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Culture of honor, psychopathy, and aggression: An examination of how regional differences and personality traits relate to aggression

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M.A., Emory University, 2007

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Abstract

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By Meredith K. Jones

The relationships between psychopathy and aggression as well as culture of honor (COH) and aggression are well-established. Nevertheless, it is unknown how, if at all, psychopathy and COH combine or interact to influence risk for aggression. The present study investigated whether an interaction between psychopathy and COH would account for more variance in aggressive behavior than either psychopathy or COH alone. A total of 144 Emory undergraduates participated in the study. 63 participants completed self-report measures of psychopathy, COH, aggression, executive functioning, and alcohol consumption. An additional 81 participants were administered an insult manipulation directed towards measuring laboratory aggression, and also completed all self-report measures. COH was measured in several ways, via region (North versus South), city size, and endorsement of self-report measures. Aggression was also measured in several ways, via laboratory measures, cognitive biases toward aggression, and self-reports of physical and relational aggression. Findings suggested that COH did not moderate the relationship between psychopathy and aggression. Relationships between psychopathy and relational aggression and COH and relational aggression were observed. The findings suggested that there may be limits to the relationship between COH and aggression, and that future research should be directed towards a clearer definition of the COH construct.

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Table of Contents

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Personality disorders (PDs) are chronic disturbances in perceiving the self, others, and environment with traits that are inflexible, rigid, and maladaptive across both situation and time. Psychopathy is one such PD, and is characterized by distinct interpersonal, affective, and behavioral features. Interpersonally, psychopaths are glib, superficially charming, grandiose, egocentric, deceitful, manipulative, and conning. Affectively, psychopaths show many deficits including low remorse, low guilt, low empathy, a weak conscience, shallow affect, and failure to accept responsibility for their actions. Behaviorally, psychopaths are impulsive, irresponsible, frequently bored, excitement-seeking, and lacking in long-term goals. Though clinical lore of the psychopathic personality existed previously, Cleckley's seminal manuscript, *The Mask of Sanity,* (1941), provided the first coherent account of the psychopath, proffering diagnostic features (Appendix A) and rich clinical descriptions of the disorder. Over the last 30 years, the study of psychopathy was greatly advanced in large part due to the development of a variety of psychopathy measurement instruments, many of which were based in part on Cleckley's description of the disorder (Hare, 2003). A new area of exploration for psychopathy researchers has been to investigate whether factors in an individual's environment may be associated with the manifestation of or protection from psychopathic personality traits (Lilienfeld, 1994). Such an investigation has not been conducted previously to investigate whether cultural and regional differences may impact the manifestation of psychopathic traits.

Factor structure. Despite some debate (Cooke & Michie, 2001), psychopathy is often characterized as a hierarchical disorder comprising two factors (Ogloff, 2006). In the 2 factor model, Factor 1 refers to "selfish, callous, remorseless use of others" and Factor 2 to "a

chronically unstable and antisocial lifestyle." Factors 1 and 2 evidence differential patterns of external correlates. Factor 1 is related to psychophysiological indicators of emotional detachment (Patrick, Bradley, & Lang, 1993), narcissistic personality traits (Harpur, Hare, & Hakstian, 1989), and inversely related to psychological distress (Verona, Patrick, & Joiner, 2001). In contrast, Factor 2 is related to recidivism (Hemphill, Hare, & Wong, 1998), aggression and antisocial personality disorder (Hare, 1991; Skeem & Mulvey, 2001), and psychological distress (Verona, Patrick, & Joiner, 2001).

Psychopathy in non-clinical samples. Despite a historical focus on studying psychopathic personality traits in forensic and clinical samples (Cleckley, 1941; Hare, 2003), a relatively recent focus of psychopathy research has been on the construct of the "successful psychopath," which describes individuals in the community who evade criminal behavior (or least detection for such behavior), yet who share many of the same core personality features (e.g., grandiosity, callousness, and glibness) as clinical psychopaths (Hall & Benning, 2006). In clinical (Edens et al., 2006), forensic (Hare, 2003) and community (Neumann & Hare, 2008) samples, psychopathy is best conceptualized as a dimensional construct. Additionally, recent work suggested that, like most personality traits, psychopathic traits are continuously distributed across the general population (Hare & Neumann, 2008). Support for the dimensionality of psychopathic traits has arisen from taxometric analyses (e.g., Guay et al., 2007), which use both statistical and graphical modeling to investigate whether data fit a generated population curve. Taxometric analyses examine whether an observed distribution of traits is underpinned by two or more categorical distributions (i.e., evaluate whether there are discrete distributions that better explain a variable that might seem continuous). While some results of taxometric analyses provided inconsistent support for the dimensionality of psychopathic traits (Harris, Rice, &

Quinsey, 1994; Marcus, John, & Edens, 2004), newer analyses using more current statistics have provided strong support for the dimensionality of psychopathic traits (Guay et al., 2007).

Although the level of psychopathic traits is lower in community than in clinical or forensic samples, the relationships between psychopathic traits and external correlates appears similar in community samples to that of forensic and clinical samples. Farrington (2006) followed a sample of community men longitudinally for 40 years and found that self-reported psychopathy scores were correlated with poor family functioning, externalizing behavior problems, and low intelligence. In a community sample of adult men and women, psychopathy was significantly correlated with violent behavior, alcohol use, and intellectual functioning (inversely) (Neumann & Hare, 2008). Coid et al. (2008) found that correlates of self-reported psychopathic traits (e.g., drug use, violent behavior, antisocial personality traits) in a national household study were consistent with correlates of psychopathy in criminal samples. Such research suggests that psychopathy represents a coherent syndrome that can be observed across a variety of settings. At present, little is known about environmental variables that may facilitate or discourage the presentation of psychopathic personality traits.

Culture of Honor

Over the last several centuries a wealth of anecdotal, census, historical, and forensic data have accrued suggesting that the Southern states of the United States (see Appendix B for a list of "Southern" states as operationalized in culture of honor research) are venues for higher rates of violence than Northern states (Nisbett, 1993; Nisbett & Cohen, 1996). Such violence has been manifested in homicides, assaults, lynchings, duels, feuds, "purrings" (i.e., public fights common in Southern states in the 19th century involving kicking), and "bushwhackings" (Nisbett & Cohen, 1996). Many explanations for the increased rate of violence have been proffered. Four

of the most researched accounts for higher rates of violent behavior in the South are temperature, poverty, legacies from slavery, and imitation of violence in African American culture (Nisbett, 1993). However, thorough analyses, typically regression or hierarchical linear modeling, indicate that these variables account for very little of the variance in violence.[1]

A different explanation of Southern violence is a variable that anthropologists refer to as "culture of honor" (COH). COH refers to a mentality in which an individual's status, reputation, and self-concept are vital to success and survival. As such, an individual feels compelled to protect and defend his or her status through a variety of means, including violence. Nisbett and Cohen (1996) argued that cultures based on herding economies are predisposed toward violence due to the fact that herders are exposed economically. They contend that herd theft is a frequent threat and that individuals in this type of economy are constantly vigilant for threats. When such a threat is made, herders must demonstrate dominance, power, and strength such that the threat is mitigated, but also to caution others against making such a threat. Nisbett and Cohen mentioned that not only were the economies of most Southern states based on herding initially (and some remain so), but that the initial settlers of Southern states tended to be individuals from herding economies in Scotland, Ireland, and the peripheries of England. As a result of traditions that crossed the Atlantic, as well as the initial economies of the South, COH became an integral part of the Southern mentality.

[1] Nisbett (1993) argues that variables such as temperature, poverty, legacies from slavery, and imitation of violence from African American cultures do not account for a significant amount of variance in Southern white male's aggressive behavior. However, Messner, Baller, and Zevenbergen (2005) report that the historical impact of area lynchings may explain some of the variance in aggressive behavior. Specificially,using regression analyses they report that the frequency of past lynchings is a significant predictor of a subset of homicides. These homicides begin as a result of interpersonal conflicts and are interracial in nature (i.e., white on black crime). Despite suggesting that historical events may account for some of the aggression observed in Southern white males, Messner, Baller and Zevenbergen's work is also suggestive of the role of COH in aggressive behavior (e.g., homicide) as interpersonal conflicts were the starting point for homicidal behavior.

While being vigilant against potential threats may be one possible explanation for COH mentalities, Henry (2009) investigated a status-oriented explanation for the violent behavior often exhibited in herding regions. Henry argues that explaining the relationship between herding regions and violent behavior stemming from insults via COH is incomplete. To understand the phenomenon of violence in herding regions more accurately, he contends that the integration of aggression, stigma, and human ecology literatures in necessary. To this end, Henry writes that herders tend to be low-status individuals in society from a human ecology perspective. As a result of being low status, herders tend to be psychologically vigilant in order to protect and defend themselves. From the aggression literature, Henry argues that being vigilant against potential threats or insults tends to lead to an increased level of violent behavior. As a function of combining these literatures, Henry contends that herders are low-status individuals who are pressed to be wary of insults and threats. As a result of this "psychological self-defense," herders are more likely, and do, tend to behave more aggressively.

To examine this hypothesis, Henry (2009) conducted several studies. First, he used survey data from Americans, including women and minorities. Consistent with a status-oriented explanation, he found that individuals who are low in socioeconomic status (SES) endorse higher rates of stigma and were more likely to endorse self-defense mentalities. After establishing a relationship between SES and psychological self-defense, Henry conducted a laboratory experiment investigating the relationship between status, self-worth, and aggression. Findings suggested that low-status participants were more likely to behave aggressively if they had not had a previous opportunity to establish their self-worth. Henry used these findings to support his hypothesis that the relationship between COH and aggression may be mediated via herders' conceptions of their self-worth.

COH may also be understood through an evolutionary psychology perspective. Shackelford (2005) argued that all humans have the "psychological mechanisms for responding to insult to maintain or repair a reputation for strength, toughness, and honor" (p. 389). He referred to these mechanisms as *evolved reputation maintenance mechanisms* and contends that such mechanisms may often lead an individual to behave violently. Although all humans have the predisposition for these mechanisms, Shackelford contends that herding economies, such as those in the South, tend to elicit behavioral manifestations such as violence. Further, he believes that this sort of behavior has evolutionary significance. These mechanisms may have evolved due to ancestral men's concern about theft of a reproductively-fit female partner. That is, the violence associated with COH may be an evolved response to ancestors' mate retention. As such, COH should be observable in diverse geographic areas.

Cross-cultural culture of honor. Nisbett and Cohen (1996) argued that COH is not inherent to the Southern United States, but instead to herding economies in general. As such, they contend that COH attitudes and related violence should exist in other regions globally. To examine this claim, COH has been investigated in Europe, Central America, and South America. Henry (2009) used data from the United Nations Office on Drugs and Crime and the Food and Agriculture Association to investigate the relationship between violence and different economic regions in 92 countries. Henry included a wide range of countries, including Chile, Pakistan, Sweden, the United Kingdom, Zimbabwe, Jamaica, and China. Similar to findings from the United States, Henry found a consistently stronger relationship between herding regions and homicide rates than between farming regions and homicide rates.

To consider COH attitudes in Central America, Figueredo et al. (2004) constructed a 32-item COH measure composed of two subscales: a reciprocity subscale and a revenge subscale.

The measure was administered to six communities in Costa Rica and Mexico: two herding communities, two farming communities, and two fishing communities. Consistent with the COH hypothesis, herding communities scored significantly higher with regard to the revenge scale than farming communities. No consistent patterns were found for the reciprocity scale, nor the fishing communities.

Vandello et al. (2009) investigated how COH may impact women in abusive relationships. In Study 1, participants viewed a videotape of a woman describing her experience in an abusive relationship. Participants were then asked to rate the woman. Individuals from COH regions (i.e., Chile and the Southern United States) were more favorable toward the woman if she stayed in the abusive relationship than individuals from non-COH regions (i.e., the Northern United States). In Study 2, participants listened to an audiotape of a man describing a violent conflict with his wife. As compared with Canadians (a non-COH group), Chileans (a COH group) rated the man and his actions more favorably if the argument was about jealousy (e.g., flirting) than about another subject (e.g., finances).

Mosquera, Manstead, and Fischer (2002) examined differences between Spanish (COH region) and Dutch (non-COH region) individuals with regard to levels of honor endorsed and emotional reactions to insults. Their findings suggested that Spanish individuals responded with significantly more anger and shame to threats regarding family honor than Dutch individuals. Therefore, COH may be responsible for heightened levels of aggression in individuals across cultures.

Finally, adherence to COH attitudes was investigated as a possible mediator of the relationships between attachment, SES, callousness, and conduct problems in Israeli adolescent boys (Somech & Elizur, 2009). 136 Israeli adolescent boys were sampled from the education

system. The boys completed self-reports of COH attitudes, attachment, callousness, and delinquency. Teachers completed reports of emotional and behavioral problems and the boys' families' SES was also calculated. The results suggested that COH predicted conduct problems, and that COH was a partial mediator of the effects of callousness and low SES on conduct problems. Somech and Elizur (2009) concluded that COH may interact with dispositional and environmental variables (e.g., callousness and SES) to affect conduct problems.

Aggression

Psychopathy and aggression. The relationship between psychopathy and aggression/violence is robust and well-validated (Hart, 1998; O'Toole, 2007; Salekin & Sewell, 1996). Psychopathy and aggression are related longitudinally (Gretton, Hare & Catchpole, 2004), in youth and adolescents (Edens et al., 2001), and in a variety of settings (e.g., inpatient, incarcerated, and community) (Reidy et al., 2007; Salekin, Rogers, & Sewell, 1996; Stafford & Cornell, 2003). Although there are many theories about the underlying mechanisms responsible for psychopathic personality traits (Blair, 1995, 1997; Frick, 2007; Lykken, 1995), one of the hypothesized core deficits of psychopathy is a lack of perspective taking or empathy (Blair, 1995, 1997). Several studies have suggested that a lack of empathy or perspective-taking is related to aggressive behavior (Giancola, 2003; Richardson, Green, & Lago, 1998). Therefore, psychopathic individuals may be predisposed towards aggressive behavior because they cannot imagine the interpersonal consequences of their aggressive behavior.

As aggression is a broad class of behavior, a specific subset of aggressive behavior deserves mention. First, relational aggression refers to indirect and interpersonal forms of aggression (e.g., rumor spreading and gossiping), whereas physical aggression refers to direct forms of aggression (e.g., violence). The vast majority of the research investigating the

relationship between psychopathy and aggression has operationalized aggression in the physical form, finding a strong relationship between psychopathic personalilty traits, particularly Factor 2 traits, and physical aggression (Hare, 2003; Neumann & Hare, 2008; O'Toole, 2007). Only three published studies investigated the relationship between psychopathy and relational aggression. Schmeelk, Sylvers, and Lilienfeld (2008) found that relational aggression was significantly correlated with both psychopathy and Factor 2 traits even after controlling for overt aggression in a sample of undergraduates. Marsee, Silverthorn, and Frick (2005) found that relational aggression was significantly correlated with psychopathy in a sample of children. Warren and Clarbour (2009) investigated the relationship between a 3-Factor model of psychopathy and aggression. They found that psychopathy was strongly related to relational aggression, particularly Factors 1 (coldheartedness) and 3 (impulsive antisociality). Further, they found that the relationship between psychopathic traits and relational aggression remained significant after controlling for physical aggression. They concluded that individuals with a high level of psychopathy use both relational and physical aggression, though the particular situation dictates which type is utilized. As the relationship between psychopathy and aggression is moderate, more work needs to be dedicated to examining potential moderators of this relationship. It is possible that a variable such as COH could account for some of the variance as to why some individuals with psychopathic traits are not aggressive.

Culture of honor and aggression/violence. To support the relationship between COH and violence, several types of research have been conducted: examinations of census data, laboratory paradigms, and field trials. First, census data supports the link between violence and Southernness. Nisbett (1993) examined census data via regression analysis to ascertain which of the following variables predicted homicide rates: income, population density, poverty index, %

males, and Southernness. Only poverty index and Southernness significantly predicted homicide rates, though Southernness was still a significant predictor when controlling for poverty index, whereas the converse was not. Nisbett (1993) also examined regional differences between small (10,000-50,000 inhabitants) and medium (50,000-200,000 inhabitants) sized cities in terms of unadjusted homicide rates. For smaller cities, the ratio of homicides in the South against New England was 3:1, with the South having the highest homicide rate of all geographic regions. For medium cities, the ratio of homicides in the South against New England was slightly more than 2:1, again with the South having the highest homicide rate of all geographic regions. Nisbett also reported regional differences in attitudes toward violence. Southerners differed significantly from Northerners in the following attitudes toward violence: violence for self-protection, violence in response to insults, and socialization toward violence in children.[2]

In support of the herding hypothesis to explain COH, analyses of census and Federal Bureau of Investigation (FBI) data suggested that homicide rates are significantly higher in the hills/dry plains regions (where herding occurs) (12.27 homicides per 100,000) than in farming regions (4.98 homicides per 100,000) (Nisbett & Cohen, 1996). Further, in both cities of less than 200,000 inhabitants and cities of more than 200,000 inhabitants, there is no regional difference between the rate of felony-related murders; however, there is a large North-South difference, particularly in cities of less than 200,000 inhabitants, in the rate of argument-related murders, with Southern states having elevated rates of argument-related homicides (Nisbett & Cohen, 1996).

Henry (2009) extended Nisbett and Cohen's (1996) analysis of the relationship between type of region and murder rates. Henry used the same FBI homicide reports, but was able to

[2] Note: This research, as well as all following research (unless noted otherwise), pertains only to Caucasian males. Additionally, Nisbett's analyses of census data controlled for gun control laws in each geographic region.

include approximately ten more years of data than the original Nisbett and Cohen (1996) analysis. In support of the COH research and Nisbett and Cohen's previous findings, Henry found that the number of homicides committed by Caucasian males in herding regions in the southern United States was higher than that in farming regions.

Cohen (1998) investigated the impact of community social organization (i.e., whether a community is stable and well-knit) on the relationship between homicides and region. Findings suggested that social organization was associated with decreased felony-related homicides in the South, but decreased argument-related homicides in the North. In contrast, social organization was associated with increased rates of argument-related homicides in the South, suggesting that violence related to COH may be condoned in the South.

Importantly, several researchers found that Southerners do not necessarily endorse overall violence more than Northerners, but that they are more likely to endorse violence when responding to insults or for protection. Hayes and Lee (2005) analyzed census data regarding attitudes toward violence and found that Southerners differed from Northerners in their hypothetical use of violence in the following situations: if a man's child were involved, if a man's wife were involved, and if a man's political opinions were questioned. They conclude that Southerners are indistinguishable from Northerners, in terms of approval of violence, under some conditions. However, Southerners are more approving of violence, and thus different, from Northerners under certain conditions, several of which involve honor. Similarly, Cohen and Nisbett (1994) found that Southerners endorsed violence, more so than Northerners, when responding to insults or threats that challenge one's honor, strength, or toughness.

A second type of research designed to examine the COH and violence relationship has been conducted in laboratory settings. By using confederates who "accidentally" bumped into a

participant and then called the participant a derogatory name, it was hypothesized that regional differences in aggression might be activated in participants (Nisbett, 1993). Following the bump, participants were asked to complete a word completion task, a face emotion rating task, and three different written scenarios. Findings (Nisbett, 1993) suggested that Southerners were initially angrier after the bump and completed the written scenarios with more angry content than Northerners. There were no regional differences in the word completion task or face emotion ratings.

Using a similar paradigm to the one described above (i.e., bumping a participant, then calling him a derogatory name), both cortisol and testosterone levels were measured pre- and post-bump to assess stress and preparation for violence (Cohen et al., 1996). Consistent with hypotheses, Southerners demonstrated significantly higher pre/post differences in both cortisol and testosterone than Northerners. This finding suggested that Southerners were more offended and stressed by the bump incident, and were activated to respond more aggressively to the incident than Northerners.

As a second part to the Cohen et al. (1996) study, researchers investigated whether the bump may impact a participant's behavior, particularly making the participant more aggressive. The main dependent variable in this study was referred to as the "chicken game." After the bump, a participant had to walk down a narrow hallway. A large confederate was also walking down the hallway, toward the participant. The dependent variable was the distance that a participant "gave way" from the confederate so that a collision did not occur. Results suggested that Southerners "gave way" much closer to the confederate than Northerners, and also that Southerners gave firmer handshakes post-bump than Northerners.

Vandello, Cohen, and Ransom (2008) investigated how peers may impact the relationship between COH and aggressive behavior in a three-part study. First, participants were given several paradigms resulting in violent behavior. Participants were asked how likely they were to respond in a similar fashion, as well as how likely they believed their peers would be to respond in a similar fashion. Findings suggested that participants rated their peers as more aggressive than themselves. This finding was higher for Southerners, who rated their peers as significantly more aggressive than Northerners. The second part of the study examined whether participants would encourage a confederate to respond aggressively to a staged insult in a laboratory. There were no differences between Southerners and Northerners with regard to encouraging aggression in the laboratory. In the third part of the study, participants viewed taped vignettes in which an interpersonal conflict occurred and an actor's peers encouraged the actor to respond to the conflict aggressively. Some of the conflicts were "clear" while others were "ambiguous." Participants were asked to rate how strongly the actors' peers had encouraged an aggressive response. Southerners rated significantly more encouragement of aggressive behavior in the actors' peers as opposed to Northerners, particularly in ambiguous situations.

Finally, field experiments have been undertaken to investigate social and community support for COH attitudes, and the relationship between COH and violence. Cohen (1998) investigated the relationship between social organization, region, and cultural violence. In the first part of the study, findings suggested that socially organized Northern states were less likely to consume violence (e.g., viewing violent television programs, purchasing violent magazines, issued hunting licenses, and National Guard enrollments), whereas socially organized Southern states were more likely to consume violence. In the second part of the study, socially organized Northern states had stricter gun control laws, whereas there was no effect or an opposite effect

(i.e., looser gun control laws) in socially organized Southern states. The same was true with regard to national defense policy; socially organized Northern states demonstrated less stringent national defense policies, whereas socially organized Southern states demonstrated more stringent national defense policies. This effect was not found for self-defense laws and policies. As a whole, this research suggests that social cohesion and organization is associated with more violence in the South, but less violence in the North.

