Attention to Environmental Context Cues and Response Modulation: A Measure of Psychopathy and Cognition in a University Setting

Because psychopaths have difficulty in passive avoidance learning, it has been suggested that they have cognitive impediments in response modulation when engaged in reward-driven behavior (Newman, Schmitt, & Voss, 1997). The experimenter assessed psychopathic traits in 90 undergraduate students using the Psychopathic Personality Inventory (Lilienfeld & Andrews, 1996) and compared the performance of the high psychopathy group with the low psychopathy group on a Stroop-like picture-word task (Gernsbacher & Faust, 1991) to examine possible response modulation deficits in noninstitutionalized students. Contrary to the prediction, students with more psychopathic traits performed just as well as students with less psychopathic traits on the Picture-Word Task. The author discusses future research suggestions and possible cognitive differences between institutionalized (unsuccessful) and noninstitutionalized (successful) psychopaths.

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this peripheral information (e.g., noticing punishment cues or changes in their own emotional states), psychopaths have difficulty evaluating the goal-directed behavior in which they are partaking (Patterson & Newman). Patterson and Newman suggested that this inability to process peripheral information leads to a lack of passive avoidance learning in psychopaths, or in other words, a lack of behavior change in order to avoid punishment. Newman and his colleagues have examined multiple aspects of this prospective cognitive deficit in psychopaths. In one notable study, Newman, Patterson, and Kosson (1987) tested psychopaths and nonpsychopaths on the Wisconsin Card Sorting Task (WCST), a computerized card game in which participants earn money by sorting cards and adapting to changing sorting rules. Looking at response times, Newman and his colleagues found that low-anxious psychopaths paused less after sorting rules were changed than low-anxious nonpsychopaths. These results suggest that when engaged in reward-driven behavior, psychopaths had a more difficult time taking a break to evaluate their behavior, which resulted in an inability to make the necessary behavioral adjustments.

Another study by Newman, et al. (1997) assessed psychopaths and nonpsychopaths on the Picture-Word task (PW; Gernsbacher & Faust, 1991). Originally used to distinguish less-skilled comprehenders from more-skilled comprehenders in a college setting, the PW is a Stroop-like task that presents a word superimposed onto a picture (Gernsbacher & Faust). Before each trial, the participant is instructed to focus attention on either the word or the picture and then decide if it is related to a following picture or word (Gernsbacher & Faust). With this task, Newman et al. found that in the reward-driven trials, low-anxious nonpsychopaths experienced interference from the to-be-ignored stimulus, but low-anxious psychopaths did not. These results suggest that psychopaths suppressed secondary stimuli better than nonpsychopaths when engaged in reward-driven behavior.

In assessing the cognitive deficits of psychopaths, Newman and his colleagues also have investigated the role of anxiety on the expression of psychopathy (Newman & Brinkley, 1997; Newman, MacCoon, Vaughn, & Sadeh, 2005). A substantial amount of research has found differences between primary (low-anxious) and secondary (high-anxious) psychopaths (see Newman & Brinkley). For example, primary psychopaths seem to have relative optimism, high energy, and little negative affect in general (Arnett, 1997), compared to secondary psychopaths whose antisocial behavior seems to be more of a result of negative emotionality or neuroticism than of cognitive deficits (Newman & Brinkley). Primary psychopathy is often characterized as true psychopathy because the reduced anxiety is characteristic of the description of psychopaths. Measures such as the Welsh Anxiety Scale (WAS; Welsh, 1956) and Taylor’s Manifest Anxiety Measure (TMAS; Taylor, 1953) have been the most common measures for assessing the anxiety levels of psychopaths (Newman et al., 2005). Primary psychopaths are less sensitive to punishment and less apt to engage in passive avoidance learning (Newman & Kosson, 1986; Newman, Patterson, Howland, & Nichols, 1990; Patterson & Newman, 1993). At this time, however, it is essential to mention that in all of the studies by Newman and his colleagues mentioned thus far, only male prison populations were examined. Therefore, it is still unclear whether these cognitive deficits apply to nonincarcerated or female psychopaths.

