringent training for school counselors and staff administering the psychotropic drugs to children. Moreover, Abrams, Flood, and Phelps (2006) advocate school psychologists should only prescribe psychotropic drugs if there is an inherent need and if the drugs are augmented with psychosocial interventions. Clearly, if these policies were in place at Joey's school, he may have had behavioral and health gains well after the medications were needed. Also, Joey's mother might not have needed to worry about labeling with stringent privacy policies in place.

In conclusion, *Law & Order: SVU* reflects the current controversies of our time. In their episode, *Manic*, the writers dealt specifically with the use of psychotropic drugs for children. In this episode, a depressed child with ADHD taking an SSRI has a manic episode and kills two of his classmates. The episode underscores basic questions about how to adequately handle the use of psychotropic drugs in children – specifically, safety of psychotropic drugs for children, school policy of enforcing children to be medicated, and how schools should best treat children with behavioral disorders. Although safety over the use of psychotropic drugs in children is still being debated, clear policy changes must be made with regard to school training, privacy, and therapeutic supplements to medication.

References

- Abrams, L., Flood, J., & Phelps, L. (2006). Psychopharmacology in the schools. *Psychology in the Schools, 43*, 493-501.
- Bauer, A. L., Ingersoll, E., & Burns, L. (2004). School counselors and psychotropic medication: Assessing training, experience, and school policy issues. *Professional School Counseling, 7*, 202-211.
- Efron, D. (2006). Attention-deficit/hyperactivity disorder: Are we medicating for social disadvantage? *Journal of Pediatrics and Child Health, 42*, 548-551.

Gibbons, R. D., Hur, K., Bhaumik, D. K., & Mann, J. (2006). The relationship between antidepressant prescription rates and the rate of early adolescent suicide. *American Journal of Psychiatry*, *163*, 1898-1904.

Harbinson, P. (Writer), & Bee, G. N. (Director). (2003). Manic [Television series episode]. In D. Wolf (Producer), *Law & Order: Special Victims Unit*. Universal City, CA: NBC Universal Television Studio.

Psychologically Speaking

An Interview with Virginia Andreoli Mathie

Denise Oelsligle, Sara Ottun, and Richard L. Miller
University of Nebraska at Kearney

Virginia Andreoli Mathie originally set out to become a mathematics teacher and enrolled in the mathematics and computer science program at the University of Waterloo (Ontario, Canada). While there she also discovered psychology and graduated with both a BMath in mathematics and computer science and BA in psychology. She continued her graduate study at the University of North Carolina--Chapel Hill where she received a MA and PhD in social psychology under the mentorship of John Thibaut.

Most of Ginny's professional career (1975-2004) was spent at James Madison University in Virginia where she taught introductory psychology, social psychology, research methods, and statistics. While at JMU, Ginny served eight years as coordinator of their undergraduate program, and four years as department head. In 1981, she received the JMU Distinguished Teacher Award. Other honors followed including being selected as the 2000 American Psychological Association (APA) Harry Kirke Wolfe Lecturer. Ginny has had considerable experience in conducting research with students. Her research interests include factors related to family violence, the effectiveness of instructional technology, and the differences between acknowledged and unacknowledged rape victims.

In July 2004 she became Executive Director of Psi Chi, the National Honor Society in Psychology. She has held several prominent leadership positions in psychology including secretary of the Virginia Psychological Association, president of the Virginia Academy of Academic Psychologists, president of the Society for the Teaching of Psychology, member of the American Psychological Association's (APA) Board of Educational Affairs, and chair of the APA Psychology Partnerships Project (P3). Among her many honors, she received an APA Presidential Citation for her leadership of the APA's Psychology Partnerships Project (P3), and the 2002 APA Distinguished Contributions to Applications of Psychology to Education and Training Award.