A second study investigated tolerance of violence related to COH in both employment practices and media representations (Cohen & Nisbett, 1997). In the first part of the study, researchers sent job application requests to companies in the North or South. These requests contained one of two stories: the first was about a man who had been charged for felony manslaughter after his honor had been insulted (COH condition), the second was about a man who had been charged for felony grand theft auto to provide for his family (control condition). The way in which the company responded to the request was coded on several different dimensions, which constituted the dependent variables. With regard to both compliance with requests and tone of response, an interaction effect was observed, such that Southerners were warmer and more compliant with the COH letter than Northerners. There was a non-significant trend in this direction with regard to job availability. In the second part of the study, researchers sent a fictitious set of facts to college newspapers asking a writer to turn the facts into a publishable story. One of two fact sets was sent to the newspapers: the first was about a man who had stabbed another man after an insult (COH condition), the second was about a man who had assaulted another man during a robbery (control condition). The newspapers' stories were coded for justification of the crime, blameworthiness of the perpetrator, and sympathy for the perpetrator. With regard to the COH condition, Southern newspapers viewed the crime as more

provoked and less aggravated, were less likely to blame the perpetrator, and were more sympathetic to the perpetrator than Northern newspapers. There were no interaction effects observed (newspaper region x dependent variable), suggesting that Southern newspapers are not more tolerant of violence in general than Northern newspapers. While the research suggests a moderate link between COH and aggression, there are certainly Southern individuals who endorse COH and do not behave aggressively. It is possible that personality traits, such as psychopathic traits, may account for some of the variance in the relationship between COH and aggression. Both psychopathy and COH are traits that may predispose an individual toward aggressive behavior. Other variables, such as alcohol consumption, may also account for engaging in aggressive behavior.

Alcohol Consumption

Relationship with psychopathic personality traits. Psychopathic personality traits are associated with substance use and substance use disorders (Rutherford, Alterman, & Cacciola, 2000). Several researchers found strong relationships between both total psychopathy scores and alcohol use/disorders, and Factor 2 traits and alcohol use/disorders (Hart & Hare, 1989; Hemphill, Hart & Hare, 1994; Smith & Newman, 1990). These studies found no relationship or a small relationship between Factor 1 traits and alcohol use/disorders. As a result of such research, Hare (2003) concluded that the relationship between psychopathy and substance use/disorder was due primarily to Factor 2 traits. More recent research has attempted to ascertain whether the link between psychopathy and substance use/disorder is due to general antisocial behavior or psychopathic traits specifically. For example, Walsh, Allen, and Kosson (2007) examined the relationships between specific dimensions of psychopathy and several substance

use disorders. Their findings suggested that alcohol disorders were related to Factor 2 traits unique to psychopathy, not just to general antisocial behavior, but not to Factor 1 traits.

Relationship with aggression. The relationship between alcohol consumption and aggressive behavior is robust and well-established (Bushman & Cooper, 1990; Chermack & Giancola, 1997; Giancola, 2000). The relationship is supported by both experimental and nonexperimental data (e.g., census data, community studies) (Chermack & Giancola, 1997), as well as meta-analyses (Hull & Bond, 1986; Ito, Miller, & Pollock, 1996). Despite the correlation between alcohol use and aggression, the causality of the relationship has been contested. Some have found that higher rates of violence and aggression were predictive of higher levels of alcohol use (Loeber et al., 1998; Weiner, 2002). Others have reported that state and trait alcohol use are predictive of later aggression (Sussman et al., 1999, 2004; White, Brick, & Hansell, 1993; White & Hansell, 1996). Finally, others have found prospective and reciprocal relationships between trait alcohol use and aggression (Huang et al., 2001; White et al., 1999). One limitation of the literature regarding the relationship between alcohol use and aggression is that aggression is typically operationalized as physical aggression. One study (Skara et al., 2008) examined both physical and relational aggression with regard to drug use. Both physical and relational aggression were measured at baseline, and drug use was measured at a 1-year follow-up. Baseline relational aggression was predictive of future alcohol use for both males and females, while baseline physical aggression was predictive of future alcohol use for males only. Evidence suggests a strong link between both psychopathic personality traits and alcohol use, and aggression and alcohol use. Executive functioning may represent a mediating variable in both of these relationships.

Executive Function

Psychopathy and executive function. Executive function is a broad term referring to a variety of cognitive abilities including concept formation, planning, working memory, cognitive flexibility, selective attention, and response inhibition (Bronowski, 1977). Despite much research into the relationship between executive functions and psychopathy, consistent results have not been found (Hare, 1984; LaPierre, Braun, & Hodgins, 1994; Ray et al., 2008; Sellbom & Verona, 2007; Smith, Arnett, & Newman, 1992; Sutker & Allain, 1987). Instead, what is clear is an inverse relationship between executive functioning abilities and antisocial behavior. In a meta-analysis, antisocial groups performed .62 standard deviations worse on executive functioning tasks than non-antisocial groups (Morgan & Lilienfeld, 2000).

Alcohol consumption, aggression, and executive functions. Given the relationship between alcohol use and aggressive behavior, there has been interest in investigating the causal mechanisms for alcohol-related aggression. Giancola (2000) reviewed literatures investigating the relationships between alcohol and aggression, executive functions and aggression, and the acute effects of alcohol on executive functions and generated a two-part explanatory framework for the relationship between alcohol and aggression. First, Giancola argued that executive functions mediate the relationship between alcohol use and aggression. That is, alcohol use disrupts executive functions, making the probability of aggression higher. Second, Giancola contended that executive functions moderate the relationship between alcohol use and aggression. For individuals with low executive functioning, alcohol use would be more likely to facilitate aggressive behavior than for individuals with high executive functioning because individuals with low executive functioning have a lower threshold for interruptions to their planning, forward thinking, and cognitive flexibility.

The Current Study

The current study will seek to investigate the relationships between the following variables: psychopathic personality traits, COH, aggression, alcohol consumption, and executive functioning. To my knowledge, this is the first research to address how regional differences may interact with personality traits to influence aggression in a sample from the United States. Two additional points deserve mention. First, this is the first experimental COH research to include women and an ethnically diverse sample. Previous COH research (Nisbett & Cohen, 1996) used samples containing all Caucasian men. Therefore, the current research is more inclusive, and will also test the boundaries of the COH findings in a way that has not been done before (i.e., is the relationship between COH and aggression extendable to women and minorities?). Additionally, this is the first COH study to utilize multiple operationalizations of COH. Previous research operationalized COH by a North/South distinction (Nisbett & Cohen, 1996) or by scores on one self-report COH measure (Figueredo et al., 2004). By using multiple operationalizations of COH in this study, it will be possible to examine whether North/South differences, city size differences, and scores on COH self-report measures demonstrate similar patterns with regard to aggression variables. Also, it will be possible, for the first time, to examine the relationships between the various self-report measures of COH. In this way, the present study will attempt to examine relationships between these different COH operationalizations that have not been examined, and perhaps taken for granted, previously.

Hypotheses

Given the previous research, I advance the following hypotheses:

Primary Hypothesis 1: Culture of honor will be positively associated with aggression. COH has been implicated as a possible explanation for violent and aggressive behavior or endorsements of violent and aggressive behavior (Cohen & Nisbett, 1994; Hayes & Lee, 2005;

Henry, 2009; Nisbett, 1993; Nisbett & Cohen, 1996; Vandello et al., 2009). The relationship between COH and aggression has been established via self-report data measures (Figueredo et al., 2004), laboratory data (Cohen et al., 1996; Henry, 2009; Nisbett, 1993; Vandello, Cohen, & Ransom, 2008), and field experiments (Cohen, 1998; Cohen & Nisbett, 1997). In many previous studies, COH was operationalized via geographic regions (i.e., North versus South in the United States, or herding versus farming elsewhere). Additionally, much of the previous data has used census or government data to establish the relationship between COH and aggression; that is, few studies investigated an in-vivo relationship between COH and aggressive behavior. Further, there has been no previous research regarding the relationship between COH and relational aggression. Therefore, from previous research we hypothesize a relationship between COH and aggression. The current study will add to the previous literature by operationalizing COH in multiple ways: via scores on self-report measures of COH attitudes, region, and city size within region. We expect that Southerners will be more aggressive than Northerners, as they should be higher on COH. Also, we expect that Southerners from smaller and medium cities would be more aggressive than Southerners from large cities or Northerners. In addition, the current study also extends the previous literature by measuring aggression in several ways (i.e.,laboratory behavioral aggression, self-reported physical aggression, and self-reported relational aggression).

Primary Hypothesis 2: Psychopathic traits will be positively associated with aggression, with Factor 2 traits being significantly more strongly associated with aggression than Factor 1 traits. A wealth of research has established a consistent and well-validated relationship between psychopathy and aggression (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991; Hart, 1998; Neumann & Hare, 2008; Skeem & Mulvey, 2001). Further, the relationship between Factor 2 and aggression is more robust than that between Factor 1 and aggression (Hare, 2003;

Neumann & Hare, 2008; O'Toole, 2007). While most of the previous research focused on the relationship between psychopathy and physical aggression, two studies supported a relationship between psychopathy and relational aggression (Marsee, Silverthorn, & Frick, 2005; Schmeelk, Sylvers, & Lilienfeld, 2008). Based on the previous literature, we expect that psychopathy will be associated with all measures of aggression, and that Factor 2 will be more strongly associated with aggression than Factor 1. The present study extends the previous literature by measuring behavioral aggression (via the laboratory reaction time paradigm), relational aggression, and physical aggression in a community sample.

Primary Hypothesis 3: Culture of honor will moderate the relationship between psychopathic personality traits and aggression. The relationship between COH and aggression has been well-established (Cohen, 1998; Cohen & Nisbett, 1994, 1997; Figueredo et al., 2004; Hayes & Lee, 2005; Henry, 2009; Nisbett, 1993; Nisbett & Cohen, 1996; Vandello, Cohen, & Ransom, 2008; Vandello et al., 2009). Similarly, the relationship between psychopathic personality traits, particularly Factor 2 traits, and aggression has been well-established (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991, 2003; Hart, 1998; Neumann & Hare, 2008; O'Toole, 2007; Skeem & Mulvey, 2001). We were interested in examining whether psychopathy and COH may interact to explain a greater amount of variance in aggression. Examinations of the relationship between COH and aggression have never used cognitive biases towards aggression or relational aggression as dependent variables, so the current study will add to the previous literature by expanding the type of aggression analyzed. To our knowledge, only one study has investigated whether personality factors may interact with COH to affect behavioral outcomes. Somech and Elizur (2009) found that the relationships between callousness and conduct problems and SES and conduct problems were both mediated by COH

in Israeli adolescent boys. As callousness is a trait associated with Factor 1 of psychopathy, and is hypothesized to be a precursor of later psychopathic traits (see Kruh, Frick, & Clements, 2005), we interpret Somech and Elizur's results as very preliminary support for our hypothesis. Further, our research will extend Somech and Elizur's by examining the relationship between COH, personality traits and behavioral outcomes in an older, American sample, and also use multiple operationalizations of the behavioral outcome (i.e., aggression).

Secondary Hypothesis 1: Aggression will be positively associated with alcohol consumption. Previous research has established a robust and consistent relationship between aggression and alcohol consumption (Chermack & Giancola, 1997; Giancola, 2000; Huang et al., 2001; Ito, Miller, & Pollock, 1996; Sussman et al., 1999, 2004; Weiner, 2002). However, this research mostly operationalized aggression via measures of physical aggression. Only one study examined the relationship between relational aggression and alcohol consumption, finding that relational aggression was predictive of alcohol use one year later for both males and females (Skara et al., 2008). Therefore, we expect that aggression will be positively associated with alcohol consumption in the present study. This study will add to previous research by investigating the relationship between relational aggression and alcohol consumption. Further, we will investigate the relationship between cognitive biases towards aggression and alcohol consumption, which represents a new research question.

Secondary Hypothesis 2: Psychopathic traits will be positively associated with alcohol consumption, with Factor 2 traits being more strongly associated with alcohol consumption than Factor 1 traits. One of the consistent correlates of psychopathy is alcohol and drug use. There is a well-validated relationship between psychopathic personality traits and alcohol consumption or alcohol disorders (Hart & Hare, 1989; Hemphill, Hart, & Hare, 1994; Neumann & Hare, 2008;

Smith & Newman, 1990). Examinations of psychopathy's factors consistently indicate that Factor 2 is more strongly related to alcohol use than Factor 1, and that Factor 1 is inconsistently related to alcohol use (Hare, 2003; Walsh, Allen, & Kosson, 2007). Based on the previous research, we hypothesized that psychopathy, particularly Factor 2 traits, would be associated with alcohol consumption. This study will add to the current literature regarding psychopathic personality traits and alcohol consumption as much of the previous research has used clinical or incarcerated samples, while the present study will use a community sample.

Secondary Hypothesis 3: Executive functioning will mediate the relationship between psychopathic personality traits and aggression, as well as the relationship between alcohol consumption and aggression. Psychopathy and aggression, particularly Factor 2 traits and aggression, are reliably associated (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991, 2003; Hart, 1998; Neumann & Hare, 2008; O'Toole, 2007; Skeem & Mulvey, 2001). While the relationships between psychopathy and aggression has been well-established, evidence for a relationship between psychopathy and executive functioning was inconsistent (Hare, 1984; LaPierre, Braun, & Hodgins, 1994; Ray et al., 2008; Sellbom & Verona, 2007; Smith, Arnett, & Newman, 1992; Sutker & Allain, 1987). Further, the relationship between executive functioning and aggression has been well-established, such that lower levels of executive functioning correspond to higher levels of aggression (Giancola, 1995; Giancola & Zeichner, 1994; Hoaken et al., 1998; Lau & Pihl, 1996; Lau et al., 1995; Moffitt, 1993). Given the relationships between psychopathy, executive functioning, and aggression, we wanted to investigate whether executive functioning would mediate the relationship between psychopathy and aggression. It was our hope that these analyses may further elucidate the relationship between psychopathy and

executive functioning by testing a pathway between psychopathy and aggression via executive functioning.

Next, Giancola (2000) reviewed the aggression, executive functioning, and alcohol consumption literatures, proposing that executive functioning mediates the relationship between alcohol consumption and aggression. That is, alcohol use disrupts executive functions, making the probability of aggression higher. We sought to test this theoretical model and add new information to it by including measures of relational aggression and cognitive biases towards aggression.

Secondary Hypothesis 4: Exploratory analyses will investigate whether alcohol consumption acts as a covariate along with psychopathy in predicting aggression. Both alcohol consumption (Chermack & Giancola, 1997; Giancola, 2000; Huang et al., 2001; Ito, Miller, & Pollock, 1996; Sussman et al., 1999, 2004; Weiner, 2002) and psychopathy (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991, 2003; Hart, 1998; Neumann & Hare, 2008; O'Toole, 2007; Skeem & Mulvey, 2001) are associated with aggression. To our knowledge, only one study examined whether psychopathic traits and alcohol consumption may interact to increase aggression. Denson, White, and Warburton (2009) examined the relationships between psychopathic personality traits, acute alcohol consumption, aggression, and rumination in 100 undergraduate students. Findings supported an interaction effect between psychopathy and rumination that resulted in increased aggression, but there was no support of an interaction effect between psychopathy and alcohol consumption resulting in increased aggression. The present study will examine whether alcohol consumption and psychopathy interact to increase the amount of explained variance in aggression.

Secondary Hypothesis 5: Psychopathic personality traits and aggression will be positively correlated. This relationship will be moderated by gender, with men displaying a more pronounced association. The relationship between psychopathic personality traits and aggression is well-established (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991, 2003; Hart, 1998; Neumann & Hare, 2008; O'Toole, 2007; Skeem & Mulvey, 2001). Research investigating gender as a possible moderator in the relationship between psychopathy and aggression yielded mixed results. A recent meta-analysis found that gender was a significant moderator of the relationship between psychopathy and antisocial outcomes, including aggression (Leistico et al., 2008). For total psychopathy and Factor 1 scores, samples that included more females accounted for antisocial conduct better. In contrast, the relationship between Factor 2 and antisocial contact was not moderated by gender.

With regard to relational aggression, findings regarding gender have been inconsistent. Several studies suggested that females are more predisposed towards relational aggression than are men (Crick, 1995; Crick & Werner, 1998; Simmons, 2003). However, the two studies that investigated gender as a moderating variable in the relationship between psychopathy and relational aggression found no interaction effects (Marsee, Silverthorn, & Frick, 2005; Schmeelk, Sylvers, & Lilienfeld, 2008). The present study will examine whether gender moderates the relationship between psychopathy and various types of aggression (e.g., relational aggression, behavioral aggression, cognitive biases towards aggression, and self-reports of aggression).

Method

Participants

144 undergraduate students from the Emory Introductory Psychology student pool were recruited. Both males and females participated, as I planned to investigate whether the COH

construct, and its associations with aggression, can be generalized to females. Similarly, participants were not sampled based on race (i.e., I included participants from all races in the study), which will extend the current literature that has focused on Caucasian males only. Based on demographic information obtained from the Emory University Admissions Department, approximately half of the undergraduate student population were from Southern states (e.g., Georgia, Tennessee, Alabama, etc.; also, see Appendix B), suggesting that there would be adequate numbers of students from the North and the South to examine the differences between these regions with adequate power.

81 participants completed both the laboratory component of the study and the paper-and-pencil measures. 63 participants completed the paper-and-pencil measures only (see the Procedures section for an explanation). Table 1 reports the demographic information of the participants.

Measures

Psychopathic Personality Inventory-Revised. The Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005) is a self-report measure of psychopathic personality traits for noncriminal (e.g., undergraduate) populations. The 154 items were answered by responding on 4-point Likert scale (1=false to 4=true), and assessed the core personality traits of psychopathy. The PPI-R generates eight content scales: Machiavellian Egocentricity, Social Influence (formerly called Social Potency in the PPI), Coldheartedness, Carefree Nonplanfulness, Fearlessness, Blame Externalization, Rebellious Nonconformity (formerly called Impulsive Nonconformity in the PPI), and Stress Immunity. The PPI-R also yields three factor scores: Fearless Dominance (PPI-R-I), corresponding largely to interpersonal and affective traits, and Impulsive Antisociality (PPI-R-II), corresponding largely to a

disposition toward socially deviant behaviors, and Coldheartedness, corresponding to emotional detachment (see Benning, Patrick, Hicks, Blonigen, & Krueger, 2003). PPI-R-I is obtained by summing scores on the Social Influence, Fearlessness, and Stress Immunity subscales; PPI-R-II is obtained by summing scores on the Machiavellian Egocentricity, Carefree Nonplanfulness, Blame Externalization, and Rebellious Nonconformity subscales. The PPI-R-II Coldheartedness subscale does not load highly on either factor (Lilienfeld & Widows, 2005) and will be examined as a separate factor in exploratory analyses. The internal consistencies (Cronbach's alphas) of the PPI-R Factor 1 and PPI-R Factor 2 scales in this sample were $\alpha = .90$ and $\alpha = .87$, respectively. See Appendix C for sample PPI-R items.

State and Zip Code. Participants were asked to identify state they grew up in. If they lived in more than one state, they were asked which state they lived in for the longest amount of time, prior to attending college. States were coded either North or South and analyzed dichotomously. "Southern" states were those defined by Nisbett and Cohen (1996; see Appendix B for a list of Southern states). All states that were not identified as "Southern" by Nisbett and Cohen were classified as "Northern."

Participants were also asked the zip code of the place where they grew up. Nisbett and Cohen (1996) found that in addition to being from the South, Southerners from small or medium cities displayed more violence and aggression than Southerners from large cities or Northerners. Using the following website (http://realestate.yahoo.com/neighborhoods), participants' zip codes were coded into one of the following six categories: 1) Northern small (population less than 50,000), 2) Northern medium (population between 50,000 and 200,000), 3) Northern large (population greater than 200,000), 4) Southern small (population less than 50,000), 5) Southern medium (population between 50,000 and 2000,000), and 6) Southern large (population greater

than 200,000). Nisbett and Cohen (1996) used the same categories for analyses regarding the relationship between region and city size with regard to violence (1996).

Income. Participants' families income was calculated based on the zip code provided by the participant. Using the following website (http://www.melissadata.com/lookups/TaxZip.asp?Zip=02139&submit1=Submit), participants' zip codes were used to calculate the average adjusted gross income of individuals living in the area. Although this measure of income was not specific to the participant, it did give a reasonable proxy of the income of individuals living in the particular geographic area.

Culture of Honor Questionnaire. The Culture of Honor Questionnaire (CHQ; Figueredo et al., 2004) is a self-report measure of attitudes thought to be present in COH. Thirty-two items discuss a character in a situation and report the character's behavioral response to the situation (e.g., A male stranger deeply insulted Mary's sister in public. Mary then slapped the stranger.). Participants were asked to respond on a 6-point Likert scale ranging from whether the character responded more than he/she should have done to less than he/she should have done. Higher scores indicated more endorsement of revenge and reciprocity. The COH questionnaire has two scales: Revenge and Reciprocity. Figueredo et al. (2004) reported acceptable alphas (0.76-0.88, ranging across six sites where they were validated) for the Revenge scales, but unacceptable alphas (-.01-.33) for the Reciprocity scale. Further, based on their results, Figueredo et al. (2004) suggest more validity for the Revenge scale, due to theoretically-consistent differences in responses between groups (i.e., herders vs. farmers), than for the Reciprocity scale. For this study, I used the Revenge scale, but not the Reciprocity scale. The internal consistency (Cronbach's alpha) of the CHQ Revenge scale in this sample was α=.80. See Appendix D for the CHQ measure.

Honour Concern Scale. The Honour Concern Scale (HCS; Mosquera, Manstead, & Fischer, 2002) is a self-report measure of the extent to which an individual believes that certain situations might damage his or her reputation or status. Twenty-seven items asked participants to imagine that they had behaved in the way the item suggested, or that they had the reputation the item suggested. They were then asked to respond about the extent to which that item would damage their self-esteem or status on a 7-point Likert scale, ranging from *Not at all* to *Very much.* The Honour Concern Scale has four sub-scales: concern for family honour, concern for integrity, concern for masculine honour, and concern for feminine honour. Higher scores indicated more COH attitudes. The internal consistency (Cronbach's alpha) of the HCS in this sample was α=.88. See Appendix E for the HCS measure.

Honor Endorsement Index. The Honor Endorsement Index (HEI; Vandello et al., 2009) is a self-report measure that assessed a participant's agreement with gender-specific honor values. The 9-item measure provided a participant with statements about COH values that were specific to either males or females. Participants were asked the extent to which they agreed or disagreed with each statement by providing a score on 7-point Likert scale. Higher scores indicated stronger COH attitudes. Vandello et al. (2009) report the alpha of the scale as .86. The internal consistency (Cronbach's alpha) of the HEI in this sample was α=.82. See Appendix F for the HEI measure.

Competitive Reaction Time Measure of Laboratory Aggression (CRT). The Taylor Aggression Paradigm (TAP) is a well-validated laboratory measure of aggressive behavior which utilizes electric shocks (Giancola &Chermack, 1998; Taylor, 1967). Bushman and colleagues (Bushman, 1989; Bushman & Baumeister, 1998) updated the TAP, creating the CRT, to use

noise blasts instead of shocks, to include a non-aggressive response option, and to allow participants to dictate the duration of the stimulus.

The CRT was presented to participants as a computer-administered test of reaction time. Participants were informed that they were playing against a partner who was using a computer in a different room; in reality there is no opponent, and the participant is competing against random computer responses. Participants were told that they would compete against their opponent to determine who responds fastest to changes in colored squares on the computer. As incentive to respond quickly, participants were told that if they responded the quickest, they will be allowed to choose the intensity and duration of an annoying noise blast that would be directed towards their opponent. Similarly, participants were informed that if they responded slower than their partner on a trial, their partner would choose the intensity and duration of an annoying noise blast that they would receive. Both the intensity and duration of the noise blasts were decided prior to the start of each trial. The CRT was composed of twenty-five trials.