The Psychopathy Checklist Revised (PCL-R), currently the most widely used and most reliable measure of psychopathy, bases a diagnosis of psychopathy on both the individual personal traits (e.g., glibness or deceitfulness) and an antisocial lifestyle (Hare, 1991). It is, however, essential to note that with 50% of a PCL-R score being determined by antisocial behavior, individuals who have no criminal record cannot be diagnosed as psychopaths although they might appear to have psychopathic traits (Lilienfeld, 1998). Subsequently, Lilienfeld and Andrews (1996) created the Psychopathic Personality Inventory (PPI). The PPI is a self-report measure constructed to focus on the personality traits related to psychopathy, instead of the antisocial or behavioral manifestations (Lilienfeld). With this measure, it is hoped that those expressing psychopathic traits might be identified and studied to see if they share the same affective and cognitive deficits as criminal psychopaths.

The present study seeks to uncover possible cognitive deficits in those who exhibit psychopathic traits in a university setting. Although some might be skeptical about finding psychopathy in a sample of college students, Hare (1993) suggested that psychopaths comprise 1% of the general population, with many psychopaths who either refrain from criminal activity or remain undetected by the legal system. Psychopathic traits also have been noted to stay rather consistent from adolescence into adulthood, which would suggest that psychopathy could be measured in a college sample (Hare). Lilienfeld (1998) has suggested that psychopathy should be measured as a continuous variable instead of a taxon, which would allow us to examine those with psychopathic traits, who are not necessarily full-scale psychopaths but express psychopathic traits. Examining those with psychopathic traits instead of those with full-scale psychopathy might...
yield more than a 1% incidence rate of psychopathy in the general population. Furthermore, treating psychopathy as a continuous variable might be more empirically and mathematically sound. For example, a study by Marcus, John, and Edens (2004) used PPI archival data from inmates analyzed by three taxometric procedures (mean above minus below a cut, maximum eigen value, and latent mode factor for analysis) to support Lilienfeld’s suggestion that psychopathy is more accurately assessed as a continuous variable rather than a taxon. Furthermore, Edens, Marcus, Lilienfeld, & Poythress (2006) used taxometric and maximum covariance (MAXCOV) analyses to assess the taxometric structure of the PCL-R, and they found that the graphs of the PCL-R scores did not suggest an underlying taxon. Accordingly, measuring subclinical psychopathy or psychopathy on a continuum is in keeping with the available literature. Available evidence suggests that there is not only a definitive difference between the taxonomic distinctions of psychopath and nonpsychopath, but that psychopathic qualities appear on a continuum.

Several studies have examined subclinical psychopathy in college student samples. For example, DeGue and DiLillo (2004) used the PPI (Lilienfeld & Andrews, 1996) to assess psychopathic traits in college students, and their results indicated that psychopathy was a stronger predictor of sexual coercion and misconduct than childhood abuse. Also, Levenson, Kiehl, and Fitzpatrick (1995) used a self-report measure to examine the psychopathic traits of 487 college participants and found disinhibition, and primary and secondary psychopathy to be highly predictive of antisocial behavior in college students. Finally, Salekin, Trobst, and Krioukova (2001) assessed psychopathy in 326 undergraduate students. They found that approximately 5% of their sample had psychopathic traits and that psychopathy was related to other behavioral outcomes. They also found that as in forensic samples, more men than women demonstrated psychopathic traits. These studies concluded that psychopathy can be measured in university populations and that research on psychopathy in noncriminal, university populations has found similar results to the research conducted in criminal populations.

Furthermore, the PW itself was originally used to distinguish less skilled from more skilled comprehenders in a college sample (Gernsbacher & Faust, 1991). Howland, Kosson, Patterson, and Newman (1993) also found poor passive avoidance learning in college students, who scored low on the Socialization Scale (Gough, 1960), which was similar to that of incarcerated psychopaths in a cued reaction time test using right-hand responses. This study indicated that if cognitive deficits of low-socialized college students paralleled those of incarcerated psychopaths, the cognitive deficits of psychopathic college students also might be found to parallel those of incarcerated psychopaths, which is the focus of the current study. As a result, both the PPI and the cognitive Picture Word task have been used previously in independent college samples and have found significant differences between groups of students with different comprehension and passive-avoidance skills within these college samples.

Consequently, it is hypothesized that due to a response modulation deficit, college students who show more psychopathic traits will exhibit faster response times on the PW (Gernsbacher & Faust, 1991) task than those who exhibit fewer psychopathic traits. It is also hypothesized that the anxiety of the participant, as measured by the TMAS (Taylor, 1953), will moderate the relationship between the PPI and PW task, with lower anxious psychopaths exhibiting the fastest PW task response times. Furthermore, I will assess whether the PW scores differ between men and women because Newman and his colleagues have found cognitive deficits only in incarcerated male psychopaths thus far. However, there is not enough literature on the subject to predict whether male and female PW scores will differ and in which direction these possible differences might exist.