Miller: This interview is designed primarily for the audience of 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. To provide a bit of background, the journal grew out of discussions among a group of several of us from Nebraska, Kansas, and the Great Plains area that have been involved with students presenting papers at student conventions. At some point, we began to ask ourselves, "And then what?" The "And then what?" implied taking the manuscript to the next

step, following the model of a professional psychologist, you would publish it. And although we don't restrict publication to students who have previously presented their papers at conferences, we had originally envisioned the journal as another step in the evolution of increasing the quality of the work students had done. So, that's the context in which we wanted to talk with you.

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

Mathie: Well, I actually got involved with research when I was an undergraduate at the University of Waterloo in Ontario, Canada. I met a professor who was looking for a teaching assistant. His specialty was mathematical psychology. I happened to be a math and computer science major with some psychology courses. He was looking for someone who could help him with his course, mathematical psychology. After I assisted him with his course, he got me involved in his research. It was one of the most exciting things as an undergraduate, to get involved in research. This professor treated the undergraduate research assistants as if they were colleagues. I could call him Harold; his name was Harold Miller. There were two of us undergraduates who worked with his research team, and he would ask us questions as if we knew something. It was so exciting to feel like you were a part of this professional group of researchers. For me, it was a very stimulating, engaging, exciting opportunity to be involved in research. It also provided a role model for the style that I wanted to use when I became a faculty member in how I involved my students in research. That was my first research experience and after that I was hooked. I worked with Harold a couple of years, and then, of course, when I went to graduate school, I continued doing research.

Ottun: What is the value of involvement in undergraduate research?

Mathie: For you, as students, one value is that you learn how to do research. Also, it helps you learn more about the intricacies of the theories and models that you are using for that particular research project. There are many other benefits as well. It gives you an opportunity to work closely with a faculty member. Whether you are going on to graduate school or you are going to go into a job after you leave an undergraduate program, having that kind of relationship with a faculty member is going

to help you. It gives you a person who can write reference letters for you; who can give you guidance on your job, your graduate school choices, and your career; and who can assist you in preparing your resume, your letter of intent, or your personal statement. Research also helps you learn how to think critically and write professionally. These are skills you take with you no matter what profession you enter—skills you bring to life. Other benefits of engaging in research are that research generates excitement about asking questions and helps you learn how to ask good, helpful questions. As a researcher you learn how to formulate questions so that you can test your ideas, test your hypothesis, and get the answers to the things you want to know about. Again, that is a skill that you can use no matter what you do.

Oelsgle: What kind of tactics do you use to get your undergraduate students involved in research?

Mathie: During 29 years of teaching and supervising student research, I had tried a lot of different things. I tried to use the same method that Harold Miller used for me. I tried to recognize that students are colleagues in the research endeavor. I did research in an area because I wanted to know something about that area. I had questions that I wanted answered and the students were right there with me. I might have brought a little more knowledge about other issues or other areas of psychology to that research endeavor, but we were going into this project as colleagues.

I had questions that I wanted answered and the students were right there with me. I might have brought a little more knowledge about other issues or other areas of psychology to that research endeavor, but we were going into this project as colleagues.

To try to help them feel like they are colleagues I encouraged them to call me Ginny. The other thing that I tried to do to get them engaged in research was to help them identify a research question that was of interest to them. I had my own research interests and sometimes I would seek out students to work on these projects, but I also supervised a lot of independent projects, honors theses, and master's theses. I really wanted students to follow their own research interests because that is what keeps you going. Research is not necessarily easy. It takes a long time to develop a good research project and a lot of preplanning before you begin collecting data. It's exciting to collect data, but then there is a long road of analyzing that data and writing and rewriting the research manuscript. To sustain you through that process,