Despite informing the participants that the CRT was a measure of reaction time, the CRT was actually a measure of aggression. Aggression was operationalized via the participant's chosen intensity and duration of the noise blasts. Each trial was randomly chosen as a win (i.e., the participant responds the fastest) or a loss (i.e., the opponent responds the fastest). The participant was informed immediately after each trial of whether the trial was a win or loss. If the trial was a loss, the participant received the noise blast selected by the opponent. If the trial was a win, the participant was led to believe that their opponent would receive the noise blast that s/he selected prior to the beginning of that trial. The computer software recorded the participant's chosen noise intensities and durations. Higher intensities and durations indicated

more aggressive behavior. The internal consistencies (Cronbach's alphas) of the CRT-Duration in this sample was α=.94 and the CRT-Intensity in this sample was α=.95.

Conditional Reasoning Test of Aggression. The Conditional Reasoning Test of Aggression (CRT-A; James & McIntyre, 2000) is a self-report measure of implicit biases that ostensibly influence aggressive behavior. Twenty-five items asked participants to read a short problem and then select the most "logical" solution to the given problem. Four possible solutions were given. For each problem, one of the possible responses represented an "aggressive" response. The authors believe that participants who select the aggressive response are more likely to behave aggressively because they cognitively rationalize aggression. Higher scores indicated more proclivity towards aggression. James and McIntyre (2000) report the CRT-A as having strong reliability and validity. With regard to criterion-related validity, scores on the CRT-A correlated .44 with behavioral measures of aggression collapsed across 11 studies (James et al., 2005). The internal consistency (Cronbach's alpha) of the CRT-A in this sample was α= .60. See Appendix G for a sample CRT-A item.

Aggression Questionnaire. The Aggression Questionnaire (BPAQ; Buss & Perry, 1992) is a self-report measure of overt aggressive behaviors. Twenty-nine items assessed an individual's endorsement of how characteristic each statement is of them. Participants responded on a 7-point Likert scale ranging from *Extremely uncharacteristic of me* to *Extremely characteristic of me*. Higher scores indicated more aggressive tendencies. The AQ contains four scales representing different types of aggressive behavior: Anger, Hostility, Physical Aggression, and Verbal Aggression. The internal consistency (Cronbach's alpha) of the BPAQ in this sample was α=.88. See Appendix H for sample BPAQ items.

Self-Report of Aggression and Social Behavior. The Self-Report of Aggression and Social Behavior (SRASB; Morales, 1999) is a self-report measure of relational aggression that focuses on intimate relationships (e.g., romantic relationships or friendships). Sixteen items pertaining to behaviors consistent with relational aggression were answered using a 7-point Likert scale ranging from *Not at all true* to *Very true*. Items included "I try to make my romantic partner jealous when I am mad at him/her" and "When I have been mad at a friend, I have flirted with his/her romantic partner." Higher scores indicated more relational aggression. The internal consistency (Cronbach's alpha) of the SRASB in this sample was α=.85. See Appendix I for sample SRASB items.

Relational Aggression Scale. The Relational Aggression Scale (RAS; Markon, unpublished measure, 2003) is a self-report measure of general relational aggression. Twenty items described motivations for relational aggression and behaviors consist with relational aggression. Participants responded using a 4-point Likert scale ranging from *False* to *True*. Items included "I sometimes enjoy it when other people get left out" and "I've insulted someone because they annoyed me." Higher scores indicated more relational aggression. The internal consistency (Cronbach's alpha) of the RAS in this sample was α=.89. See Appendix J for sample RAS items.

Michigan Alcoholism Screening Task. The Michigan Alcoholism Screening Task (MAST; Selzer, 1971) is a self-report measure of alcoholism and alcohol-related problems. Twenty-five items pertaining to cognitive, emotional, and behavioral aspects of drinking were answered dichotomously (i.e., Yes or No). The MAST has been administered to various populations (e.g., hospitalized alcoholics, convicted drunk drivers, community members) and was demonstrated to have predictable correlations with external criterion variables (e.g., legal,

social, and medical reports of drinking behaviors) (Selzer, 1971). These correlations support the validity of the instrument. Higher scores on the MAST corresponded to more alcoholism or more drinking-related problems. The internal consistency (Cronbach's alpha) of the MAST in this sample was α=.58. See Appendix K for the MAST measure.

Frontal Systems Behavior Scale. The Frontal Systems Behavior Scale (FrSBe; Grace & Malloy, 2001) is a self-report measure of frontal lobe deficits. The 46 items were answered by responding on a 5-point Likert scale (1=Almost never to 5=Almost always). Higher scores indicated greater frontal lobe impairment. The FrSBe generates three scales, each assessing a distinct frontal lobe impairment: apathy, disinhibition, and executive dysfunction. The internal consistency (Cronbach's alpha) of the FrSBe in this sample was α=.77. See Appendix L for sample FrSBe items.

Profile of Mood States. The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) is a self-report measure of current mood states. The 20 items were answered by responding on a 5-point Likert scale (1=Not at All to 5=Extremely). Higher scores indicated more endorsement of the moods listed. The POMS was administered as a manipulation check to assess whether the participant feels challenged or insulted following the scripted feedback (see Procedure section). See Appendix M for sample POMS items.

Procedure

Participants were told that they were participating in a study investigating the relationship between personality traits and response time. The research assistant (RA) had a scripted cover story explaining why reaction time may be influenced by various personality traits. After the participant received the cover story, s/he was randomized to one of two conditions. Participants in both conditions were administered the same set of measures. Participants randomized to the

first condition received an insult and completed the CRT first, followed by administration of the paper-and-pencil measures (i.e., COH, psychopathy, conditional reasoning, aggression, alcoholism, and executive functioning measures). Participants randomized to the second condition completed the paper-and pencil measures (i.e., COH, psychopathy, conditional reasoning, aggression, alcoholism, and executive functioning measures), then received an insult and completed the CRT. Thus, I counter-balanced the measures in the study. I used a counter-balanced study design to examine the possibility that the order of administration may bias performance on other measures.

For the paper-and-pencil measures condition the participant was told to complete the measures to the best of his/her abilities and as accurately as possible. S/he was told to ask the experimenter if any questions arose. For the insult/CRT condition, the participant was told that the first part of the study assessed how good undergraduates were at determining one another's personality traits. The participant was told that tasks had been randomly assigned to the participant and a partner that was another undergraduate also participating in the study; in reality, there was no partner.

The participant was told that their first task was to view five cartoon pictures depicting characters in frustrating situations. The cartoons were part of the Rosenzweig Picture Frustration Task (see Appendix N) (Rosenzweig, 1978). The cartoons depicted characters in frustrating situations who are talking about their situtation. The participant was asked to state what s/he would say next in the situation. The participant was told that one of the study objectives was to investigate whether undergraduate students can accurately interpret a psychological assessment. To examine this, the participant had a "partner" that "analyzed" the participant's responses to the cartoon and tried to determine the participant's personality traits. Once the participant had given

responses to all five cartoons, the RA told the participant to wait several minutes while the partner determined the participant's personality traits. The RA left the room that the participant was in, and made sure to shut the door so that the participant "could not see their partner."

The RA left the participant for seven minutes and then returned, again keeping the laboratory door shut. The RA told the participant that s/he would then share the partner's feedback with the participant, and the participant would have the opportunity to rate how accurate the partner was. The RA provided scripted feedback to the participant (see Appendix O). The feedback was meant to insult and challenge the participant's honor. The feedback consisted of telling the participant that their partner believed that s/he does not stand up for him/herself very well and that his/her family of origin was also likely inadequate in this domain. After receiving the feedback, the participant then completed the POMS to assess their current mood. Then, the participant completed the CRT. The participant was told that they were competing on a reaction time task against the partner they worked with on the cartoon task. Therefore, the participant had the opportunity to deliver unpleasant noise blasts to the person who just gave insulting feedback to the participant.

Due to the concerns about statistical power, additional subjects were recruited to complete the paper-and-pencil measures only (i.e., these subjects did not participate in the insult and laboratory aggression tasks).

Results

Preliminary analyses

Prior to examining the hypotheses, a variety of preliminary analyses were conducted to investigate several assumptions about the data.

PPI-R inconsistent responding. The PPI-R contains a measure of inconsistent responding. If a participant responds inconsistently, there may be an excessive amount of unsystematic measurement error associated with that individual's PPI-R responses, necessitating the exclusion of his or her data. To examine whether any of the participants' had high scores of inconsistent responding, a histogram examining the PPI-R Inconsistent Responding scale was created (see Figure 1). Participants' responding on the PPI-R followed an approximately normal distribution with no obvious outliers. Therefore, all 144 participants' data were included in subsequent analyses.

Relationships among COH measures. As the COH measures all measured slightly different aspects of this construct (e.g., rating the impact that a certain reputation might have on one's own self-esteem versus whether a fictional character over- or under-reacted in an imagined scenario), the correlations among the three measures of COH were examined. The HEI was significantly correlated with either the HCS (r=.17, p=.05), but not with the CHQ (r= .07, p=.40). The HCS was significantly negatively associated with the CHQ (r=-.33, p<.001). Thus, subsequent COH analyses will use the three separate COH measures.

COH measures and regional differences. According to the COH literature, Southerners should endorse higher levels of COH than Northerners. To investigate this assumption, *t*-tests examined whether regional differences impacted COH scores. Table 2 reports the results of the *t*-tests and gives values for the Cohen's *d* associated with each analysis. Northern and Southern participants responded significantly differently on only one scale, the Masculine Honor scale of the HCS. However, this difference was in the non-predicted direction; that is, Northern participants endorsed higher levels of Masculine Honor than Southern participants. There were no other regional differences on the other measures of COH.

COH measures and gender. The present study used both male and female participants, whereas the lion's share of previous research has used exclusively male samples. Thus, several analyses examined whether men and women responded differently on the three COH measures. To investigate differential response patterns, *t*-tests were used. Table 3 reports the results of the *t*-tests and gives values for the Cohen's *d* associated with each analysis. Males reported significantly higher levels of COH on the CHQ. In contrast, females reported significantly higher levels of COH with regard to total HCS scores, as well as the Integrity, Feminine Honor, and Family Honor scales of the HCS.

Regional differences and gender. As some, but not all, of the previous analyses suggested that regional differences and gender were associated with differential responses on the three COH measures, analyses were conducted to investigate a possible statistical interaction between regional differences and gender with regard to COH. Factorial ANOVA analyses in which region (i.e., North or South) and gender (i.e., male or female) were examined as main effects and region by gender as the interaction effect with regard to the three COH measures were conducted. For the CHQ, there was a significant gender effect, $F(1, 144)=42.94$, $p<.001$, Cohen's $d=1.04$. There was no significant regional main effect, nor a significant interaction effect. With regard to the HCS, there was a significant gender effect, $F(1, 144)=10.28$, $p=.002$, Cohen's $d=0.52$. There was not a significant regional main effect, nor a significant interaction. For the final COH measure, the HEI, there were no significant main effects. With regard to the HEI, the interaction between region and gender was significant, $F(1, 144)=4.46$, $p=.04$, $\eta^2=.03$. Figure 2 depicts the interaction between region and gender with regard to the HEI. The graph demonstrates that Southern females had higher HEI scores than Northern females, whereas Southern males had lower HEI scores than Northern males.

COH measures and city size. In addition to testing the assumption that Southerners would respond with higher levels of honor attitudes on the three COH measures, possible differences in responding associated with city size on the COH measures was examined. One-way ANOVAs were used to examine whether Northerners and Southerners from various city sizes responded differently on the COH measures. City size did not relate to participants' responses on the CHQ, $F(5, 143)=.42$, $p=.83$; the HCS, $F(5, 143)=.71$, $p=.62$; nor the HEI, $F(5, 143)=.67$, $p=.65$. Therefore, city size was not associated with differential patterns of response on any of the COH measures.

Income and COH. To determine whether income was related to COH, analyses were conducted to determine whether income varied between the various COH groups. First, a *t*-test was conducted to determine if there were regional differences with regard to income. There was a significant difference between Northerner's mean income ($190,705.72) and Southerner's mean income ($101,713.90), $t(142)=3.94$, $p<.001$. Next, an ANOVA was conducted to determine if income varied by city size. There were significant differences between small and large cities with regard to income, $F(5, 143)=3.70$, $p<.001$. Finally, correlation analyses were conducted to determine whether income was related to self-reports of COH. None of the COH measures was related to income: CHQ ($r=-.07$), HEI ($r=.06$), HCS ($r=.07$). The results of these analyses suggested that regional difference and city size are related to income differences, while self-reported COH was not related to differences in income.

Manipulation check. To ascertain whether the deception and "insult" were successful manipulations (i.e., made the participants angry and aggressive), participants completed several items from the POMS regarding current emotions and completed a questionnaire assessing their "partner." Both the emotions from the POMS and the partner questionnaire were used as

manipulation checks. Though participants completed POMS ratings for many emotions (1=not at all to 5=extremely), ratings of six emotions were relevant to the study: annoyed (range=1-4, mean=1.83), furious (range=1-5, mean=1.19), bad-tempered (range=1-4, mean=1.21), insulted (range=1-5, mean=1.81), ready to fight (range=1-4, mean=1.12), and peeved (range=1-4, mean=1.62). Participants completed the partner questionnaire with ratings from 1(not at all) to 5(extremely). The following were the ranges and means for the partner questionnaire: partner's accuracy (range=1-5, mean=3.09), partner's intelligence (range=1-5, mean=3.73), partner's perceptiveness (range=1-5, 3.48), partner's knowledge level (range=1-5, mean=3.26), whether partner should participate in another study (range=2-5, mean=3.98), and whether the participant would work with his/her partner again (range=1-5, mean=3.44). Responses to the partner questionnaire were summed, leading to a total score where higher scores indicated more regard for the partner and lower scores indicated less regard for the partner. Total scores on the partner questionnaire ranged from 10-30, with a mean of 20.99.

The results of the POMS and the partner questionnaire indicated that participants were mildly distressed by their "partner's" insult and thought moderately well of their partner. However, these ratings may not have been entirely accurate due to a concern for social desirability. During debriefings, the experimenter asked each participant whether he/she was upset by the "partner's" feedback. Many of the participants said that they were upset, but that they did not want to get their partner in trouble. Additionally, when asked about the ratings of their partner, many participants said that their partner was partially correct in the feedback that they provided based on the participant's responses to the cartoon. This phenomenon may partly reflect a Barnum Effect. As some of the feedback was generic (e.g., being fairly well-adjusted, having at least average self-esteem, having experienced some frustrating things in life)

participants may have given their partner high ratings based on some of the generic content in the feedback. Therefore, from questions asked to the participants during the debriefing, as well as ratings from the POMS and the partner questionnaire, the manipulation was probably mildly insulting to the participants.

Study design check. To avoid a possible confound with regard to the order of the laboratory measures and the self-report measures, a counterbalanced design was implemented for the 81 participants who completed both the laboratory measures and the self-report measures. *T*-tests examined whether the order of the study (i.e., laboratory measures first then self-report measures versus self-report measures first then laboratory measures) was associated with differences in responses with regard to the following measures: CRT duration, CRT intensity, PPI-R, MAST, HCS, SRASB, RAS, HEI, BPAQ, FrSBe, CRT-A, and the CHQ. None of the *t*-tests was significant, indicating that the order of measures did not affect the way participants responded to the measures.

Laboratory aggression measures. The measure of laboratory aggression, the CRT, yielded two scores for each participant: a duration score and an intensity score. The correlation between the CRT-Duration and CRT-Intensity score was r=.92, p<.001. As a very strong relationship existed between the two CRT scores, the scores were standardized (i.e., Z-scored) and combined to create one robust measure of laboratory aggression per participant. Subsequent analyses will utilize the combined, standardized measure of laboratory aggression.

Primary Hypothesis 1

I hypothesized that culture of honor would be positively associated with aggression. First, I examined this hypothesis by using the regional differences operationalization of COH (i.e., North versus South). *T*-tests were used to investigate whether participants from different

geographic regions (a proxy for COH) exhibited differences in aggressiveness. Table 4 presents the results of these analyses. Two of the analyses indicated that Southern participants scored significantly higher on aggression than Northern participants, and thus supported the hypothesis. Southern participants reported more cognitive biases towards aggression, $t(142)=-1.97$, $p=.05$. Also, Southern participants reported more physical aggression on the BPAQ, $t(142)=-1.92$, $p=.05$. There were no significant differences between Northerners and Southerners with regard to laboratory aggression, relational aggression, or total self-reported aggression. Therefore, when COH was operationalized regionally, there was only partial support for the hypothesis that Southerners were more aggressive than Northerners.

Next, I examined the hypothesis that COH would be associated with aggression by operationalizing COH via city size. One-way ANOVAs were used to investigate whether participants from different sized cities in the North and South exhibited differences in aggressiveness. City size was not differentially related to laboratory aggression, $F(5, 80)=.27$, $p=.93$; relational aggression (as measured by the RAS), $F(5, 143)=.87$, $p=.50$; relational aggression (as measured by the SRASB), $F(5, 143)=.91$, $p=.48$; cognitive biases toward aggression, $F(5, 143)=1.92$, $p=.09$; total aggression (as measured by the BPAQ), $F(5, 143)=.85$, $p=.52$; physical aggression (as measured by the BPAQ), $F(5, 143)=1.64$, $p=.15$; verbal aggression (as measured by the BPAQ), $F(5, 143)=.56$, $p=.73$; anger (as measured by the BPAQ), $F(5, 143)=.85$, $p=.51$; or hostility (as measured by the BPAQ), $F(5, 143)=.33$, $=.89$. That is, there were no significant relationships between city size and aggression.

Finally, I examined the relationship between COH and aggression by operationalizing COH as scores on self-report measures of COH (i.e., the HEI, the CHQ, and the HCS). Table 6 presents the correlations between the COH and aggression measures. There were no significant

relationships between the COH measures and laboratory aggression or cognitive biases towards aggression. The CHQ was associated with RAS relational aggression and total and physical BPAQ aggression. Total HEI scores were associated with self-reported total and physical aggression. The Male Honour scale of the HEI demonstrated the most significant relationships and was associated with RAS relational aggression (r=.18, p=.03), SRASB relational aggression (r=.20, p=.01), total BPAQ aggression (r=.29, p<.001), BPAQ physical aggression (r=.30, p<.001), BPAQ anger (r=.29, p<.001), and BPAQ hostility (r=.17, p=.05). The Female Honour scale of the HEI was not significantly associated with any of the aggression variables.

Total HCS scores were associated with SRASB relational aggression (r=.19, p=.02), BPAQ anger (r=.20, p=.02), and BPAQ hostility (r=.21, p=.01). The Integrity scale of the HCS was not associated with any of the aggression variables. Similar to the Male Honour scale of the HEI, the Masculine Honor scale of the HCS demonstrated a large number of significant relationships. It was associated with RAS relational aggression (r=.31, p<.001), SRASB relational aggression (r=.25, p<.001), total BPAQ aggression (r=.28, p<.001), BPAQ physical aggression (r=.21, p=.01), BPAQ anger (r=.24, p<.001), and BPAQ hostility (r=.22, p<.001). The Feminine Honor scale of the HCS was negatively associated to BPAQ physical aggression (r=-.20, p=.02). The Family Honor scale of the HCS was related to SRASB relational aggression and several of the BPAQ scales.

The analyses of the self-report COH measures yielded partial support for the third hypothesis. Each of the three COH measures demonstrated different patterns of relationships with the aggression measures. Across the COH measures, there was most support for relationships between the COH measures and self-reports of total and relational aggression. Scales regarding feminine honor on the HEI and HCS were not related to aggression; in fact, the

HCS Feminine Honor scale was negatively related to BPAQ physical aggression. In contrast, the male honor scales of the HEI and HCS demonstrated a large number of significant relationships with the BPAQ and its scales, as well as the relational aggression measures.

In summary, there was partial support for the hypothesis that COH would be associated with aggression. Contrary to my hypothesis, none of the operationalizations of COH was related to laboratory aggression. Southerners indicated more cognitive biases towards aggression and displays of physical aggression. Participants from different city sizes did not display differences on aggression measures. The COH measures were most commonly associated with relational aggression, total aggression, verbal aggression, physical aggression, anger, and hostility.

Given that income was related to differences in COH in several of the preliminary analyses, I examined whether income would moderate the relationships between COH and aggression. To conduct these analyses I used hierarchical multiple regression analyses. In Step 1, I entered the COH variable (either dummy codes for North/South, city size, or scores for the self-report of COH measures) and income. In Step 2, I entered the multiplicand of COH and income. All five aggression variables (CRT-A, BPAQ, RAS, SRASB, and CRT) were investigated as dependent variables. When COH was operationalized by region (North versus South), income did not moderate the relationships between COH and any of the five aggression variables. When COH was operationalized by city size (small, medium, and large Northern and Southern cities), income did not moderate the relationships between COH and any of the five aggression variables. Finally, when COH was operationalized by scores on self-report measures, income did not moderate the relationships between COH and any of the five aggression variables. Thus, income did not moderate the relationships between COH and aggression.

Primary Hypothesis 2

I hypothesized that psychopathic traits would be positively associated with aggression, with Factor 2 traits being significantly more strongly associated with aggression than Factor 1 traits. Table 4 presents the correlations between Factor 1, Factor 2, total psychopathy, and the five aggression variables, as well as *t*-tests comparing the r-values associated with Factor 1 and Factor 2. The results of the correlation analyses support the hypothesis in that both total psychopathy and Factor 2 traits were associated with aggression, and Factor 2 was more associated with aggression than either Factor 1 or total psychopathy. None of the psychopathy variables was associated with laboratory aggression (as measured by the CRT) or cognitive biases toward aggression (as measured by the CRT-A). With regard to relational aggression, only Factor 2 was associated with the SRASB (r=.29, p<.001), whereas both Factor 2 and total psychopathy were associated with the RAS (r=.44, p<.001; r=.34, p<.001).

For self-reported aggression (as measured by the BPAQ), a similar pattern emerged. Correlations ranged from medium to large among Factor 2 and total and all four scale BPAQ scores. Likewise, correlations ranged from medium to medium-large among total psychopathy and total and all four scale BPAQ scores. In addition, Factor 1 was correlated with two of the BPAQ scales: the Physical scale (r=.27, p<.001) and the Verbal scale (r=.19, p=.02). These two correlations were the only significant relationships between Factor 1 and any of the aggression variables.

With regard to the strength of the relationships between psychopathy and aggression, t-tests comparing the r-values between Factor 1 traits and aggression and Factor 2 traits and aggression were conducted. The results of these t-tests are reported in Table 6. The hypothesis was supported in that the relationships between Factor 2 and aggression were significantly larger than the relationships between Factor 1 and aggression. For the CRT, RAS, SRASB, BPAQ

total, BPAQ Verbal scale, BPAQ Anger scale, and BPAQ Hostility scale, Factor 2 demonstrated significantly stronger relationships than Factor 1.