Method

Participants

Ninety-two students from introductory psychology classes at a mid-sized, Midwestern, Jesuit university participated in this study. Fifty-six women and 36 men completed the PW (Gernsbacher & Faust, 1991), the PPI (Lilienfeld & Andrews, 1996), and the TMAS (Taylor, 1953). The average age of the participants was 18.7 years. The sample was 80.5% Caucasian, 10.3% Asian, 2.3% Latino, 1.1% African American, and 1.1% Indian. “Other” ethnicity was indicated in the remaining 4.6% of the sample.

Materials

Picture-Word Task. The PW task used in this study was a modified Gernsbacher and Faust (1991) task that was adopted by Newman et al. (1997) to illustrate the lack of attention to peripheral cues that psychopaths exhibit compared to nonpsychopaths. In this task, participants had to decide whether two stimuli were related or unrelated. To accomplish this purpose, a common word was superimposed onto a picture. A “P,” flashed 1000 ms prior to the presentation of the picture-word stimulus, instructed the participant to pay attention to only the picture, while a “W” instructed the participant to pay attention to only the word. The
picture-word stimulus was presented for 700 ms. One hundred ms after the picture-word stimulus, either a word or a picture was presented on the screen for 2000 ms or until the participant responded. Participants’ responses were timed, and their accuracy in determining whether the stimuli were related was measured. For each correct response, the participant received a “correct” message, and for each incorrect response, the participant received a “wrong” message.

Twenty to 25 students were assessed in a computer lab at a time. After typing in their participant ID and trial number into the program, the participants completed 23 practice trials before the actual task began. The task consisted of 80 trials (40 picture trials and 40 word trials) and took approximately 20 minutes to complete. The participants were randomly assigned to two different groups in the PW task (Gernsbacher & Faust, 1991). Each group had the same practice and first trial, but the second trial differed between the two groups in the order of the stimuli and in the timing between the picture-word stimulus and the either-word-or-picture stimulus. Specifically, the second trial of the second condition had 50 ms instead of 100 ms between the presentation of the picture-word stimulus and the either-word-or-picture stimulus. The final dependent value for both groups was the latency of each participant’s response time, which was measured as the time between when the stimulus was presented and when the participant pushed a key to indicate a response.

**Psychopathic Personality Inventory** (Lilienfeld & Andrews, 1996). The PPI is a self-report measure of psychopathy designed to assess psychopathic traits in nonoffender populations. The PPI consists of 187 questions that require the participant to indicate whether the item is *false* (coded as “0”), *mostly false* (coded as “1”), *mostly true* (coded as “2”), or *true* (coded as “3”). The PPI is divided into eight subscales, including Machiavellian Egocentricity, Social Potency, Coldheartedness, Carefree Nonplanfulness, Fearlessness, Blame Externalization, Impulsive Nonconformity, and Stress Immunity. Each of these eight subscales have been demonstrated to have internal consistency between .70 and .89 and test-retest reliability between .82 and .94 (Lilienfeld & Andrews). The Machiavellian Egocentricity subscale examines the prevalence of cruel and narcissistic attitudes. For example, one statement on the Machiavellian Egocentricity subscale says, “I always look out for my own interests before worrying about those of the other guy.” The Social Potency subscale examines the degree to which one can influence and manipulate other people. An example of a Social Potency item on the PPI is “Even when others are upset with me, I can usually win them over with my charm.” The Coldheartedness subscale investigates lack of remorse, lack of empathy, and lack of affect. A reverse-coded example of a statement from the Coldheartedness subscale is “I am so moved by certain experiences (e.g., watching a beautiful sunset, listening to a favorite piece of music) that I feel emotions that are beyond words.” The Carefree Nonplanfulness subscale measures the level of indifference that one has when planning future actions. For example, “I generally prefer to act first and think later” is one of the Carefree Nonplanfulness items. The Fearlessness subscale examines the degree of risk-taking and lack of anxiety when participating in risky activities. An example of this item is “When I’m in a frightening situation, I can ‘turn off’ my fear almost at will.” The Blame Externalization subscale assesses how often the person blames others for personal shortcomings or misdeeds. An example of this subscale is “I’ve been the victim of a lot of bad luck in my life.” The Impulsive Nonconformity subscale examines an indifference to socially accepted values. As an example of this subscale, the PPI includes the statement, “I’ve never really cared much about society’s so-called ‘values of right and wrong.’” Finally, the Stress Immunity subscale measures flat affect in response to anxiety-triggering situations. An example statement for this subscale is, “Looking down from a high place gives me ‘the jitters.’” When scored, a higher PPI score means more of a trait, whereas a lower PPI score means less of a trait. As the PPI measures psychopathy as a continuum instead of as a taxon, there is no cut score established.