you really have to be interested in what you are doing. I always thought it was important to help students find what they were interested in doing. Another thing that I tried to do was to involve students in team research. I think it is much easier to get involved and stay involved, enthusiastic, interested, and dedicated if you are doing this with other people with whom you can share your excitement and your disappointments. Sometimes I had a large team of twelve or fourteen people in a semester. In these situations, we would typically divide up the work, with small groups taking responsibility for different parts of the research. We met regularly as a large group to share what we were doing so we all knew where we were going, but the small groups also met together. It's always more fun, and, I think, more helpful to do research as a team. I forgot to mention this as a benefit. Learning how to work on a team is an incredibly important skill. Another thing that I tried to do to keep students involved and engaged was to help them see the long-term benefits of their research for the profession. Even if the project was a replication, it still provided benefits to the discipline. I also pointed out the skills that they were learning and could take with them, no matter what they did. I also tried to give them a long-term goal, such as writing the manuscript and submitting it to a conference for presentation. I stressed the importance of sharing what they learned through the research project. I think students are very excited, as you have been, about attending a conference to give a poster or an oral presentation. That's something students can put on their resume. Finally, I tried to give students a lot of one-on-one mentorship and help. If they realized, 'gee something's not working right— I don't know what to do about this,' they could call me or come by my office. . If we could not come up with a satisfactory solution, we would bring it to the larger team for discussion at our regular meetings. I thought being accessible to my research students was very important.

Oelsgle: You talked about going from your research experience to your own teaching, so how did you become involved as executive director of Psi Chi?

Mathie: Well, I took a rather circuitous route to get there. Unfortunately, I was not involved in Psi Chi as an undergraduate. Most Canadian universities do not have disciplinary honor societies on campus. As a graduate student I did not realize that Psi Chi inducted graduate students so I did not seek out Psi Chi at that time. I learned about Psi Chi as a faculty member, when I attended Psi Chi events and inductions. The chapter always had a formal candle-lighting induction, but more recently students started asking professors to come and light their candle for them. Well, what an honor to have a student want you to be the person to light the candle. As some of my students started asking me to light their candles, I got more involved in the chapter. As I was ending my teaching career, a sad event took place that led to my current involvement in Psi Chi.

An Interview with Virginia Andreoli Mathie

Kay Wilson, the Psi Chi executive director from 1991 to 2003 passed away very suddenly. Kay was an outstanding leader who, like her predecessor Ruth Hubbard Cousins, worked diligently with the Psi Chi National Council to expand Psi Chi's activities. Given the breadth of Psi Chi's activities and future goals they had set, Psi Chi National Council members decided to divide Kay's position into two jobs. The executive officer would continue to run the organization, including the day-to-day activities of working with chapters and membership. The executive director would be a PhD psychologist who could help Psi Chi enhance the partnerships and relationships that Psi Chi had with other psychology organizations. The job description for the executive director was exactly what I wanted to do at that point in my career. This position would keep me involved professionally, allow me to continue working with wonderful colleagues who were Psi Chi advisors, and give me an opportunity to continue to work with students. I applied for the position and got it. It was sort of serendipitous, but here I am, in this position.

Ottun: Is it all you wanted and more then?

Mathie: It is very much so. When I started, I was not aware of how large an operation Psi Chi was, what the national office really did, or the extent of the Awards and Grant Programs. Psi Chi has over \$250,000 that we give away every year to students to help them with their research and to recognize the outstanding research that they have done. Since I started working at Psi Chi I have learned so much about the society and have been able to make some contributions to it. I have had exciting opportunities to work with other organizations to develop new programs that benefit both our undergraduate and graduate student members. A lot of people think of Psi Chi as undergraduate society, but we welcome graduate student members as well. When you become inducted, you are a member for life. We are trying to find ways to expand the services and the opportunities that we can provide for our graduate students and our alumni. I've enjoyed going to the regional and national conferences, meeting students and faculty advisors, and hearing what it's like at the chapter level, including the problems that they are having. It has been rewarding to bring chapter problems back to the national office and work with our staff members and Council members to determine how we can improve our services, help our chapters solve these problems, and develop new programs that will benefit members.

Oelsigle: What would a couple of those programs entail that you have worked on or are currently working on?