In summary, psychopathy was positively associated with aggression, and Factor 2 demonstrated more and stronger relationships with aggression than Factor 1. There were no significant relationships between the psychopathy variables and laboratory aggression or cognitive biases. Both Factor 2 and total psychopathy traits were associated with relational and self-reported physical aggression.

Primary Hypothesis 3

The third primary hypothesis stated that culture of honor would moderate the relationship between psychopathic personality traits and aggression. To test this hypothesis, I used hierarchical multiple regressions in which psychopathy traits were entered into step one, COH was entered into step two, and the multiplicand of psychopathy and COH was entered into step three for analyses predicting aggression. Prior to the main analyses, I examined the relationships between COH and psychopathy. Table 7 presents the correlations between the three self-report measures of COH and psychopathy. The CHQ demonstrated the most relationships with the psychopathy scales, factors, and total psychopathy. The HEI was associated with several of the psychopathy scales, as well as Factor 2 and total psychopathy. The HCS was significantly negatively correlated with several of the psychopathy scales. *T*-tests examined whether there were regional differences with regard to the psychopathy scales. Table 8 presents the results of these *t*-tests. There were no regional differences on any of the psychopathy scales.

First, I investigated whether COH moderated the relationship between psychopathy and aggression by using the regional differences operationalization of COH (i.e., North versus South). Tables 9, 10, and 11 present the results of these analyses. In only one analysis was COH

a significant moderator of the relationship between psychopathy and aggression; COH significantly moderated the relationship between Factor 2 traits and SRASB relational aggression, $F(1, 140)=4.30$, $\beta=-1.43$, $R^2=.13$, $p=.02$. This analysis indicated that Northerners who were high on Factor 2 traits were more relationally aggressive than Southerners who were high on Factor 2 traits (see Figure 3). COH was a marginally significant moderator of the relationship between Factor 1 traits and RAS relational aggression, $F(1, 140)=3.13$, $\beta=1.10$, $R^2=.02$, $p=.08$. This interaction revealed that Southerners high on Factor 1 traits were more relationally aggressive whereas Northerners low on Factor 1 traits were more relationally aggressive (see Figure 4). Overall, the results indicated that when operationalizing COH by North versus South, COH did not moderate the relationship between psychopathy and aggression.

Next, I examined whether COH moderated the relationship between psychopathy and aggression by operationalizing COH by city size. Tables 12, 13, and 14 present the results of these hierarchical regressions. One analysis indicated that COH was a marginally significant moderator of the relationship between Factor 1 traits and SRASB relational aggression, $F(1, 140)=2.84$, $\beta=-1.03$, $R^2=.03$, $p=.09$. This interaction indicated that being from a small city did not change the relationship between Factor 1 traits and relational aggression. For participants from large cities, those low on Factor 1 traits were more relationally aggressive than those who were high on Factor 1 traits (see Figure 5). Overall, the results indicated that when operationalizing COH by city size, COH did not moderate the relationship between psychopathy and aggression.

Finally, I investigated whether COH moderated the relationship between psychopathy and aggression by operationalizing COH by scores on the three COH measures (i.e., HEI, CHQ, and HCS). For these hierarchical regression analyses, psychopathy was entered into step 1,

scores on the three COH measures were entered into step two, and the multiplicand between psychopathy and the three COH measures was entered into step three. Tables 15, 16, and 17 present the results of these hierarchical regressions. Three of the analyses were marginally significant. COH was a marginally significant moderator of the relationship between total psychopathy and laboratory aggression, $F(1, 75)=3.25$, $\beta=-.80$, $R^2=.05$, $p=.08$. This interaction indicated that participants low on psychopathy traits exhibited more laboratory aggression if there were high on COH. In contrast, participants high on psychopathy traits exhibited more laboratory aggression if they were low on COH (see Figure 6).

COH was a marginally significant moderator of the relationship between total psychopathy and RAS relational aggression, $F(1, 138)=3.44$, $\beta=-.60$, $R^2=.02$, $p=.07$. Participants high on both psychopathy traits and COH were the most relationally aggressive (see Figure 7). COH was also a marginally significant moderator of the relationship between total psychopathy and SRASB relational aggression, $F(1, 138)=3.45$, $\beta=-.65$, $R^2=.10$, $p=.07$. Similar to the last analysis, participants high on both psychopathy traits and COH were the most relationally aggressive (see Figure 8). Aside from the three marginally significant relationships, the majority of the results indicated that when operationalizing COH by scores on the three self-report measures, COH did not moderate the relationship between psychopathy and aggression.

Secondary Hypothesis 1

I expected that aggression would be positively associated with alcohol consumption. None of the following variables were associated with alcohol consumption: laboratory aggression ($r=-.05$, $p=.68$), cognitive biases towards aggression ($r=.12$, $p=.15$), RAS relational aggression ($r=.12$, $p=.15$), nor SRASB relational aggression ($r=.10$, $p=.21$). The results from the BPAQ did support the hypothesis. Alcohol consumption was associated with the total BPAQ

score (r=.24, p=.003), as well as three of the scales scores: the Verbal scale (r=.20, p=.02), the Anger scale (r=.18, p=.03), and the Hostility scale (r=.20, p=.01). Alcohol consumption approached significance in its association with the fourth scale, the Physical scale (r=.16, p=.06). Hypothesis 4 was partially supported in that alcohol consumption was related to self-reports of total aggression, verbal aggression, anger, and hostility. However, the hypothesis was not supported in that alcohol consumption was not related to laboratory aggression, relational aggression, or cognitive biases toward aggression.

Secondary Hypothesis 2

I hypothesized that psychopathic traits would be positively associated with alcohol consumption, with Factor 2 traits being more strongly associated with alcohol consumption than Factor 1 traits. Analyses partially supported this hypothesis. Alcohol consumption was associated with Factor 1 (r=.20, p=.02), Factor 2 (r=.30, p<.001), and total psychopathy (r=.34, p<.001). Though the correlations between alcohol consumption and psychopathic traits were all moderate, the r-values for Factor 1 and Factor 2 [$t(141)$=-1.02, p=.16] were not significantly different. Therefore, although psychopathic traits were associated with alcohol consumption, Factor 2 traits were not more strongly associated with alcohol consumption than Factor 1 traits.

Secondary Hypothesis 3

The third secondary hypothesis stated that executive functioning would mediate the relationship between psychopathic personality traits and aggression, as well as the relationship between alcohol consumption and aggression. To examine these relationships, analyses investigating executive functioning as a mediator followed the criteria set forth by Baron and Kenny (1986). The first criterion is that the "initial variable" (in this case, psychopathic personality traits and alcohol consumption are the initial variables) be significantly correlated

with the "outcome" variable (in this case, the five aggression variables are the outcomes). The second criterion is that the initial variable is correlated with the mediator (in this case, executive functioning is the mediator). The third criterion is that the mediator is significantly associated with the outcome variable in a regression analysis in which both the initial variable and the mediating variable are predictors. The fourth criterion is that the initial variable should not be significantly related to the outcome variable after controlling for the mediating variable.

The relationship between alcohol consumption and aggression, in which executive functioning acts as a mediator, was examined first. To meet the first criterion, correlation analyses between alcohol consumption and aggression were conducted. The relationships between alcohol consumption and laboratory aggression (r=-.05, p=.68), cognitive biases towards aggression (r=.02, p=.78), RAS relational aggression (r=.12, p=.15), and SRASB relational aggression (r=.10, p=.21) were not significant. Therefore, further examinations of the relationships between alcohol consumption and these four aggression variables were not undertaken, as they did not meet the first criterion. The relationship between alcohol consumption and BPAQ aggression was significant (r=.24, p<.001); therefore, these variables met the first criterion. The second criterion was that alcohol consumption should be correlated with executive functioning. Alcohol consumption was significantly correlated with executive functioning (r=.31, p<.001) so the second criterion was also met.

The third criterion states that in a regression analysis in which both alcohol consumption and executive functioning are predictor variables, executive functioning must relate significantly to BPAQ aggression. The overall model, in which alcohol consumption and executive functioning predicted BPAQ aggression, was significant, F(2, 143)=13.35, p<.001. Further, executive functioning was a significant predictor of BPAQ aggression (t=4.09, p<.001). Thus,

the third criterion was met. Finally, the fourth criterion states that alcohol consumption should bear no association with BPAQ aggression after controlling for executive functioning. In a hierarchical regression, executive functioning was entered in step one and alcohol consumption was entered in step two. Alcohol functioning was not a significant predictor of BPAQ after controlling for executive functioning (t=1.77, p=.08). Therefore, all of Baron and Kenny's criteria (1986) were met, providing support for the hypothesis that executive functioning significantly mediated the relationship between alcohol consumption and BPAQ aggression.

Next, I examined whether executive functioning mediated the relationship between psychopathic personality traits and aggression. To examine Baron and Kenny's first criterion, I examined the correlations between Factor 1, Factor 2, total psychopathy, and the five aggression variables. Factor 1 was not significantly related to any of the aggression variables; therefore, Factor 1 did not meet the first criterion to be an initial variable and was not used in subsequent analyses. Factor 2 was significantly associated with RAS relational aggression (r=.44, p<.001), SRASB relational aggression (r=.29, p<.001), and BPAQ aggression (r=.51, p<.001). Total psychopathy was also significantly associated with RAS relational aggression (r=.34, p<.001) and BPAQ aggression (r=.41, p<.001). Thus, these variables met the standards for the first criterion. The second criterion states that psychopathy must be associated with executive functioning. Correlation analyses indicated that executive functioning was significantly related to both Factor 2 (r=.47, p<.001) and total psychopathy (r=.32, p<.001).

The third criterion states that executive functioning should relate to aggression when psychopathy and executive functioning are predictors. Five regression analyses were conducted to analyze all possibly significant relationships. First, the overall model, in which Factor 2 and executive functioning predicted RAS relational aggression was significant [F(2, 143)=19.89,

p<.001], and executive functioning was a significant predictor of RAS relational aggression (*t*=2.20, p=.03). Factor 2 and executive functioning significantly predicted SRASB relational aggression [F(2, 143)=11.54, p<.001], and executive functioning was a significant predictor of SRASB relational aggression (*t*=3.03, p<.001). Factor 2 and executive functioning significantly predicted BPAQ aggression [F(2, 143)=27.99, p<.001], and executive functioning was a significant predictor of BPAQ aggression (*t*=2.18, p=.03). Total psychopathy and executive functioning significantly predicted RAS relational aggression [F(2, 143)=15.55, p<.001], and executive functioning was a significant predictor of RAS relational aggression (*t*=3.34, p<.001). Finally, total psychopathy and executive functioning significantly predicted BPAQ aggression [F(2, 143)=21.77, p<.001], and executive functioning was a significant predictor of BPAQ aggression (t=3.51, p<.001). Thus, all analyses met the standards for the third criterion.

Finally, Baron and Kenny's fourth criterion states that psychopathy should have no relationship with aggression after controlling for executive functioning. Five regression analyses were conducted to test this assumption. First, after controlling for executive functioning in step one, Factor 2 significantly predicted RAS relational aggression in step two (*t*=4.21, p<.001). Controlling for executive functioning in step one, Factor 2 did not significantly predict SRASB relational aggression in step two (*t*=1.88, p=.06); therefore, executive functioning met criteria as a mediator between Factor 2 and SRASB relational aggression. Controlling for executive functioning in step one, Factor 2 significantly predicted BPAQ aggression in step two (*t*=5.32, p<.001). Controlling for executive functioning in step one, total psychopathy significantly predicted RAS relational aggression in step two (*t*=3.18, p<.001). Controlling for executive functioning in step one, total psychopathy significantly predicted BPAQ aggression in step two (*t*=4.19, p<.001). Therefore, executive functioning was a complete mediator of the relationship

between Factor 2 and SRASB relational aggression. According to Baron and Kenny (1986), if the first three criteria are met and the fourth is not, the mediator is said to be a "partial mediator." Thus, executive functioning was a partial mediator in the relationships between Factor 2 and RAS relational aggression, Factor 2 and BPAQ aggression, total psychopathy and RAS relational aggression, and total psychopathy and BPAQ aggression. In summary, executive functioning was either a complete or partial mediator in the relationships between psychopathy and aggression.

Secondary Hypothesis 4

I next investigated whether alcohol consumption acted as a covariate along with psychopathy in predicting aggression. To examine this hypothesis I used hierarchical multiple regressions in which alcohol consumption was entered into step one, and psychopathy traits entered into step two. Analyses were limited to only psychopathy and aggression variables that exhibited significant relationships (see correlation analyses from Primary Hypothesis 2). Therefore, I evaluated whether alcohol consumption was a covariate for the following pairs of variables: Factor 2 and RAS relational aggression, Factor 2 and SRASB relational aggression, Factor 2 and total BPAQ aggression, total psychopathy traits and RAS relational aggression, and total psychopathy traits and BPAQ aggression. Table 18 presents the results of these analyses. Alcohol was not a significant covariate in the relationships between Factor 2 and RAS relational aggression, Factor 2 and SRASB relational aggression, and total psychopathy traits and RAS relational aggression.

When predicting BPAQ aggression, step one of the model (in which alcohol consumption was the predictor) was significant [$F(1, 142)=9.01$, $R^2=.06$, $p<.001$]. Although the model in step two was also significant [$F(1, 141)=40.41$, $R^2=.27$, $p<.001$], alcohol consumption was not a

significant covariate (t=1.33, p=.19) but Factor 2 was a significant predictor (t=6.36, p<.001). Similarly, when predicting BPAQ aggression, step one of the model (in which alcohol consumption was the predictor) was significant [F(1, 142)=9.01, R^2 =.06, p<.0010]. Although the model in step 2 was also significant [F (1, 141)=21.02, R^2 =.18, p<.001], alcohol consumption was not a significant covariate (t=1.46, p=.15) but Factor 2 was a significant predictor (t=4.59, p<.001). In summary, alcohol consumption was not a significant covariate with psychopathic personality traits in predicting aggression.

Secondary Hypothesis 5

Finally, I examined gender as a possible moderator in the relationship between psychopathy and aggression. To examine this hypothesis, hierarchical multiple regressions were conducted in which psychopathy traits were entered into step one, gender (dummy coded as a either 0 or 1) was entered into step two, and the multiplicand of psychopathy traits and gender was entered into step three. First, I examined whether gender moderated a relationship between Factor 1 traits and aggression. Table 19 presents the results of these hierarchical regressions. Gender was not a significant moderator in any of the relationships between Factor 1 traits and aggression.

Next, I investigated whether gender moderated the relationship between Factor 2 traits and aggression. Table 20 presents the results of these hierarchical regressions. Gender was not a significant moderator in any of the relationships between Factor 2 traits and aggression.

Lastly, I conducted analyses to determine whether gender moderated the relationships between total psychopathy traits and aggression. Table 21 presents the results of these hierarchical regressions. Gender was not a significant moderator in any of the relationships

between total psychopathy traits and aggression. In summary, gender did not moderate any of the relationships between psychopathy traits and aggression.

Discussion

The analyses provided support for some, but not all, of the hypotheses. Psychopathy was associated with relational and self-reported aggression, but not laboratory aggression or cognitive biases towards aggression. Factor 2 traits were more strongly related to aggression than Factor 1 traits. Psychopathy was also associated with alcohol consumption, but the strength of the relationship between Factor 1 and alcohol consumption was not significantly different from that between Factor 2 and alcohol consumption.

With regard to the relationship between COH and aggression, however, findings were mostly in opposition to previous research that had suggested a relationship between COH and aggression. Northerners and Southerners differed only with regard to self-report aggression. Participants from smaller Southern cities did not demonstrate more aggressiveness than participants from Northern or large Southern cities. Self-reports of COH were associated with self-reported aggression and relational aggression, but not laboratory aggression or cognitive biases towards aggression.

Alcohol consumption was associated with self-reported aggression, but not relational aggression, cognitive biases toward aggression, or laboratory aggression. Executive functioning mediated the relationship between alcohol consumption and self-reported aggression. Alcohol consumption was not a covariate along with psychopathy in predicting aggression. Additionally, executive functioning was either a complete or partial mediator in the relationships between psychopathic traits and self-reported or relational aggression.

Regional differences (i.e., North versus South) significantly moderated the relationship between Factor 2 traits and relational aggression. But the direction of this relationship was the opposite of that hypothesized, as Northerners who were high on Factor 2 traits were more aggressive than Southerners. Several other analyses of whether COH moderated the relationship between psychopathy and aggression were marginally significant. However, these findings were mixed in their support for the original hypotheses (i.e., some analyses indicated that individuals high on COH and psychopathic traits were more aggressive, whereas other analyses indicated that individuals high on psychopathy and low on COH were most aggressive). Gender did not moderate the relationship between psychopathy and either relational or physical aggression.

COH and aggression

In general, findings regarding the relationship between COH and aggression supported neither of the central hypotheses nor previous research. That is, the results indicated relatively few associations between COH (operationalized in three different ways) and aggressive behavior.

There was a regional difference (i.e., North versus South) with regard to cognitive biases towards aggression, with Southerners demonstrating more cognitive biases than Northerners. Although previous research investigated only overt aggression and not cognitive biases, this result was in opposition to the direction of previous research. Specifically, Hayes and Lee (2005) examined regional differences with regard to endorsements of aggression. They found that Southerners did not endorse aggression more than Northerners, except for when the aggression was in response to an honor-related issue, such as defending one's wife or family. As none of the items on the CRT-A related to honor-relevant issues, this result was unexpected. As the majority of the previous COH research established a relationship between COH attitudes and

aggression, it seems plausible that Southerners may hold more cognitive biases towards aggression. As the CRT-A indirectly assesses attitudes towards aggression, this finding represents a new way of assessing endorsements of aggression. Situated in the context of the Hayes and Lee (2005) findings, this result suggests that when Southerners are asked directly about aggressive behaviors they often respond negatively, but that if asked indirectly they are more likely to endorse aggressive attitudes.

A new finding that adds to the COH literature was that Southerners reported more physical aggression than Northerners. Previous studies have investigated laboratory behavior (Nisbett, 1993), archival arrests and police charges (Nisbett & Cohen, 1996; Henry, 2009), and biology (i.e., cortisol and testosterone levels) (Cohen et al., 1996) to support regional differences in aggressive behavior. Finding that Southerners reported more physical aggression than Northerners adds to, and is in line with, previous findings. This result suggests that Southerners may have behavioral histories of more aggressive incidents than Northerners.

Regional differences did not relate significantly to displays of laboratory aggression. This result was surprising, particularly given previous research (Cohen et al., 1996; Nisbett, 1993; Nisbett & Cohen, 1996) using several laboratory paradigms to study the relationship between regional differences and aggression. As prior examinations of regional differences and laboratory aggression were conducted by the same two researchers in the same laboratory, it was important to determine whether their results were replicable. The findings from the present study suggested that their results were not replicable, at least using a different methodology and different measures of aggression.

Although Nisbett and Cohen believed they were measuring regional differences, their "regional differences" may have been a proxy for a different variable. For example, they may

actually have been measuring a construct like "social appropriateness," "manners," or "decorum," which dictates appropriate behavior in oneself and others. Such a variable probably exists on a continuum, and is not dichotomous in nature. Individuals who are higher on such a variable may have certain, and perhaps rigid, social expectations. If such expectations are not met, these individuals may be distressed and are more likely to behave aggressively due to others' failure to abide by the same social rules that they are held to. Although different regions, social groups, or classes may adhere differentially to a variable like "decorum," Nisbett and Cohen's results could reflect such a variable, as opposed to regional differences.

A further concern regarding Nisbett and Cohen's operationalization of COH pertains to the "black and white" nature of using a categorical distinction like "Southerner" as a proxy for COH. As an example, the present research was conducted in a large (200,000+) Southern city, Atlanta. Given the growth, economy, culture, and population of the city, Atlantans are rather cosmopolitan and are presumably distinct from individuals raised in rural areas of Georgia. However, according to Nisbett and Cohen, an individual from Atlanta should have the same COH beliefs and behaviors as an individual from rural Georgia. It is likely that individuals from large Southern cities manifest different COH beliefs and behaviors than individuals from smaller Southern cities. To this end, it may limit the accuracy of research to include individuals from large cities in the South, such as Atlanta, in a "Southern" group. Instead, it may be more realistic to classify individuals on a continuum ranging from rural to urban, and perhaps having separate continuums for rural versus urban for Northerners and Southerners. As cities in the South continue to grow and change, this may be a more valid way to define COH from a geographic standpoint.

In addition, the relationship between city size and aggression was not supported in the current research. Nisbett and Cohen (1996) reported that Southerners from small (0-50,000) and medium (50,000-200,000) sized cities had higher rates of homicide than Southerners from large cities or Northerners from small to large cities. In contrast, our results suggested no significant relationships between city size and any of the aggression variables. Eighteen percent of the sample reported residing in small Southern cities and 7.6% reported residing in medium Southern cities. These numbers were comparable to those for participants from small and medium Northern cities (18.3% and 6.3% respectively). One possible explanation for the result was that Nisbett and Cohen operationalized aggression by homicide, whereas the current study operationalized aggression on a less severe scale via laboratory displays of aggression, cognitive biases, and self-reports of physical and relational aggression. It is possible that the individuals from smaller cities are more aggressive only when aggression is operationalized in an extreme way, such as homicide. In this case, less extreme operationalizations of aggression did not correspond to various city sizes. Similar to the relationship between region and laboratory aggression, the relationship between city size and aggression requires replication. As of now, this finding is less than robust.

A new finding was that individuals who scored highly on the COH measures tended to be relationally aggressive. This finding is important because all previous operationalizations of aggression were physical in nature; thus, the present study extended the relationship between COH and aggression to include a new form of aggression. This relationship is plausible in that status or reputation is important to understanding both COH and relational aggression. With regard to COH, individuals with high levels of COH believe in the utmost importance of their own reputation and may go to great, and occasionally even violent, lengths to protect their name.

Similarly, relational aggression is about socially isolating an individual, spreading rumors about an individual, and tarnishing a reputation to increase negative social interactions. Given the common factor of status between COH and relational aggression, the finding seems to be theoretically meaningful.

Two of the COH measures (the HEI and the HCS) included scales pertaining to masculine honor. These scales demonstrated the most substantial relationships with both relational and self-reported aggression of any of the COH measures. All previous COH research was conducted using all-male populations, and Nisbett and Cohen (1996) contended that COH behaviors are specific to men. Certainly, the large number of relationships between the masculine honor scales and the physical and relational aggression measures supports the notion that COH is a male-dominated construct. Regardless of whether the participant was male or female, participants tended to identify high levels of masculine honor with high levels of physical and relational aggression. That is, the relationship between masculine honor and aggression may be acknowledged by both males and females, but only manifested behaviorally in men.