**Taylor Manifest Anxiety Scale** (Taylor, 1953). The TMAS consists of 28 statements and requires participants to report the relevance of the statement (*mostly false* = 1 and *mostly true* = 2) in their own lives. Statements include such things as “I blush as often and others” and “I work under a great deal of strain.” A higher score suggests a higher level of anxiety. Having a test-retest correlation of .82 with 5 months between testing and .81 with between 9 and 17 months between testing, the TMAS has been proven reliable when used in cognitive research to assess negative affect and to assure that the cognitive differences found are due to psychopathy and not confounded by negative affect (Taylor).

**Procedure**

The participants completed the PW task, the PPI, the TMAS, and the demographic questionnaire online in a computer lab. The participants showed identification, signed in, and chose their own participant ID numbers. The experimenter then gave the partici-
pants the URL for the website containing the tasks. The first page of the website directed participants either to a consent form or to an assent form, according to their age. The assent form noted that students should show their signed parental consent forms to the investigator. The parental consent forms were received in class by students taking a psychology course and were signed prior to the investigation. The parental consent forms were not specific to this investigation; they were consent to participate in any psychological research that semester. After reading the consent or assent online forms, participants indicated whether they wanted to participate in the study or not by clicking either the “I want to participate in this study” link or by clicking the “I do not want to participate in this study” link. If the participant chose to participate in the study, he or she was directed to the web page that contained the directions to access the PW task (advertised as a computer game) and the survey’s link. No participant refused to participate in the study.

The participants were instructed to access the PW task (Gernsbacher & Faust, 1991) first. Prior to the trial, the experimenter downloaded the necessary components of the PW task onto the computers. A program called DOSBox was used to prevent Windows from interfering with the PW task. In an attempt to enhance motivation, which has been found to improve the likelihood of a dominant response set in doing the task (Newman et al., 1997), the researcher reminded participants immediately before the PW task began that they were competing against each other in this “game,” and that they should subsequently do as well as they possibly could.

Once the PW task was accessed and completed, the participants accessed the PPI, the TMAS, and the demographic questionnaire in the form of a single online questionnaire with three distinct parts. Participants completed the survey and submitted it online. A written debriefing paragraph was included at the end of the survey. The debriefing reminded the participants that the purpose of the study was to examine the correlation between certain personality traits and computer game (PW task) skills. Following the original procedures in Newman, Kosson, and Voss (1997), participants with 25% or more errors on the PW task were excluded from the final analyses. These procedures resulted in the exclusion of two male students and one female student.

**Design**

Participants were divided into three groups (e.g., high, medium, and low psychopathic trait groups) according to the PPI scores. The effect of the PPI group and sex of the participant on response times in the PW task were analyzed using an ANCOVA. The TMAS scores, measuring anxiety, were used as a covariate.

**Results**

Before the hypotheses were directly examined, an independent samples t test was conducted to ascertain that the PW (Gernsbacher & Faust, 1991) response times (the average time of the interference tasks subtracted by the average time of the unrelated tasks) were not due to the different conditions in the PW task. The first condition (M = 907.70, SD = 327.05) versus the second condition (M = 1006.12, SD = 403.35) did not differ significantly in their response times, t(88) = 1.28, p = .21. Therefore, the order of the stimuli and the timing differences did not affect the response times. As a result, data were collapsed across PW conditions for all further analyses.

To test the hypothesis that higher PPI (Lilienfeld & Andrews, 1996) scores would correlate with less interference in the PW task, the participants were first split into three equal groups according to their PPI scores: high PPI scores (362.00-459.82), mid PPI scores (328.00-361.42), and low PPI scores (248.00-327.01)*. Each group had 29 participants. The mean and standard deviation of the PPI also were similar to the construction sample of the PPI (Lilienfeld & Andrews, 1996). A between-subjects 3 (PPI: high, medium, and low) × 2 (sex: man vs woman) ANCOVA was then conducted to assess the effect of the PPI score and the sex of the participant on the response time of the PW task. The TMAS score was used as a covariate in the ANCOVA. Not supporting our hypotheses, the high PPI scoring group (M = 961.45, SD = 312.66) did not have significantly reduced response times on the PW task than the low PPI scoring group (M = 995.62, SD = 278.13), F(2, 86) = .456, p = .64; and TMAS scores acted as a significant covariate for the results, F(1, 86) = .01, p = .93. Furthermore, female participants (M = 999.40, SD = 357.47) did not have significantly different response times on the PW task than male participants (M = 889.88, SD = 379.30), F(1, 86) = 2.028, p = .16. Finally, there was not a significant interaction between PPI groups and the sex of the participant on the PW response times, F(2,86) = .055, p = .95.