Mathie: There have been several. For example, we had research grants for undergraduate students, but we didn't have anything for graduate students. Dr. Melanie Domech Rodriguez, the Psi Chi Vice-President for the Rocky Mountain region proposed starting a grant pro-

gram for graduate students. I worked with Dr. Domech Rodriguez and our National Council to develop this program. Now we have a grant program for graduate research, and we hope to be able to expand it in the next couple of years. Here is another example. I was at an APA conference, actually my first conference as the Psi Chi executive director and someone asked me why Psi Chi was not doing more with internships. By coincidence, at that conference I met both the director of the internship program and the clinical psychologist who supervises research at the FBI's National Center for the Analysis of Violent Crime (NCAVC). The NCAVC offers unpaid internships to students, many of whom are psychology majors, to conduct research on violent crimes. I worked with the NCAVC staff members and the Psi Chi National Council to develop a grant program that provides up to \$7,000 for the semester for one intern who is a Psi Chi member. I also worked with the National Council and the staff at the American Psychological Association's Science Directorate to offer a Psi Chi member a summer internship at the Science Directorate. Science Directorate interns help to create databases for research areas, plan conferences for high school and undergraduate students to help get them involved in research, attend Congressional hearings on topics dealing with psychological research, and participate in the general work of the directorate. The Psi Chi National Council will continue to explore ways in which we can help our members get involved in the research enterprise.

Ottun: So a lot of the things you have been working on have come from questions that have been asked by people?

Mathie: Yes. Another example of a project that was initiated by a chapter initiative is the Psi Chi National Leadership Conference (NLC). We held the first NLC in January 2007 and will hold the conference every other year. It is exciting to take my own ideas and implement them, but it's even more exciting and gratifying to implement ideas that come from students, our advisors, and our National Council, and help them realize their dreams.

It is exciting to take my own ideas and implement them, but it's even more exciting and gratifying to implement ideas that come from students, our advisors, and our National Council, and help them realize their dreams.

Oelsigle: You previously wrote an article "Celebrating the Past, and Looking to the Future" about the initiative for professional partnerships. Do you believe you have been successful in expanding your partnerships with other organizations?

Mathie: Yes, I think I have been successful, but there is

much more to do. One of my primary responsibilities is to make Psi Chi more visible at the national level by establishing partnerships with other organizations. I have helped Psi Chi establish liaisons with various boards and committees at APA. Psi Chi now sends a Council member or former Council member to sit in on meetings of the APA Board of Educational Affairs and Board of Scientific Affairs. These boards oversee much of what APA does in the realm of promoting and advancing psychology education and psychological science, two goals that are directly related to Psi Chi's mission. This initiative has helped Psi Chi become more aware of opportunities in which Psi Chi could partner with APA on projects that benefit both organizations and helped APA recognize Psi Chi as a potential partner.

For example, Psi Chi will be a sponsor for the upcoming 2008 APA National Conference on Undergraduate Education in Psychology. In another partnership initiative, Psi Chi is working with other student-oriented groups and groups that focus on teaching at high schools, community colleges, and 4-year colleges and universities to form a coalition of psychology groups that are committed to providing resources to enhance pre-graduate psychology education. In many ways, this project is an extension of the work I did with P3. I am pleased that Psi Chi is taking a leading role in this effort. These are a few examples of the partnership initiatives that Psi Chi will continue to work on in the next several years.

Oelsgle & Ottun: Thank you so much for your time!

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. The Special Features section of the current issue (pp.) contains an example of the types of psychological analysis students may submit.

Option 1—Television Program:

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

Option 2—Movie Analysis:

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

Procedures:

1. All manuscripts should be formatted in accordance with the APA manual (latest edition).
2. Provide the following information:
 - (a) Names, current addresses, and phone numbers of all authors. Specify what address and e-mail should be used in correspondence about your submission,
 - (b) Name and address of your school,
 - (c) Name, phone number, address, and e-mail of your faculty sponsor, and
 - (d) Permanent address and phone number (if different from the current one) of the primary author.
3. Include a self-addressed stamped envelope of proper size and with sufficient postage to return all materials.
4. Send three (3) hard copies and one (1) electronic copy (CD-rom) of the 3-5 page manuscript in near letter quality condition using 12 point font.
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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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