The findings also raise the question of whether the three COH measures are valid.[3] All three measures were used, validated, or examined extensively after their creation or prior to their use in this study. Further, the items were not empirically-derived. For two of the measures, the

[3] To investigate this conclusion, exploratory factor analyses were conducted. Individual items from the HEI, CHQ, and HCS were factor analyzed. From the scree plot, it appeared that a four factor solution was most appropriate for the data. The results of the factor analysis supported the conclusion that the three COH measures may have validity problems. The first factor had high loadings from the CHQ only, the second factor had high loadings from the HEI only, and the third factor had high loadings from the HCS only. These results suggest that each measure was assessing different constructs, and that there was not much construct overlap across the three measures. Interestingly, the fourth factor contained items from all three measures that were sexual in nature (e.g., having sexual relations before marriage). The results of the factor analysis, though exploratory, mirror the finding that there were weak correlations between the three COH measures. Additionally, the results from the factor analysis suggest that the COH measures were likely assessing different constructs, which suggest that the three COH measures may lack validity.

HEI and the HCS, the measures were not piloted. One possible explanation for the few relationships observed between COH and aggression could be that the COH measures were not validly measuring COH. Although these measures may have face validity, further examinations of their correlates, predictive validity, and reliability should be undertaken to ensure their relevance to the COH construct.

Psychopathy and aggression

The relationship between psychopathy and aggression has been well-validated (Coid et al., 2008; Gretton, Hare, & Catchpole, 2004; Hare, 1991; Hart, 1998; Neumann & Hare, 2008; Skeem & Mulvey, 2001). Some (Giancola, 2003; Richardson, Green, & Lago, 1998) argue that empathy is associated with aggression-inhibiting properties; thus, one hypothesis for why individuals with high levels of psychopathic traits tend to be more aggressive than other individuals is because they lack empathy. Although empathy was not directly assessed, the results of the current study are in line with previous research in finding that psychopathy was associated with aggression, and that Factor 2 traits were more associated with aggression than Factor 1 traits.

The present study is the third published investigation to examine the relationship between psychopathic traits and relational aggression. The prior two studies (Marsee, Silverthorn, & Frick, 2005; Schmeelk, Sylvers, & Lilienfeld, 2008) found that psychopathy was strongly associated with relational aggression. The findings of these studies, as well as those of the present study, suggest that much aggression related to psychopathic traits is indirect. In fact, some hypothesize that aggression displayed in high-functioning samples (e.g., college students) is more likely to be covert than overt (Babiak & Hare, 2006; Hall & Benning, 2006; Lilienfeld, 1992; Widom, 1984). As individuals with high levels of psychopathic traits in the community,

college samples, or business and politics are likely to have been relatively "successful" or at least not markedly unsuccessful (i.e., avoiding criminal behavior, or detection of such behavior), it may be advantageous for these individuals to use subtler forms of aggression to avoid detection or police involvement.

Psychopathy was not associated significantly with laboratory aggression. This finding was surprising, given that psychopathy has been associated with laboratory aggression in previous studies. For example, Reidy et al. (2007) found that in a sample of undergraduate men in a laboratory, Factor 1 traits were associated with both instrumental aggression (i.e., goal-directed aggression) and hostile/reactive aggression, whereas Factor 2 traits were only associated with hostile/reactive aggression. Given that participants in the laboratory condition were "insulted" by their partner, participants could have responded with hostile/reactive aggression. Further, as this research paradigm elicited hostile/reactive aggression, we would expect a strong relationship between Factor 2 traits and laboratory aggression. One reason that the relationship between psychopathy and laboratory aggression was not supported could have been the large number of females in this sample, which is dissimilar from the sample of Reidy et al. Another possible explanation is that the insult given to participants may not have been aversive enough to create a strong urge to aggress. As participants' mood ratings post-insult were on the low-medium range for negative emotions, a weak insult may explain this finding.

Psychopathy was not related significantly to cognitive biases towards aggression. That is, individuals high on psychopathic traits did not rationalize the use of aggression to solve problems more so than individuals low on psychopathic traits. This finding was surprising given previous research supporting the link between psychopathic traits and instrumental aggression (i.e., aggression directed towards attaining a goal) (Miller & Lynam, 2003; Williamson, Hare, &

Wong, 1987; Woodworth & Porter, 2002). It is possible that for this high-functioning sample, thinking about aggression and behaving aggressively are quite different constructs. That is, individuals were able to demonstrate more restraint in their cognitions about aggression as opposed to their self-reports of previous physical and relational aggression. Further, as previously discussed, given the nature of this sample, relational aggression may be more frequent than physical aggression. Therefore, this sample may not endorse high levels of cognitive rationalizations of physical aggression. Had the CRT-A investigated cognitive rationalizations of relational aggression, as opposed to general aggression, participants might have indicated stronger endorsements.

The relationship between psychopathy and aggression was not moderated by gender: both males and females demonstrated a similar relationship between psychopathic traits and aggressive behaviors. Men (Corrado et al., 2004; Harris, Rice, & Cormier, 1991; Hemphill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996) and women (Jackson et al., 2002; Odgers, Reppucci, & Moretti, 2005; Salekin, Rogers, & Machin, 2001; Salekin et al., 1998) demonstrate a consistent relationship between psychopathy and aggression. Although females may have a different developmental trajectory (i.e., delayed-onset) towards manifesting psychopathic traits (Silverthorn & Frick, 1999) than males, the findings of the present study add to previous literature suggesting that gender does not moderate the relationship between psychopathy and direct (Penney & Moretti, 2007) or indirect aggression (Marsee, Silverthorn, & Frick, 2005; Schmeelk, Sylvers, & Lilienfeld, 2008). *Psychopathy, COH, and aggression*

The hypothesized relationship between psychopathic traits, COH, and aggression was not supported by regression analyses. In fact, only one analysis was significant, and it indicated the opposite of what was hypothesized—Northerners high on Factor 2 traits were more relationally

aggressive than Southerners. A number of other moderator analyses were marginally significant, although these analyses did not demonstrate a consistent pattern (i.e., some analyses indicated that individuals high on COH and low on psychopathy were more aggressive, whereas others indicated that individuals high on COH and high on psychopathy were more aggressive). Due to the number of regression analyses conducted, even the marginally significant results should be interpreted with caution due to the risk for Type I error.

The finding that high levels of psychopathic traits and high levels of COH were not consistently associated with aggressive outcomes ran counter to prediction. I anticipated that high levels of psychopathic traits, particularly Factor 2 traits, which are associated with poor impulse control and antisocial behavior, would facilitate a behavioral manifestation of COH attitudes. Somech and Elizur (2009) found support for this phenomenon in adolescent Israeli boys. They reported that the level of endorsement of COH attitudes mediated the relationships between callousness and conduct problems. As callousness is thought to be a precursor or risk factor for psychopathy (Frick & Ellis, 1999; Frick & Morris, 2004; Frick & White, 2008), it was expected that Somech and Elizur's results would extend upward to older individuals in the United States. Further, Somech and Elizur extended their findings to contend that behaviors such as aggression may be best understood through an intersection of disposition, environment, and community. The present study attempted to take such variables into account when investigating aggression.

There may be several reasons why different relationships among psychopathy, COH, and aggression were observed in the Somech and Elizur (2009) study and the present study. Somech and Elizur utilized a self-report COH measure that was investigated and used in previous research. Further, they altered this measure to make it more appropriate to school-age

adolescents in Israel and piloted the new measure. In effect, the Somech and Elizur COH measure was validated in a way that the COH measures in the present study were not. Before asserting that Somech and Elizur's results are not replicable, it would be necessary to measure COH with an instrument whose reliability and validity had been examined, and which was sufficiently piloted with the population of interest.

Another possible explanation for the difference between this study's results and Somech and Elizur's results is that the populations studied were different. Somech and Elizur investigated an all-male adolescent sample. To a certain extent, conduct problems, including aggression, are normative in such a population (Moffitt, 1993; Moffitt et al., 1996). In contrast, as the sample in the current study consisted of young adults in a college setting, there was probably a restriction in the range of aggressive behaviors. As a consequence, it may have been difficult to detect a significant association in the present study.

Thus, I did not find support for the previous findings that community and personality variables interact to predict behavioral outcomes. Because there have been only two studies of this topic, however, future research is warranted. *Alcohol consumption*

Findings suggested that alcohol consumption was associated with Factor 1 traits, Factor 2 traits, and total psychopathy traits. Nevertheless, there was no significant difference between the correlations between Factor 1 traits and Factor 2 traits with alcohol consumption. This result is in contrast to previous research, which suggests that Factor 2 traits, but not Factor 1 traits, are related to alcohol use and disorders (Hart & Hare, 1989; Hemphill, Hart, & Hare, 1994; Smith & Newman, 1990; Walsh, Allen, & Kosson, 2007). To contextualize the rate of alcohol consumption in the sample I compared the number of participants who did not consume alcohol with the number of participants who were below the legal drinking age. Twelve percent of

participants did not drink, while 92.4% of participants were below the legal drinking age. These statistics highlight the prevalence of drinking, albeit illegal drinking, in this sample.

Alcohol consumption was associated with self-reported physical aggression, but not with cognitive biases towards aggression, laboratory aggression, or relational aggression. Although much previous research supports the relationship between alcohol consumption and aggression, the results of the present study differed. As alcohol consumption was operationalized via a "trait" variable for this study, the relationship between alcohol consumption and aggression could be more detectable when operationalizing alcohol consumption as a "state" variable. It was previously noted that the vast majority of research regarding the relationship between alcohol consumption and aggression investigated physical aggression. Indeed, only one previous study examined the relationship between alcohol consumption and relational aggression (Skara et al., 2008), finding that baseline relational aggression predicted alcohol use in one year. Alcohol consumption was not related to either measure of relational aggression in this sample. Certainly, more research should examine whether a robust relationship exists between alcohol consumption and relational aggression.

Executive functions

Executive functioning mediated the relationship between alcohol consumption and self-reported aggression. This finding was consistent with Giancola's (2000) model of the relationship between these three variables, and his argument that executive functioning both mediates and moderates the relationship between alcohol consumption and aggression. It should be noted that this finding was limited to "trait" variables only; that is, I found that executive functioning mediated the relationship between trait alcohol consumption and trait aggression. This finding was not supported for "state" aggression (i.e., laboratory aggressive behavior).

Further, executive functioning was either a complete or partial mediator of the relationship between psychopathic personality traits and self-reported and relational aggression. Baron and Kenny's second criterion is that the independent variable must be correlated with the mediator (i.e., psychopathy must be correlated with executive functioning). This finding was important, as previous research provided mixed results concerning the relationship between psychopathy and executive functioning (Hare, 1984; LaPierre, Braun, & Hodgins, 1994; Morgan & Lilienfeld, 2000; Ray et al., 2008; Sellbom & Verona, 2007; Smith, Arnett, & Newman, 1992; Sutker & Allain, 1987).

Limitations

Several limitations of the current study deserve mention. First, the number of participants, and thus statistical power, may have limited our ability to detect significant results. As several of the hypotheses sought to examine potential interactions between variables (e.g., psychopathic personality traits and COH with regard to aggression), 144 participants (or 81 participants when the laboratory aggression measure was the dependent variable) may have not have provided adequate power to detect such interactions. Post-hoc analyses of power indicated that for some of the interaction analyses there was inadequate power. For analyses when the laboratory aggression measure was the dependent variable, power values ranged from .04 to .29, indicating that there was not adequate power to detect an interaction. For all other interaction analyses (i.e., regression analyses where relational aggression, cognitive biases towards aggression, or self-reported aggression was the dependent variable) post-hoc power analyses indicated that some of the analyses did have adequate power (i.e., power values $\geq$.80) to detect significant interactions. However, most of the analyses with adequate power indicated non-

significant results. Future studies would benefit from larger samples to eliminate inadequate power as a possible explanation for non-significant interaction results.

Next, the sample composition of the current study was markedly different from many of the samples used in previous COH research. The Nisbett and Cohen (1996) research, which was conducted using laboratory, census, and field experiment paradigms, was carried out on all male, all Caucasian samples. As the present sample was 63% female and 63% Caucasian, there were clear differences in the sample used in this study and those of previous studies. Such differences in the demographics of the sample may account for differences in the results. For example, because males tend to demonstrate more physical aggression than females, certain hypothesized relationships between psychopathic personality traits and aggression or COH and aggression may not have been found due to the limited variance of reported physical aggression in females. However, it was important to include both females and individuals of diverse racial backgrounds to investigate the extent to which the COH findings are generalizable. As the results indicate a different pattern than was previously observed, there is now preliminary empirical support for the limits that should be placed on COH research.

Another possible limitation of the study was the effectiveness of the "insult" manipulation in the laboratory experiment. As the mean ratings for partner were neutral, and the mean ratings of negative affective states were on the low end of the scale, it was questionable whether the manipulation was successful in insulting study participants and eliciting anger. Of course, if the manipulation was not successful, individuals high on COH would not have had their COH attitudes activated and would not be motivated to behave aggressively on the reaction time task. Previous insults in COH research have tended to be physical in nature; that is, a confederate bumped a participant or a participant's physical space was threatened by a

confederate. It was important to test a different kind of insult, one that was more verbal in nature, to examine whether this type of insult could produce COH-induced aggression. As a verbal insult did not induce high levels of aggression, the results raise the possibility that COH-related aggression may be induced by a physical insult, but not by a verbal insult.

Further, the insult may not have been effective due to the study's cover story. The participant may not have felt insulted because they believed that their partner was simply doing what was asked of them by providing feedback about the cartoon. It may have been a more effective insult if the participant believed that their partner was not under obligation to deliver feedback about them, and that the partner went out of their way to insult the participant. Additionally, as the RA acted as a messenger between the partner and the participant, the RA may have acted as a "buffer." That is, the participant may have been more insulted if the insult had come directly from the partner, not from the RA.

The largely untested validity of the self-report COH measures was another possible limitation. The fact that the correlations between the measures were weak, non-significant, or even negative suggests that the measures may have insufficiently unreliable measuring largely non-overlapping constructs. Additionally, there may be problems using city size and North versus South as regional descriptions for individuals, as those labels did not correspond to systematic differences with regard to aggression or with the COH measures. Further, the city size variable also did not correspond to systematic differences with regard to aggression or with the COH measures.

Future Directions

The general findings of this study suggest several important areas to consider for future examinations of psychopathy, COH, and aggression. First, and perhaps most important, a

standard measure, or measures, of COH should be created. A good preliminary step would be to examine self-reports of COH in multiple samples of diverse populations. It also may be beneficial to design a measure from an empirical rather than rationally/theoretically constructed approach. Designing an empirically-based measure could be accomplished by finding two groups of individuals—a group who committed assaults and a group who committed honor-related assaults. Honor-related assaults would be defined as an assault in response to a challenge to reputation. Then, test constructers would compare the two group's responses to questions about COH and COH-induced aggression. Items that demonstrated differences in responding between the two groups may be more valid than the current COH measures. It may also be helpful to incorporate a measure of rural versus urban status, or city size, on such a measure as individuals who grow up in large Southern cities may receive a very different upbringing than those who group up in small Southern cities.

A second avenue of future inquiry would be to examine other variables that may affect the relationship between COH and aggression. One such variable is parenting style. Different styles of parenting may hinder or increase the expression of COH attitudes. It would also be interesting to contrast the effects of maternal versus paternal parenting styles on the relationship between COH and aggression, as Nisbett and Cohen (1996) contended that women are often socializing agents (pp. 86-88) towards their sons with regard to COH. Another important variable to consider when examining the relationship between COH and aggression would be an individual's history of past violence, arrests, and self-reports of honor-related aggression. Indeed, individuals who have responded aggressively to honor-related events in the past are likely to respond in a consistent manner in the future as well. In addition, it may be important to examine the setting or context of an event to see whether the relationship between COH and

aggression changes. It seems likely that the probability of aggression or the severity of aggression may be higher if COH is examined in a public context, a setting in which other people are present, or a place where an individual's friends or family are present. In contrast, an individual may not be as motivated to aggress against another person if an honor-related insult occurs in private, or with individuals who are not known to the participant.

Finally, continuing to examine the relationship between COH and relational aggression will be important. As reputation and status are important in understanding both constructs, there is good theoretical support for continuing investigation of these two variables. Further, as much of the previous COH research has been conducted with males and focused on physical aggression, this topic could be extended by investigating COH in females and with relational aggression. Females may be more prone to relational aggression than males are, and demonstrate more relational aggression than physical aggression (Crick 1995; Crick & Werner, 1998).

Conclusions

The purpose of this study was to investigate the relationships among psychopathy, COH, and aggression. By operationalizing COH and aggression in several ways, I hoped to investigate new relationships between these variables, as well as replicate previous results and extend them to a more diverse sample. Although previous relationships between COH and laboratory aggression were not replicated, I did find that COH was related to relational aggression, which extends the literature on the correlates of COH. Further, I found that psychopathic personality traits were related to relational aggression, which is a relatively new, but important finding, especially in high-functioning populations. Contrary to my hypotheses and previous research, I found minimal support for the hypothesis that COH moderates the relationship between

psychopathy and aggression. Importantly, this research suggests a need to re-visit the definition and measurement of COH. Additionally, as COH was associated with relational aggression, this research suggests that responses to COH-insults may not be merely physical in nature. Further, as the sample was mostly female, the relationship between COH and aggression was extended to females. In the future it will be important to continue to examine variables that may affect the relationship between psychopathy and COH, on the one hand, and aggression, on the other.

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Table 1

Demographic information

Variable	Laboratory and self-report measures (N=81)	Self-report measures only (N=63)	Total (N=144)
Age (mean)	19.0	19.0	19.0
Female	61.7	63.5	62.5
Ethnicity			
Caucasian	63.0	63.5	63.2
African American	9.9	15.9	12.5
Asian	13.6	12.7	13.2
Middle Eastern	2.5	0.0	1.4
Hispanic	2.5	0.0	1.4
Mixed	8.6	6.3	7.6
Other	0.0	1.6	.7
Geographic region			
North	50.6	52.4	51.4
South	49.4	47.6	48.6

Note. Values are listed as percentages unless otherwise indicated

Table 2

Regional differences on COH measures

	North (mean)	South (mean)	*t*	*df*	p	Cohen's *d*
CHQ	36.22	37.04	-.69	142	.51	.11
HEI Total	38.96	39.96	-.65	142	.52	.11
HEI Male Honour	21.18	21.31	-.14	142	.89	.02
HEI Female Honour	17.178	18.64	-1.29	142	.20	.22
HCS Total	99.47	97.79	.45	142	.65	.08
HCS Integrity	31.05	31.63	-.47	142	.64	.08
HCS Masculine Honor	31.54	28.24	2.05	142	.04*	.34
HCS Feminine Honor	16.21	17.91	-1.32	142	.19	.22
HCS Family Honor	20.66	20.00	.70	142	.51	.11

*Note. * denotes statistical significance*

Table 3

Gender differences on COH measures

	Males (mean)	Females (mean)	*t*	*df*	p	Cohen's *d*
CHQ	41.20	33.87	-6.41	142	<.001*	1.04
HEI Total	40.72	38.68	-1.30	142	.20	.23
HEI Male Honour	21.93	20.83	-1.04	142	.30	.18
HEI Female Honour	18.80	17.84	-1.39	142	.17	.25
HCS Total	91.24	103.10	3.20	142	<.001*	.52
HCS Integrity	28.81	32.84	3.27	142	.001*	.54
HCS Masculine Honor	31.48	29.01	-1.48	142	.141	.24
HCS Feminine Honor	12.24	19.92	6.53	142	<.001*	1.10
HCS Family Honor	18.70	21.32	2.58	142	.01*	.42

*Note. * denotes statistical significance*

Table 4

Regional differences on aggression measures

	North (mean)	South (mean)	*t*	*df*	p
CRT (Z-score)	-.07	.07	-.39	79	.74
RAS	40.08	39.43	.39	142	.70
SRASB	38.66	35.91	1.31	142	.19
CRT-A	4.05	4.66	-1.97	142	.05*
BPAQ Total	84.81	87.90	-.66	142	.50
BPAQ Physical	23.42	27.29	-1.92	142	.05*
BPAQ Verbal	18.69	18.84	-.16	142	.88
BPAQ Anger	19.09	18.84	.20	142	.84
BPAQ Hostility	23.61	22.93	.35	142	.73

*Note. * denotes statistical significance*

Table 5

Correlations between COH and aggression measures

	CRT (Z-score)	*RAS*	*SRASB*	*CRT-A*	*BPAQ Total*	*BPAQ Physical*	*BPAQ Verbal*	*BPAQ Anger*	*BPAQ Hostility*
CHQ	-.03	.19*	.03	.07	.17*	.26**	.13	.02	.05
HEI Total	-.07	.12	.15	.00	.23**	.26**	.07	.13	.15
HEI Male Honour	-.02	.18*	.20*	-.01	.29**	.30**	.12	.23**	.17*
HEI Female Honour	-.13	.01	.04	.02	.08	.15	-.03	-.04	.08
HCS Total	-.02	.11	.19*	.01	.16	.01	.05	.20*	.21*
HCS Integrity	-.02	-.08	.03	-.07	.00	-.08	-.02	.02	.07
HCS Masculine Honor	.01	.31**	.25**	.04	.28**	.21*	.14	.24**	.22**
HCS Feminine Honor	.00	-.07	.07	.06	-.03	-.20*	-.07	.09	.12
HCS Family Honor	-.05	.10	.17*	-.04	.17*	.06	.06	.20*	.20*

*Note. * denotes significance at p<.05. ** denotes significance at p<.001*

Table 6

Correlations between psychopathy and aggression

	Factor 1	Factor 2	Total psychopathy	Comparison of r-values for Factor 1 and Factor 2
				t(df)=_
CRT (Z-score)	-.08	.13	.04	*t*(141)=-2.07*
RAS	.03	.44**	.34**	*t*(141)=-4.41**
SRASB	-.06	.29**	.13	*t*(141)=-3.58**
CRT-A	.02	.04	.04	*t*(141)=.19
BPAQ Total	.11	.51**	.41**	*t*(141)=-4.45**
BPAQ Physical	.27**	.34**	.40**	*t*(141)=.73
BPAQ Verbal	.19*	.35**	.35**	*t*(141)=-1.65*
BPAQ Anger	-.02	.35**	.22**	*t*(141)=-3.84**
BPAQ Hostility	-.09	.47**	.24**	*t*(141)=-6.30**

*Note. * denotes significance at p<.05. ** denotes significance at p<.001.*

Table 7

Correlations between COH self-report measures and psychopathy

	Machia-vellian Egocen-tricity	Rebellious Non-conformity	Blame External-iziation	Care-free Nonplan-fulness	Social Influence	Fear-lessness	Stress Immunity	Cold-heartedness	Factor 1	Factor 2	Total
CHQ	.30**	.25**	-.05	.18*	.04	.30**	.27**	.31**	.29**	.28**	.39**
HCS	.03	-.13	.12	-.13	.05	-.13	-.30**	-.33**	-.18*	-.05	-.19*
HEI	.24**	.03	.34**	.03	.14	.05	-.09	.11	.04	.24**	.19*