**Discussion**

It was hypothesized that university students with more psychopathic traits would have lower PW (Gernsbacher & Faust, 1991) interference times than students with less psychopathic traits, as was found in...
prior studies using a male prison population (Newman et al., 1997). However, our results failed to reveal significant differences between those who scored high on the PPI and those who scored low on the PPI. Moreover, contrary to our hypotheses, the levels of anxiety of the participant, as assessed by the TMAS, also had no significant effect on the interference times of the participants. Furthermore, the sex of the participant did not affect the interference times of the participants on the PW task, which is important to note because Newman et al.’s sample did not include women.

Our findings of no significant differences between those with high psychopathic traits and those with low psychopathic traits on the PW (Gernsbacher & Faust, 1991) does not necessarily suggest that the results of Newman et al. (1997) need to be revised or questioned. The two investigations were conducted on completely different populations. Furthermore, there were some limitations to the current study. First, unlike Newman et al.’s study, there were no rewards offered for each correct response in the PW. Nevertheless, the researcher’s attempt to play upon the participants’ competitive instincts to engage the participants in reward-driven behavior did appear at least moderately effective. For example, multiple participants asked to see their results compared to their peers in the study. However, it is possible that the intangible competitive glory promised to the participants was not as motivating as receiving small monetary rewards for each correct answer. Moreover, some participants might have interpreted the competitive challenge offered by the investigator as more of a threat of losing than an opportunity to win, which might have diminished some participants’ motivation to do well on the task (Gray, 1987).

Newman et al. (1997) also used different measures to assess psychopathy and anxiety. For example, Newman et al. used the PCL-R instead of the PPI. Although Poythress, Edens, and Lilienfeld (1998) found the PPI scores and the PCL-R scores of 50 incarcerated young offenders to be positively correlated (r = .54), more research should be conducted to confirm the relationship between the PCL-R and the PPI. Until more research is conducted in this area, researchers should be cautious when trying to compare the results of a study using the PCL-R with the results of a different study using the PPI. Furthermore, in this study, the TMAS was used to examine anxiety, whereas Newman et al. used the WAS to examine anxiety. Watson and Clark (1984) found a strong correlation between the TMAS and the WAS (r = .85). Nevertheless, Kalippan, Rajalakshmi, & Sarada Menon (1982) suggested that the TMAS might be confounded with state anxiety. Therefore, if the circumstances of the experiment were found to be exceedingly anxiety-producing for individual participants, this might have affected their TMAS scores, which might have limited the correlation between the TMAS and the WAS. A further limitation was the relatively small sample size used in this study, which could have resulted in a more restricted range of scores. Nonetheless, if psychopathy is truly best measured as a continuum, then differences should have been identifiable in the present study.

Many questions arise regarding the construct of psychopathy and the possible differences between institutionalized (unsuccessful) and noninstitutionalized (successful) psychopaths. Despite the current scarcity of research on this topic, some notable differences have been found between successful and unsuccessful psychopaths that indicate stark contrasts between the two types of psychopathy (Ishikawa, Raine, & Lencz, 2001; Raine, Ishikawa, & Arce, 2004; Yang, Raine, & Lencz, 2005). Ishikawa et al. found that successful psychopaths (as measured by a high score on the PCL-R but a lack of a criminal record) actually performed some cognitive tasks better than both the unsuccessful psychopaths and the control group. Specifically, the successful psychopaths showed the best general memory and the best executive functioning of the three groups (Ishikawa et al.). Furthermore, on the WCST, successful psychopaths solved more categories and made fewer errors than both the unsuccessful psychopaths and the control group (Ishikawa et al.). These results indicate that successful psychopaths might not suffer from the same cognitive deficits as unsuccessful psychopaths and might actually perform better than the general population in such cognitive tasks. The fact that the successful psychopaths outperformed even the nonpsychopathic control group in these cognitive tasks suggests that increased intelligence might be one of the factors that prevents successful psychopaths from being institutionalized.