*Note. * denotes significance at p<.05. ** denotes significance at p<.001*

Table 8

Regional differences with regard to psychopathy

	North (mean)	South (mean)	*t*	*df*	p
Machiavellian Egocentricity	44.27	43.98	.21	142	.83
Rebellious Nonconformity	32.76	33.84	-.86	142	.39
Blame Externalization	28.24	28.71	-.41	142	.68
Carefree Nonplanfulness	36.30	34.44	1.45	142	.15
Social Influence	49.09	50.09	-.79	142	.43
Fearlessness	31.73	31.67	.04	142	.97
Stress Immunity	31.45	33.51	-1.54	142	.13
Coldheartedness	30.08	31.50	-1.32	142	.19
Factor 1	112.27	115.27	-1.01	142	.31
Factor 2	141.57	140.98	.18	142	.86
Total	283.92	287.76	-.72	142	.48

Table 9

Hierarchical regressions of COH as a moderator between Factor 1 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.08	.01	.52	1, 79	.48
Step 2				.09	.01	.16	1, 78	.69
Step 3				.10	.01	.05	1, 77	.83
Factor 1	-.15	-.44	.66					
COH	-.12	-.15	.88					
Factor 1 x COH	.18	.21	.83					
Prediction of RAS relational aggression								
Step 1				.03	.00	.13	1, 142	.72
Step 2				.05	.00	.18	1, 141	.68
Step 3				.16	.02	3.13	1, 140	.08
Factor 1	-.39	-1.54	.13					
COH	-1.00	-1.81	.07					
Factor 1 x COH	1.10	1.77	.08					
Prediction of SRASB relational aggression								

Step 1				.06	.00	.52	1, 142	.47
Step 2				.12	.02	1.56	1, 141	.21
Step 3				.16	.03	1.71	1, 140	.19
Factor 1	.26	1.03	.30					
COH	.61	1.10	.27					
Factor 1 x COH	-.81	-1.31	.19					
Prediction of CRT-A								
Step 1				.02	.00	.06	1, 142	.81
Step 2				.16	.03	3.81	1, 141	.05
Step 3				.18	.03	.74	1, 140	.39
Factor 1	-.20	-.79	.43					
COH	-.31	-.56	.58					
Factor 1 x COH	.53	.86	.39					
Prediction of BPAQ aggression								
Step 1				.11	.01	1.88	1, 142	.17
Step 2				.12	.02	.30	1, 141	.58
Step 3				.19	.03	2.77	1, 140	.10
Factor 1	-.29	-1.14	.26					
COH	-.86	-1.56	.12					

Factor 1 x COH	1.03	1.67	.10					

Note. COH was operationalized as regional differences (i.e., North versus South)

Table 10

Hierarchical regressions of COH as a moderator between Factor 2 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.13	.02	1.25	1, 79	.27
Step 2				.14	.02	.26	1, 78	.61
Step 3				.15	.02	.29	1, 77	.59
Factor 2	.31	.89	.38					
COH	.50	.61	.55					
Factor 2 x COH	-.46	-.54	.59					
Prediction of RAS relational aggression								
Step 1				.44	.19	34.03	1, 142	<.001
Step 2				.44	.19	.12	1, 141	.73
Step 3				.44	.20	.43	1, 140	.46
Factor 2	.60	2.57	.01					
COH	.38	.68	.50					
Factor 2 x COH	-.44	-.73	.46					
Prediction of SRASB relational aggression								
Step 1				.29	.09	13.11	1, 142	<.001

Step 2				.31	.10	1.71	1, 141	.19
Step 3				.36	.13	4.30	1, 140	.02
Factor 2	.82	3.36	<.001					
COH	1.22	2.10	.04					
Factor 2 x COH	-1.43	-2.30	.02					
Prediction of CRT-A								
Step 1				.04	.00	.22	1, 142	.64
Step 2				.17	.03	3.90	1, 141	.05
Step 3				.18	.03	.72	1, 140	.40
Factor 2	.25	.97	.34					
COH	.68	1.11	.27					
Factor 2 x COH	-.56	-.85	.40					
Prediction of BPAQ aggression								
Step 1				.51	.26	48.89	1, 142	<.001
Step 2				.51	.26	.77	1, 141	.38
Step 3				.52	.27	1.00	1, 140	.32
Factor 2	.72	3.24	<.001					
COH	.59	1.11	.27					
Factor 2 x COH	-.57	-1.00	.32					

Note. COH was operationalized as regional differences (i.e., North versus South)

Table 11

Hierarchical regressions of COH as a moderator between total psychopathy traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.04	.00	.14	1, 79	.71
Step 2				.06	.00	.12	1, 78	.73
Step 3				.06	.00	.03	1, 77	.87
Total psychopathy	-.01	-.03	.97					
COH	-.14	-.13	.90					
Total psychopathy x COH	.18	.17	.87					
Prediction of RAS relational aggression								
Step 1				.34	.12	18.59	1, 142	<.001
Step 2				.34	.12	.45	1, 141	.50
Step 3				.35	.12	.93	1, 140	.34
Total psychopathy	.12	.50	.62					
COH	-.74	-1.03	.30					
Total psychopathy x COH	.74	.97	.34					
Prediction of SRASB relational aggression								

Step 1				.13	.02	2.38	1, 142	.13
Step 2				.17	.03	1.99	1, 141	.16
Step 3				.22	.05	2.75	1, 140	.10
Total psychopathy	.53	2.10	.04					
COH	1.11	1.48	.14					
Total psychopathy x COH	-1.32	-1.66	.10					
Prediction of CRT-A								
Step 1				.04	.00	.24	1, 142	.63
Step 2				.17	.03	3.77	1, 141	.05
Step 3				.17	.03	.04	1, 140	.85
Total psychopathy	.08	.30	.76					
COH	.30	.40	.69					
Total psychopathy x COH	-.15	-.19	.85					
Prediction of BPAQ aggression								
Step 1				.41	.17	28.95	1, 142	<.001
Step 2				.41	.17	.16	1, 141	.69
Step 3				.42	.17	.34	1, 140	.56
Total psychopathy	.28	1.18	.24					
COH	-.37	-.54	.59					

Total psychopathy x COH	.44	.58	.56					

Note. COH was operationalized as regional differences (i.e., North versus South)

Table 12

Hierarchical regressions of COH as a moderator between Factor 1 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.08	.01	.52	1, 79	.48
Step 2				.12	.02	.65	1, 78	.42
Step 3				.13	.02	.11	1, 77	.74
Factor 1	-.16	-.68	.50					
COH	-.17	-.21	.83					
Factor 1 x COH	.28	.33	.74					
Prediction of RAS relational aggression								
Step 1				.03	.01	.13	1, 142	.72
Step 2				.03	.00	.99	1, 141	.98
Step 3				.05	.00	.27	1, 140	.61
Factor 1	-.05	-.30	.77					
COH	-.31	-.52	.61					
Factor 1 x COH	.32	.52	.61					
Prediction of SRASB relational aggression								
Step 1				.06	.00	.52	1, 142	.47

Step 2				.08	.00	.36	1, 141	.55
Step 3				.16	.03	2.84	1, 140	.09
Factor 1	.22	1.18	.24					
COH	.92	1.58	.12					
Factor 1 x COH	-1.03	-1.69	.09					
Prediction of CRT-A								
Step 1				.02	.00	.06	1, 142	.81
Step 2				.14	.02	2.57	1, 141	.11
Step 3				.14	.02	.33	1, 140	.57
Factor 1	-.08	-.44	.66					
COH	-.20	-.34	.74					
Factor 1 x COH	.35	.57	.57					
Prediction of BPAQ aggression								
Step 1				.11	.01	1.88	1, 142	.17
Step 2				.12	.02	.32	1, 141	.57
Step 3				.14	.02	.51	1, 140	.48
Factor 1	.00	-.03	.98					
COH	-.37	-.63	.53					
Factor 1 x COH	.44	.71	.48					

Note. COH was operationalized as city size

Table 13

Hierarchical regressions of COH as a moderator between Factor 2 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.13	.02	1.25	1, 79	.27
Step 2				.14	.02	.26	1, 78	.61
Step 3				.15	.02	.30	1, 77	.58
Factor 2	.09	.65	.52					
COH	-.06	-.23	.81					
Factor 2 x COH	.13	.55	.58					
Prediction of RAS relational aggression								
Step 1				.44	.19	34.03	1, 142	<.001
Step 2				.44	.19	.12	1, 141	.73
Step 3				.44	.20	.47	1, 140	.50
Factor 2	.42	5.03	<.001					
COH	-.12	-.76	.45					
Factor 2 x COH	.11	.68	.50					
Prediction of SRASB relational aggression								
Step 1				.29	.09	13.11	1, 142	<.001

Step 2				.31	.10	1.71	1, 141	.19
Step 3				.31	.10	.51	1, 140	.48
Factor 2	.26	3.01	<.001					
COH	-.20	-1.27	.21					
Factor 2 x COH	.12	.72	.48					
Prediction of CRT-A								
Step 1				.04	.00	.22	1, 142	.64
Step 2				.17	.03	3.90	1, 141	.05
Step 3				.17	.03	.08	1, 140	.78
Factor 2	.05	.57	.57					
COH	.20	1.23	.22					
Factor 2 x COH	-.05	-.28	.78					
Prediction of BPAQ aggression								
Step 1				.51	.26	49.89	1, 142	<.001
Step 2				.51	.26	.77	1, 141	.38
Step 3				.52	.27	.16	1, 140	.69
Factor 2	.50	6.28	<.001					
COH	.01	.09	.93					
Factor 2 x COH	.06	.40	.69					

Note. COH was operationalized as city size

Table 14

Hierarchical regressions of COH as a moderator between total psychopathy traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.04	.00	.14	1, 79	.71
Step 2				.09	.01	.48	1, 78	.49
Step 3				.09	.01	.06	1, 77	.81
Total psychopathy	-.01	-.03	.98					
COH	-.15	-.16	.88					
Total psychopathy x COH	.24	.24	.81					
Prediction of RAS relational aggression								
Step 1				.34	.12	18.59	1, 142	<.001
Step 2				.34	.12	.01	1, 141	.91
Step 3				.34	.12	.04	1, 140	.85
Total psychopathy	.37	2.28	.02					
COH	.13	.18	.86					
Total psychopathy x COH	-.14	-.20	.85					
Prediction of SRASB relational aggression								

Step 1				.13	.02	2.38	1, 142	.13
Step 2				.14	.02	.48	1, 141	.49
Step 3				.19	.04	2.63	1, 140	.11
Total psychopathy	.37	2.18	.03					
COH	.13	1.53	.13					
Total psychopathy x COH	-1.22	-1.62	.11					
Prediction of CRT-A								
Step 1				.04	.00	.24	1, 142	.63
Step 2				.14	.02	2.58	1, 141	.11
Step 3				.14	.02	.00	1, 140	.99
Total psychopathy	.04	.24	.81					
COH	.15	.20	.84					
Total psychopathy x COH	-.01	-.02	.99					
Prediction of BPAQ aggression								
Step 1				.41	.17	28.95	1, 142	<.001
Step 2				.41	.17	.35	1, 141	.56
Step 3				.41	.17	.04	1, 140	.84
Total psychopathy	.38	2.45	.02					
COH	-.09	-.13	.90					

Total psychopathy x COH	.14	.20	.84					

Note. COH was operationalized as city size

Table 15

Hierarchical regressions of COH as a moderator between Factor 1 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.08	.01	.52	1, 79	.48
Step 2				.11	.01	.13	3, 76	.94
Step 3				.18	.03	1.66	1, 75	.20
Factor 1	.15	.70	.49					
HCS	.33	.11	.27					
HEI	.18	.78	.43					
CHQ	.25	1.04	.30					
Factor 1 x COH	-.56	-1.29	.20					
Prediction of RAS relational aggression								
Step 1				.03	.01	.13	1, 142	.72
Step 2				.28	.08	3.90	3, 139	.01
Step 3				.30	.09	1.43	1, 138	.23
Factor 1	.15	.92	.40					
HCS	.40	1.96	.05					
HEI	.26	1.49	.14					
CHQ	.44	2.43	.02					

Factor 1 x COH	-.39	-1.20	.23					
Prediction of SRASB relational aggression								
Step 1				.06	.00	.52	1, 142	.47
Step 2				.25	.06	2.85	3, 139	.04
Step 3				.28	.08	2.81	1, 138	.10
Factor 1	.17	1.05	.30					
HCS	.51	2.46	.02					
HEI	.38	2.12	.04					
CHQ	.37	2.01	.05					
Factor 1 x COH	-.55	-1.68	.10					
Prediction of CRT-A								
Step 1				.02	.00	.06	1, 142	.81
Step 2				.08	.01	.26	3, 139	.85
Step 3				.10	.01	.45	1, 138	.50
Factor 1	-.09	-.55	.58					
HCS	-.09	-.44	.66					
HEI	-.12	-.64	.53					
CHQ	-.03	-.15	.88					
Factor 1 x COH	.23	.67	.50					
Prediction of BPAQ								

aggression								
Step 1				.11	.01	1.88	1, 142	.17
Step 2				.34	.11	5.23	3, 139	<.001
Step 3				.34	.12	.54	1, 138	.47
Factor 1	-.01	-.08	.94					
HCS	.07	.36	.72					
HEI	.06	.36	.72					
CHQ	.08	.45	.65					
Factor 1 x COH	.24	.73	.47					

Note. COH was operationalized as scores on the HEI, CHQ, and HCS

Table 16

Hierarchical regressions of COH as a moderator between Factor 2 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.13	.02	1.25	1, 79	.27
Step 2				.16	.03	.28	3, 76	.84
Step 3				.23	.05	2.03	1, 75	.16
Factor 2	.25	1.83	.07					
HCS	.23	1.13	.26					
HEI	.08	.47	.64					
CHQ	.10	.63	.53					
Factor 2 x COH	-.38	-1.42	.16					
Prediction of RAS relational aggression								
Step 1				.44	.20	34.03	1, 142	<.001
Step 2				.48	.23	2.10	3, 139	.10
Step 3				.49	.24	2.50	1, 138	.12
Factor 2	.49	5.28	<.001					
HCS	.33	2.69	<.001					
HEI	.13	1.06	.29					

CHQ	.25	2.36	.02					
Factor 2 x COH	-.28	-1.58	.12					
Prediction of SRASB relational aggression								
Step 1				.29	.09	13.11	1, 142	<.001
Step 2				.36	.13	2.38	3, 139	.07
Step 3				.37	.14	.151	1, 138	.22
Factor 2	.35	3.52	<.001					
HCS	.32	2.48	.01					
HEI	.17	1.30	.19					
CHQ	.10	.91	.37					
Factor 2 x COH	-.24	-1.23	.22					
Prediction of CRT-A								
Step 1				.04	.00	.22	1, 142	.64
Step 2				.08	.01	.23	3, 139	.87
Step 3				.16	.03	2.64	1, 138	.11
Factor 2	.11	1.08	.28					
HCS	.20	1.48	.14					
HEI	.15	1.13	.26					
CHQ	.20	1.68	.10					
Factor 2 x COH	-.33	-1.62	.11					

Prediction of BPAQ aggression								
Step 1				.51	.26	49.89	1, 142	<.001
Step 2				.55	.31	3.03	3, 139	.03
Step 3				.55	.31	.26	1, 138	.61
Factor 2	.50	5.62	<.001					
HCS	.24	2.08	.04					
HEI	.12	1.01	.31					
CHQ	.13	1.26	.21					
Factor 2 x COH	-.09	-.51	.61					

Note. COH was operationalized as scores on the HEI, CHQ, and HCS

Table 17

Hierarchical regressions of COH as a moderator between total psychopathy traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.04	.00	.14	1, 79	.71
Step 2				.10	.01	.21	3, 76	.89
Step 3				.23	.05	3.25	1, 75	.08
Total psychopathy	.30	1.69	.10					
HCS	.52	1.64	.11					
HEI	.30	1.25	.22					
CHQ	.34	1.36	.18					
Total psychopathy x COH	-.80	-1.80	.08					
Prediction of RAS relational aggression								
Step 1				.34	.12	18.59	1, 142	<.001
Step 2				.41	.16	2.70	3, 139	.05
Step 3				.43	.19	3.44	1, 138	.07
Total psychopathy	.51	3.94	<.001					
HCS	.58	2.74	<.001					

HEI	.32	1.75	.08					
CHQ	.43	2.38	.02					
Total psychopathy x COH	-.61	-1.86	.07					
Prediction of SRASB relational aggression								
Step 1				.13	.02	2.38	1, 142	.13
Step 2				.27	.07	2.86	3, 139	.04
Step 3				.31	.10	3.45	1, 138	.07
Total psychopathy	.32	2.42	.02					
HCS	.60	2.68	<.001					
HEI	.40	2.11	.04					
CHQ	.35	1.83	.07					
Total psychopathy x COH	-.65	-1.86	.07					
Prediction of CRT-A								
Step 1				.04	.00	.24	1, 142	.63
Step 2				.08	.01	.22	3, 139	.88
Step 3				.08	.01	.01	1 ,138	.94
Total psychopathy	.01	.09	.93					
HCS	.02	.09	.93					
HEI	-.03	-.13	.90					

CHQ	.06	.31	.76					
Total psychopathy x COH	.03	.08	.94					
Prediction of BPAQ aggression								
Step 1				.41	.17	28.95	1, 142	<.001
Step 2				.49	.24	4.43	3, 139	<.001
Step 3				.49	.24	.02	1, 138	.88
Total psychopathy	.42	3.44	<.001					
HCS	.27	1.33	.19					
HEI	.13	.71	.48					
CHQ	.10	.57	.57					
Total psychopathy x COH	-.05	-.15	.88					

Note. COH was operationalized as scores on the HEI, CHQ, and HCS

Table 18

Hierarchical regressions of alcohol consumption as a covariate with psychopathy in predicting aggression

Prediction of RAS relational aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.12	.01	2.09	1, 142	.15
Step 2				.44	.19	31.29	1, 141	<.001
Alcohol consumption	-.01	-.16	.87					
Factor 2	.44	5.59	<.001					
Prediction of SRASB relational aggression								
Step 1				.10	.01	1.57	1, 142	.21
Step 2				.21	.09	11.39	1, 141	<.001
Alcohol consumption	.02	.22	.82					
Factor 2	.29	3.38	<.001					
Prediction of BPAQ aggression								
Step 1				.24	.06	9.01	1, 142	<.001
Step 2				.52	.27	40.41	1, 141	<.001
Alcohol consumption	.10	1.33	.19					
Factor 2	.48	6.36	<.001					

Prediction of RAS relational aggression								
Step 1				.12	.01	2.09	1, 142	.15
Step 2				.34	.12	16.15	1, 141	<.001
Alcohol consumption	.01	.06	.95					
Total psychopathy	.34	4.02	<.001					
Prediction of BPAQ aggression								
Step 1				.24	.06	9.01	1, 142	<.001
Step 2				.43	.18	21.02	1, 141	<.001
Alcohol consumption	.12	1.46	.15					
Total psychopathy	.37	4.59	<.001					

Table 19

Hierarchical regressions of gender as a moderator between Factor 1 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.08	.01	.52	1, 79	.48
Step 2				.08	.01	.02	1, 78	.88
Step 3				.14	.02	1.00	1, 77	.32
Factor 1	.26	.74	.46					
Gender	.77	.97	.34					
Factor 1 x Gender	-.96	-1.00	.32					
Prediction of RAS relational aggression								
Step 1				.03	.00	.13	1, 142	.72
Step 2				.23	.05	7.43	1, 141	<.001
Step 3				.23	.05	.01	1, 140	.91
Factor 1	-.02	-.08	.93					
Gender	.30	.53	.60					
Factor 1 x Gender	-.08	-.11	.91					
Prediction of SRASB relational aggression								
Step 1				.06	.00	.52	1, 142	.47

Step 2				.10	.01	.92	1, 141	.34
Step 3				.10	.01	.10	1, 140	.76
Factor 1	-.11	-.41	.68					
Gender	-.26	-.45	.65					
Factor 1 x Gender	.22	.31	.76					
Prediction of CRT-A								
Step 1				.02	.00	.06	1, 142	.81
Step 2				.02	.00	.00	1, 141	.95
Step 3				.09	.01	1.08	1, 140	.30
Factor 1	-.24	-.90	.37					
Gender	-.60	-1.04	.30					
Factor 1 x Gender	.74	1.04	.30					
Prediction of BPAQ aggression								
Step 1				.11	.01	1.88	1, 142	.17
Step 2				.19	.04	3.43	1, 141	.07
Step 3				.20	.04	.27	1, 140	.61
Factor 1	-.07	-.30	.79					
Gender	-.13	-.23	.82					
Factor 1 x Gender	.36	.52	.61					

Table 20

Hierarchical regressions of gender as a moderator between Factor 2 traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.13	.02	1.25	1, 79	.27
Step 2				.14	.02	.27	1, 78	.60
Step 3				.14	.02	.09	1, 77	.77
Factor 2	.23	.66	.51					
Gender	.20	.23	.82					
Factor 2 x Gender	-.29	-.29	.77					
Prediction of RAS relational aggression								
Step 1				.44	.19	34.03	1, 142	<.001
Step 2				.46	.21	3.46	1, 141	.07
Step 3				.46	.22	.45	1, 140	.50
Factor 2	.27	1.17	.25					
Gender	-.26	-.43	.67					
Factor 2 x Gender	.45	.67	.50					
Prediction of SRASB relational aggression								
Step 1				.29	.09	13.11	1, 142	<.001

Step 2				.33	.11	3.79	1, 141	.05
Step 3				.34	.11	.64	1, 140	.43
Factor 2	.50	2.07	.04					
Gender	.35	.54	.59					
Factor 2 x Gender	-.57	-.80	.43					
Prediction of CRT-A								
Step 1				.04	.00	.22	1, 142	.64
Step 2				.04	.00	.01	1, 141	.95
Step 3				.05	.00	.05	1, 140	.82
Factor 2	.10	.37	.71					
Gender	.14	.21	.83					
Factor 2 x Gender	-.17	-.22	.82					
Prediction of BPAQ aggression								
Step 1				.51	.26	49.89	1, 142	<.001
Step 2				.52	.27	1.46	1, 141	.23
Step 3				.52	.27	.02	1, 140	.88
Factor 2	.53	2.37	.02					
Gender	.18	.31	.76					
Factor 2 x Gender	-.10	-.15	.88					

Table 21

Hierarchical regressions of gender as a moderator between total psychopathy traits and aggression

Prediction of laboratory aggression	*Standardized β*	*t*	*p*	*R*	R^2	*F* change	*df*	*p* change
Step 1				.04	.00	.14	1, 79	.71
Step 2				.07	.01	.27	1, 78	.61
Step 3				.16	.03	1.66	1, 77	.20
Factor 2	.50	1.39	.17					
Gender	1.44	1.23	.22					
Factor 2 x Gender	-1.70	-1.29	.20					
Prediction of RAS relational aggression								
Step 1				.34	.12	18.59	1, 142	<.001
Step 2				.35	.13	1.58	1, 141	.21
Step 3				.36	.13	.04	1, 140	.85
Factor 2	.35	1.35	.18					
Gender	.26	.32	.75					
Factor 2 x Gender	-.18	-.19	.85					
Prediction of SRASB relational aggression								
Step 1				.13	.02	2.38	1, 142	.13

Step 2				.20	.04	3.60	1, 141	.06
Step 3				.21	.04	.50	1, 140	.48
Factor 2	.37	1.38	.17					
Gender	.42	.50	.62					
Factor 2 x Gender	-.68	-.71	.48					
Prediction of CRT-A								
Step 1				.04	.00	.24	1, 142	.63
Step 2				.04	.00	.03	1, 141	.86
Step 3				.06	.00	.25	1, 140	.62
Factor 2	-.08	-.30	.76					
Gender	-.45	-.52	.61					
Factor 2 x Gender	.50	.50	.62					
Prediction of BPAQ aggression								
Step 1				.41	.17	28.95	1, 142	<.001
Step 2				.41	.17	.115	1, 141	.70
Step 3				.41	.17	.09	1, 140	.77
Factor 2	.47	1.88	.06					
Gender	.26	.33	.74					
Factor 2 x Gender	-.27	-.30	.77					

Figure Captions

Figure 1. Histogram of PPI-R Inconsistent Responding scale

Figure 2. Interaction effect between region and gender with regard to HEI

Figure 3. Interaction effect between region and Factor 2 traits with regard to SRASB relational aggression

Figure 4. Interaction effect between region and Factor 1 traits with regard to RAS relational aggression

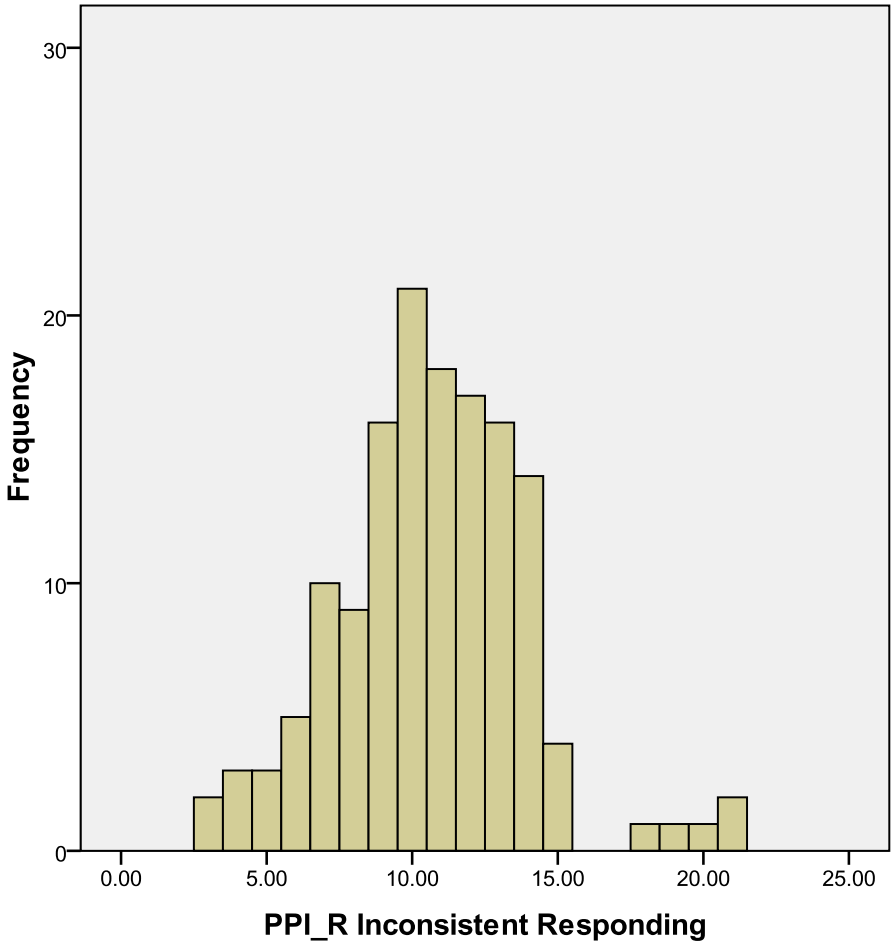
Figure 5. Interaction effect between city size and Factor 1 traits with regard to SRASB relational aggression

Figure 6. Interaction effect between COH (3 self-report measures combined) and total psychopathy with regard to laboratory aggression

Figure 7. Interaction effect between COH (3 self-report measures combined) and total psychopathy with regard to RAS relational aggression

Figure 8. Interaction effect between COH (3 self-report measures combined) and total psychopathy with regard to SRASB relational aggression

Figure 1.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20
10
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Frequency
0.00
5.00
10.00
15.00
20.00
25.00
PPI_R Inconsistent Responding

Figure 2.

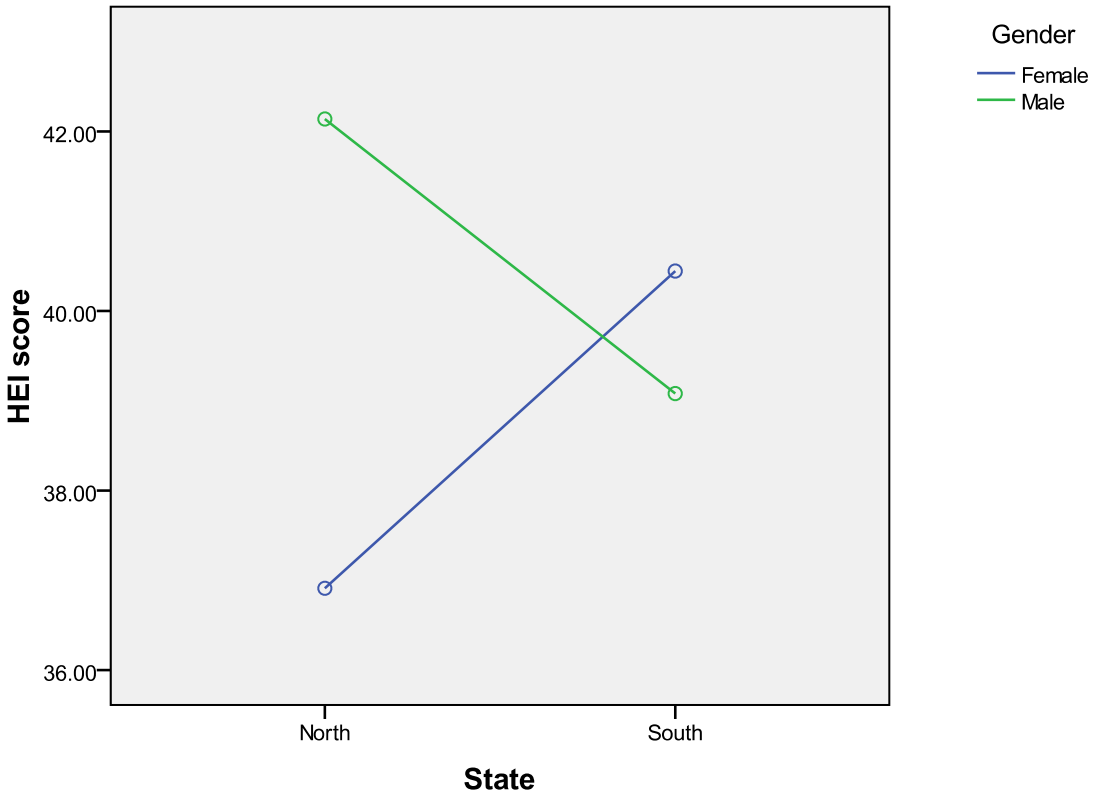
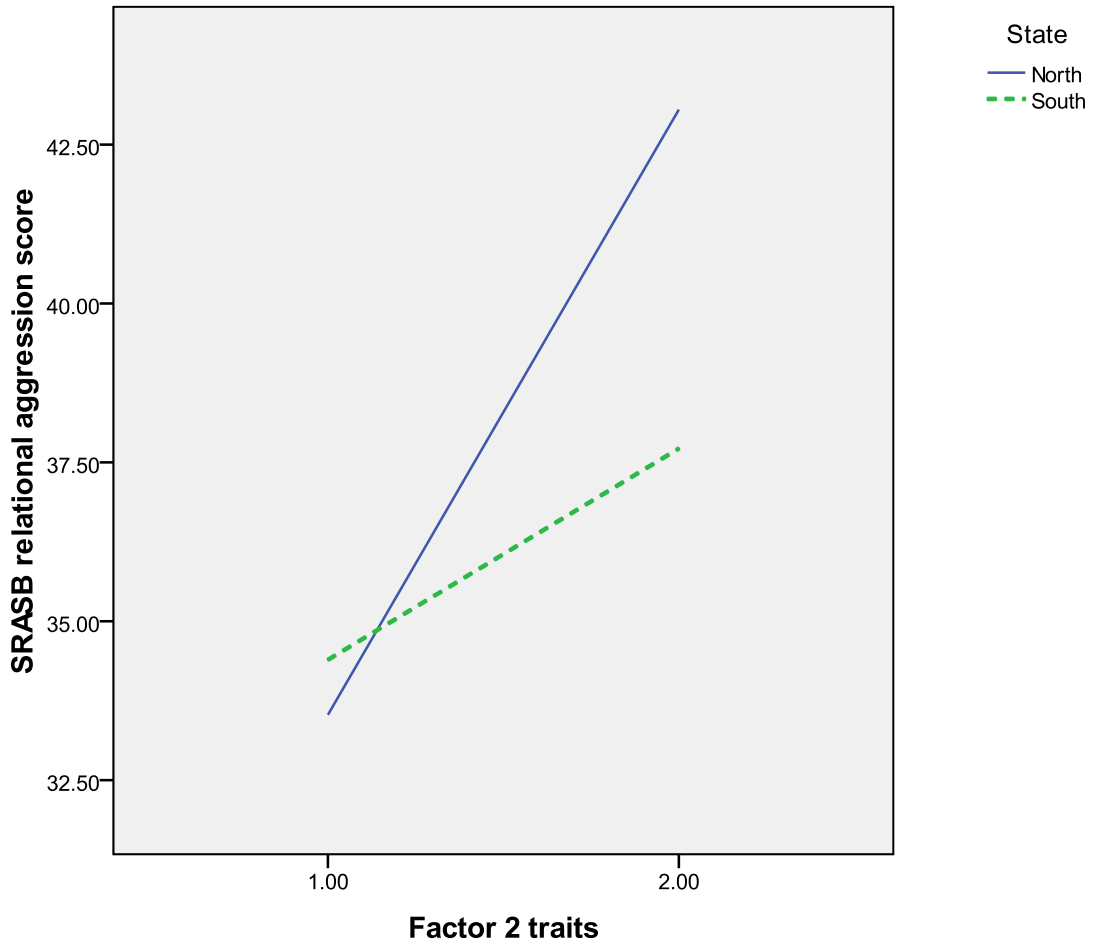

Gender
Female
Male
42.00
40.00
38.00
36.00
HEI score
North
South
State

Figure 3.


State
North
South
SRASB relational aggression score
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40.00
37.50
35.00
32.50
1.00
2.00
Factor 2 traits

Figure 4.

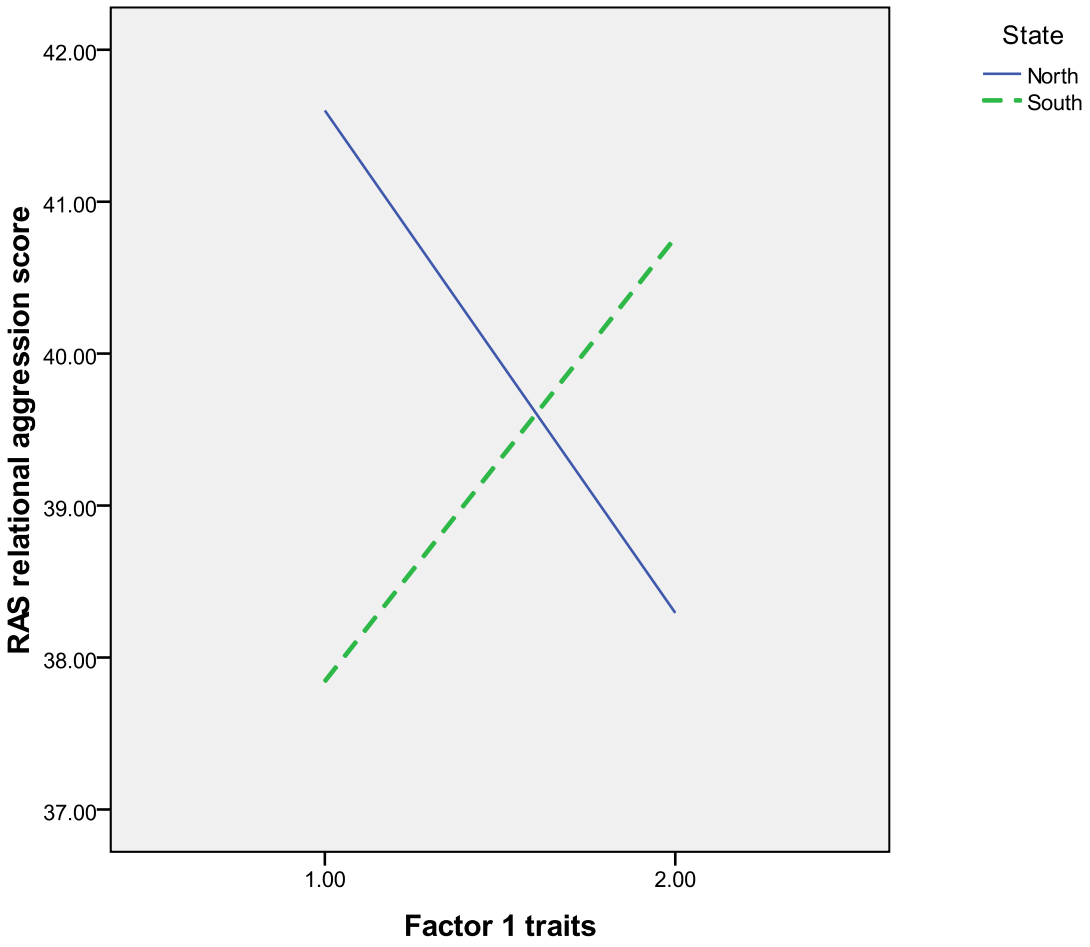

State
North
South
RAS relational aggression score
42.00
41.00
40.00
39.00
38.00
37.00
1.00
2.00
Factor 1 traits

Figure 5.

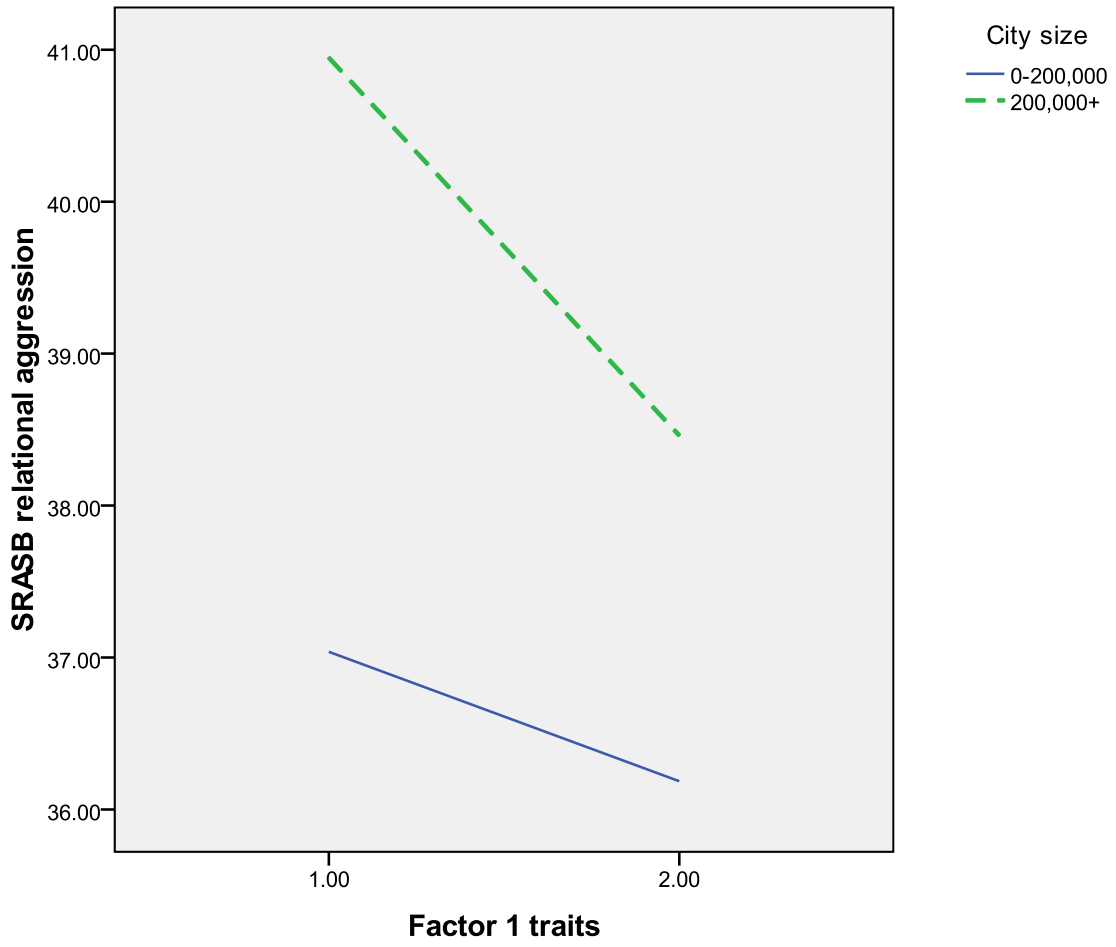

City size
0-200,000
200,000+
SRASB relational aggression
41.00
40.00
39.00
38.00
37.00
36.00
1.00
2.00
Factor 1 traits

Figure 6.

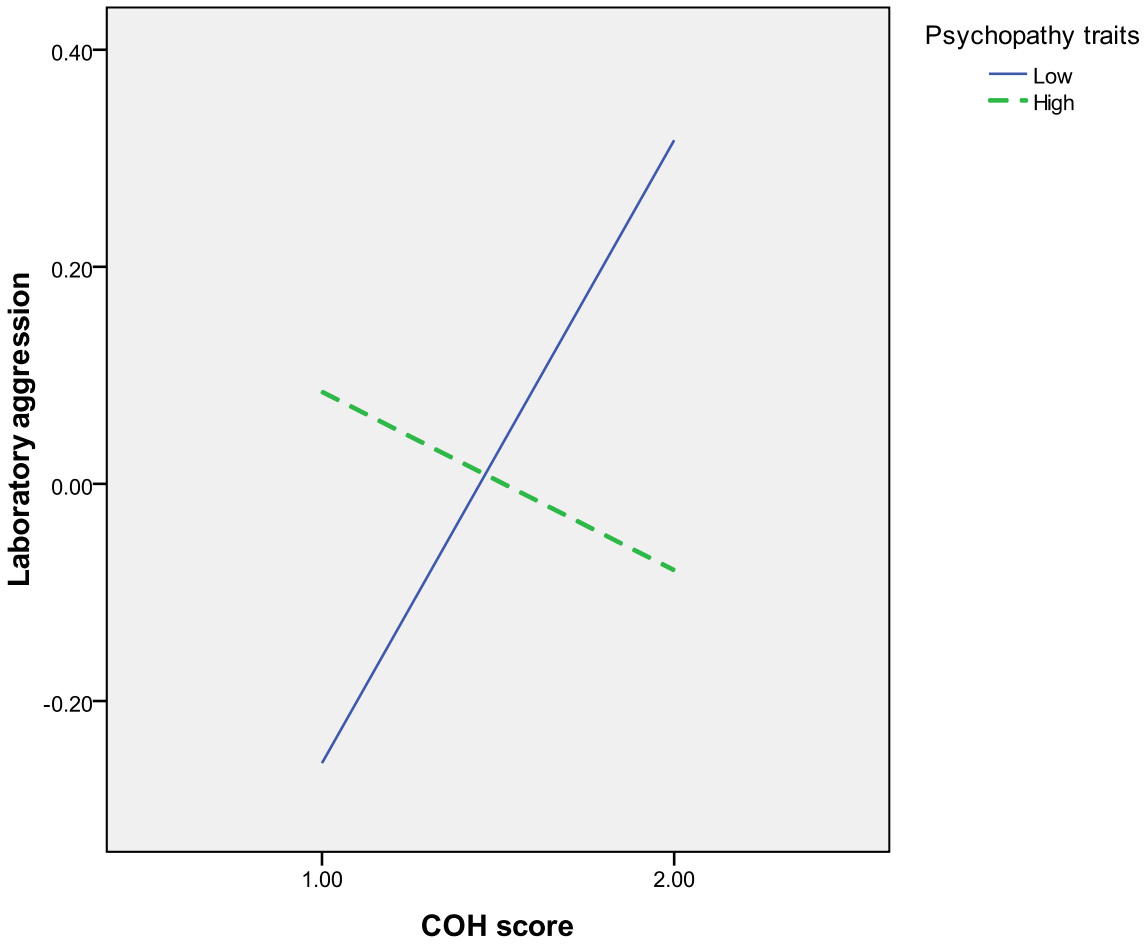

Psychopathy traits
Low
High
0.40
0.20
0.00
-0.20
Laboratory aggression
1.00
2.00
COH score

Figure 7.