Furthermore, MRI’s have revealed physiological differences between successful and unsuccessful psychopaths. Yang et al. (2005) found that even though unsuccessful psychopaths had a 22.3% less prefrontal gray matter than controls, successful psychopaths did not display this lack of gray matter. Furthermore, because animal studies have demonstrated a link between hippocampal asymmetry and disinhibition (Gorenstein & Newman, 1980), it has been suggested that a psychopath’s hypersensitivity to reward and lack of passive avoidance learning could be due to an abnormally asymmetrical hippocampus. Raine et al. (2004) found that unsuccessful psychopaths had asymmetrical hippocampuses, and they found that successful...
psychopaths did not have hippocampal asymmetry, which might suggest that successful psychopaths are capable of learning from punishment and of paying attention to peripheral clues even when involved in reward-driven behavior (Raine et al.).

The behavioral, physiological, and cognitive differences between successful and unsuccessful psychopaths suggest further support for psychopathy being divided into (at least) the two subtypes of successful and unsuccessful psychopathy. Future research based on Newman et al.’s (1997) response modulation hypothesis should focus on whether or not successful and unsuccessful psychopaths differ in their ability to use peripheral cues to guide their behavior. A matched-subject design in which institutionalized populations would be matched with noninstitutionalized populations according to their PPI scores would be best able to decipher whether there are differences between successful and unsuccessful psychopaths in response modulation. Trials on the WCST and the PW task could be used to determine the possible cognitive differences between the successful and unsuccessful psychopaths. After the trials, it could then be determined whether the between-group differences (successful vs. unsuccessful psychopaths) would be greater than the within-group differences (more psychopathic traits vs. fewer psychopathic traits).

Understanding the possible cognitive differences between successful and unsuccessful psychopaths is crucial to our efforts to understand both the construct and etiology of psychopathy. If psychopathy and its subsequent cognitive deficits are an inborn trait as Hare (1991) suggests, what abilities or experiences allow successful psychopaths to overcome these traits? Could it be that the cognitive deficits of psychopathy are analogous to a plump body type that is genetically inherited but overcome by a strict diet and extensive exercise? Or are the cognitive deficits of psychopathy simply not part of the disorder for the successful psychopath? It is important for researchers to examine if and how response modulation deficits can be overcome in order to design useful treatment options for psychopaths (Wallace & Newman, 2004). Furthermore, understanding whether successful psychopaths do not commit crimes, like the unsuccessful psychopath, or simply do not get caught are essential to our understanding of the underlying constructs of both of these types of psychopathy. Specifically, in designing treatment options we should examine closely the possible differences between successful and unsuccessful psychopaths in order to make sure that we are treating the symptoms of psychopathy that will limit the antisocial activity of the individual psychopath. For example, if we find a way to eliminate the cognitive deficits of unsuccessful psychopaths, we should be careful to make sure that we are not simply turning unsuccessful psychopaths into successful psychopaths, who are possibly better at concealing their illegal activity.

Furthermore, other research demonstrates that the cognitive deficits found by Newman and his colleagues (1997) do not necessarily apply to all psychopaths. For example, Vitale and Newman (2001) compared incarcerated female psychopaths and incarcerated female nonpsychopaths and found that unlike their male counterparts, the two groups did not differ in their scores on the WCST. Vitale and Newman’s study indicates that it is a possibility that female psychopaths might not have the same cognitive deficits as male psychopaths. The current results did not indicate cognitive deficits in men or women high in psychopathic traits. Furthermore, it appeared that the African-American psychopaths in Newman et al.’s study also did not seem to suffer from the same cognitive deficits of the PW task. Therefore, it is necessary for future research to examine whether these possible cognitive deficits can be generalized to populations such as women, African-American, and nonincarcerated psychopaths.

In essence, Newman et al. (1997) found that psychopaths were unable to partake in response modulation because of certain cognitive deficits that impeded passive avoidance learning. Nevertheless, future research should examine whether or not a lack of response modulation is applicable to all psychopathic individuals or only to unsuccessful or incarcerated psychopaths. Even though the goal of gaining a better understanding of the differentiation between successful and unsuccessful psychopaths was outside of the scope of the current research, it is hoped that a better understanding of the construct of psychopathy and better ways to treat psychopathy might be achieved in order to curb the rate of criminal activities perpetrated by psychopathic individuals.

References


RESPONSE MODULATION □ Travers

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