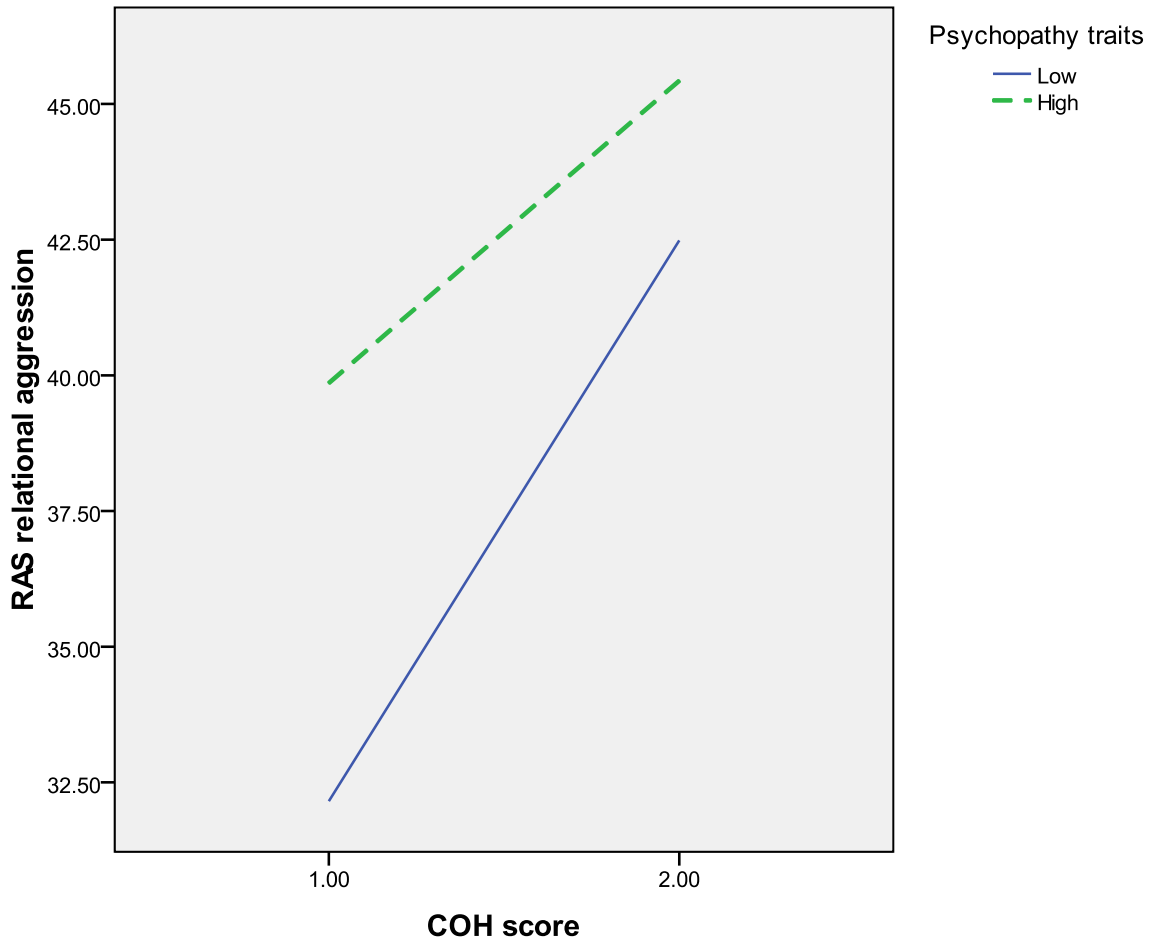
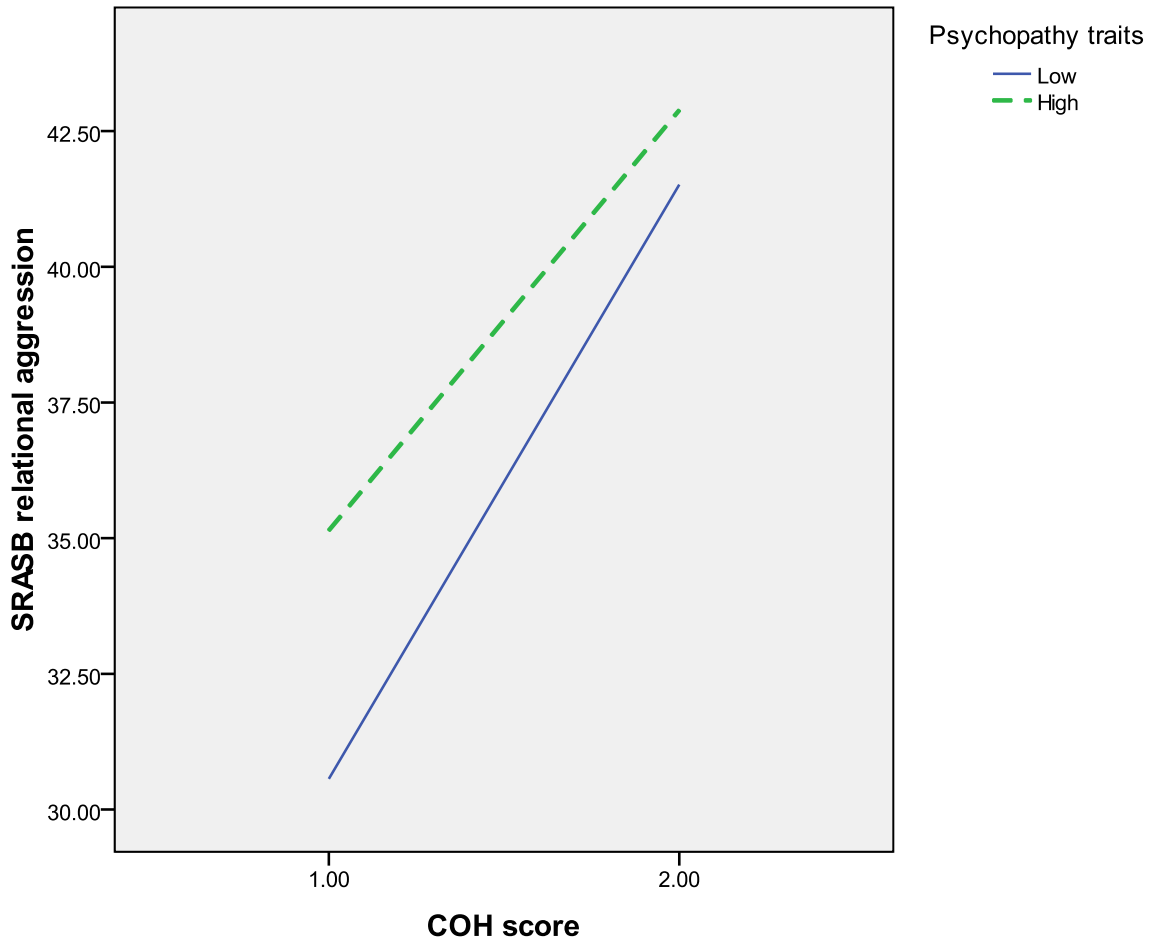

Psychopathy traits
Low
High
RAS relational aggression
45.00
42.50
40.00
37.50
35.00
32.50
1.00
2.00
COH score

Figure 8.


Psychopathy traits
Low
High
SRASB relational aggression
42.50
40.00
37.50
35.00
32.50
30.00
1.00
2.00
COH score

Appendix A

Cleckley Psychopathy Criteria

1) Superficial charm and "good intelligence"
2) Absence of delusions and other signs of irrational thinking
3) Absence of "nervousness" or psychoneurotic manifestations
4) Unreliability
5) Untruthfulness and insincerity
6) Lack of remorse and shame
7) Inadequately motivated antisocial behavior
8) Poor judgment and failure to learn by experience
9) Pathologic egocentricity and incapacity for love
10) General poverty in major affective reactions
11) Specific loss of insight
12) Unresponsiveness in general interpersonal relations
13) Fantastic and uninviting behavior with drink and sometimes without
14) Suicide rarely carried out
15) Sex life trivial, impersonal, and poorly integrated
16) Failure to follow any life plan

Appendix B

"Southern" States (Nisbett & Cohen, 1996)

Kentucky

Maryland

Oklahoma

Tennessee

Alabama

Arkansas

Florida

Georgia

Louisiana

Mississippi

North Carolina

South Carolina

Texas

Virginia

West Virginia

Delaware

Appendix C

Sample PPI-R items

If I really want to, I can persuade most people of almost anything.

When I meet people, I can often make them interested in me with just one smile.

Dangerous activities like skydiving scare me more than they do most people.

I have always seen myself as something of a rebel.

Appendix D

Culture of Honor Questionnaire

Imagine that a person named John or Mary finds himself or herself in each of the following situations.

Please tell us if this person:

+3 = Did much less than he/she should have done
+2 = Did less than he/she should have done
+1 = Did slightly less than he/she should have done
-1 = Did slightly more than he/she should have done
-2 = Did more than he/she should have done
-3 = Did much more than he/she should have done

Please consider each situation separately. There is no relationship between John's or Mary's action in one situation and what they might have done in any other situation.

__ 1) Mary's male neighbor once threw trash in Mary's back yard. Mary later threw her own trash into her neighbor's yard.

__ 2) A drunken man bumped into John's wife on the street. John hit the drunk.

__ 3) While at work, a fellow female employee called Mary a liar and a cheat. Mary then publicly accused the fellow employee of dishonesty.

__ 4) An acquaintance of John looked over John's girlfriend and started talking to her in an offensive way. John then started a fight with his acquaintance.

__ 5) A male stranger deeply insulted Mary's sister in public. Mary then slapped the stranger.

__ 6) During an argument, John's male friend called him a liar and a coward to his face. John then started a fist fight with his friend.

__ 7) A man sexually assaulted Mary's sister. Mary then shot the man who did it.

__ 8) A female stranger tried to steal John's baseball cap on the bus. John took back his cap and then pushed the stranger off the bus.

__ 9) Mary's male friend had borrowed money from Mary to buy a vase and refused to pay Mary back. While at her friend's house, Mary intentionally broke the vase.

__ 10) A man seduced John's 16-year-old daughter. To get even, John then seduced that man's teenage daughter.

__ 11) A man looked over John's girlfriend and talked to her in a suggestive way. Although John's girlfriend was not offended, John hit the man.

__ 12) A male acquaintance insults John's wife. John simply ignores it.

__ 13) A female acquaintance insulted Mary's mother. Mary slapped the acquaintance in the face.

__ 14) Mary's female friend had offended her. Mary then revealed her friend's secrets to their common acquaintances.

__ 15) An adult male stranger had beaten up John's mother. John stabbed the stranger.

__ 16) Mary's female neighbor always steals tomatoes from Mary's garden. Even though Mary works hard in her garden, she always forgives her neighbor.

Appendix E

Honour Concern Scale

Imagine as vividly as possible that you behaved or had the reputation described in each item. Then, indicate the extent to which such a behavior or reputation would damage your self-esteem by rating the item using the following scale:

0: Not at all

1: Slightly

2: More than slightly

3: Moderately

4: More than moderately

5: To a great extent

6: Very much

__1) One's family having a bad reputation

__ 2) Betraying other people

__ 3) Not defending oneself when others insult you

__ 4) Having sexual relations before marriage

__ 5) Self damaging one's family reputation

__ 6) Not keeping up one's word

__ 7) Not having authority over one's family

__ 8) Changing romantic partners often

__ 9) Being unable to defend one's family reputation

__ 10) Lying to others

__ 11) Being unable to maintain one's family

__ 12) Sleeping with someone before starting a serious relationship with that person

__ 13) One's sister or mother having the reputation of having diverse sexual relations

__ 14) Not being loyal to one's values and principles

__ 15) Not yet having had a sexual relationship

__ 16) Wearing provocative clothes

__ 17) Letting others insult your family

__ 18) Having the reputation of being dishonest with others

__ 19) Being incapable of having children

__ 20) Being known as having different sexual contacts

__ 21) Having the reputation of being someone who is not to be trusted

__ 22) Being known as someone who does not have authority over family

__ 23) Being known as someone with whom it is easy to sleep with

__ 24) Being hypocritical

__ 25) Being known as someone who cannot support a family

__ 26) Having the reputation of being someone without sexual experience

__ 27) Everybody knowing that you are sterile

Appendix F

Honor Endorsement Index

Using the scale below, please rate how strongly you believe the following items:

1	2	3	4	5	6	7
Strongly disagree	**Disagree**	**Disagree somewhat**	**Neither agree nor disagree**	**Agree somewhat**	**Agree**	**Strongly agree**

___1. A woman must protect the family's good reputation.

___2. There are many things that are much more important than a woman's honor.

___3. A woman's honor must be defended by the men in the family.

___4. A woman must be pure and honest.

___5. A man must defend his honor at any cost.

___6. A man must defend his family's honor at any cost.

___7. A real man must be capable of defending himself against an insult.

___8.There are many things that are much more important than a man's honor.

___9. A man must be tough.

Appendix G

Sample CRT-A item

People in a rich neighborhood in New York were pushed around for years by a homeless man. This man slept in alleys, stayed drunk or high on drugs, and cursed and threatened to hurt many of the residents. The police were called many times. But the homeless man always got a lawyer and returned to the neighborhood and caused trouble.

Which of the following is the most logical conclusion regarding the people who lived in this neighborhood?

a. They were used to dealing with the cold weather.

b. They were afraid of the man, and would not fight back.

c. They worked in New Jersey.

d. They did all that they could do within the law.

Appendix H

Sample BPAQ items

Once in a while I can't control the urge to strike another person.

Given enough provocation, I may hit another person.

If somebody hits me, I hit back.

I get into fights a little more than the average person.

Appendix I

Sample SRASB items

I have threatened to break up with my romantic partner in order to get him/her to do what I wanted.

My friends know that I will think less of them if they do not do what I want them to do.

When I am not invited to do something with a group of people, I will exclude those people from future activities.

When I want something from a friend of mine, I act “cold” or indifferent towards them until I get what I want.

Appendix J

Sample RAS items

I've made fun of someone to impress other people.

I've told lies about someone who upsets me.

I've hurt someone's feelings on purpose to get back at them.

I return insults.

Appendix K

MAST

Please rate yourself on the following items by endorsing either “Yes” or “No”

1)Do you feel you are a normal drinker?

_____

2) Have you ever awakened the morning after some drinking the night before and found that you could not remember part of the evening before?

____

3) Does your spouse or your parents ever worry or complain about your drinking?

____

4) Can you stop drinking without a struggle after one or two drinks?

____

5) Do you ever feel bad about your drinking?

____

6) Do your friends or relatives think that you are a normal drinker?

____

7) Do you ever try to limit your drinking to a certain time of the day or to certain places?

____

8) Are you always able to stop drinking when you want to?

____

9) Have you ever attended a meeting of Alcoholics Anonymous?

____

10) Have you gotten into fights while drinking?

____

11) Has drinking ever created problems with you and your spouse or significant other?

____

12) Has your spouse or other family member ever gone to anyone for help about your drinking?

____

13) Have you ever lost friends because of your drinking?

____

14) Have you ever gotten into trouble at work because of drinking?

____

15) Have you ever lost a job because of drinking?

____

16) Have you neglected your obligations, your family or your work for 2 or more days in a row because of drinking?

____

17) Do you ever drink before noon?

____

18) Have you ever been told you have liver trouble or cirrhosis?

____

19) Have you ever had Delerium Tremens (DT's), severe shakes, heard voices, or seen things that weren't there after heavy drinking?

____

20) Have you ever gone to anyone for help about your drinking?

____

21) Have you ever been in a hospital because of your drinking?

____

22) Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem?

____

23) Have you ever been seen at a psychiatric or mental health clinic or gone to a doctor, social worker, or clergy for help with an emotional problem in which drinking had played a part?

____

24) Have you ever been arrested, even for a few hours, because of drunk behavior?

____

25) Have you ever been arrested for drunk driving or driving after drinking?

____

Appendix L

Sample FrSBe items

I speak only when spoken to.

I am easily angered or irritated; I have emotional outbursts without good reason.

Repeat certain actions or get stuck on certain ideas.

I do things impulsively.

Appendix M

Sample POMS items

Friendly

Deceived

Tense

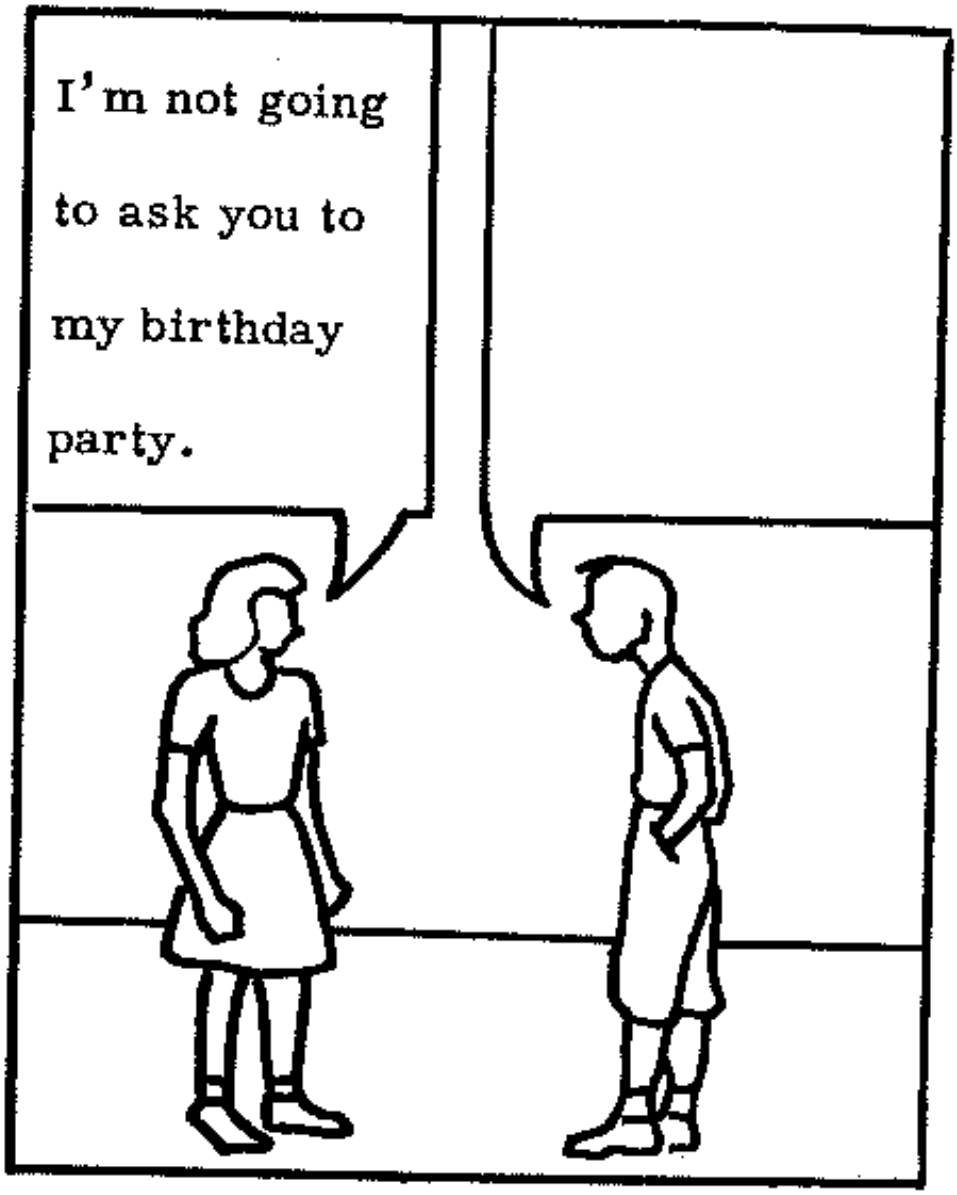
Sympathetic

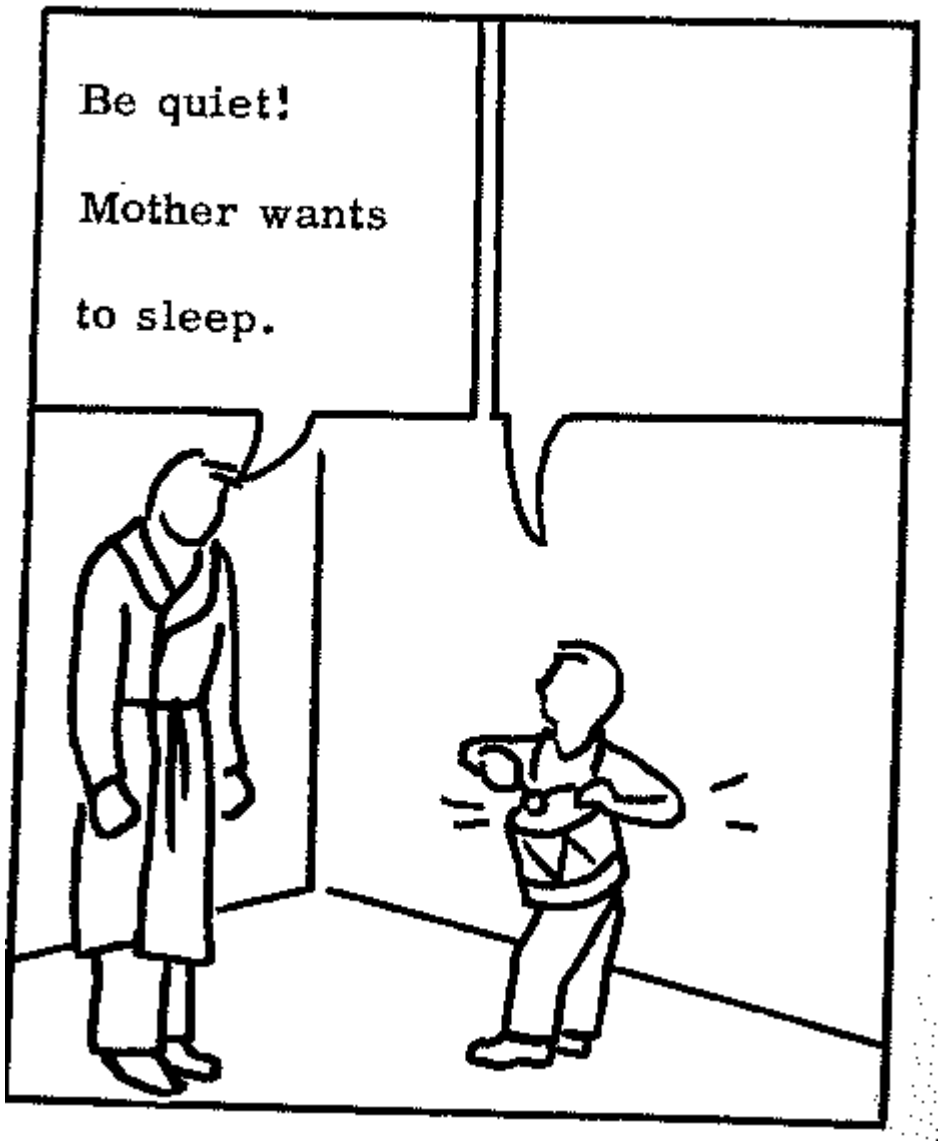
Annoyed

Sluggish

Appendix N

Sample Rosenzweig Picture Frustration Pictures




Be quiet!
Mother wants
to sleep.

Appendix O

Script for Feedback (Following responses to cartoons, prior to computer reaction time task)

One thing we do at this point is to give participants a bit of feedback about what their responses to the cartoons might reveal. Some psychologists believe that participants' answers are indicative of their personality traits or attitudes. You may be familiar with inkblot tests, in which people look at ambiguous inkblots and report what they see. People respond differently to the inkblots, and according to some psychologists, the answers they give sometimes reflect the personality traits they possess. The type of task you just completed, responding to the cartoons, is supposed to work the same way – in particular, this task has been used by some researchers to examine how people respond to insults and other threats to their reputation.

So, based on what you've said thus far, I can tell you that your responses indicate that you are someone who is fairly well-adjusted. You seem to have at least average self-esteem and view yourself in a generally positive way. You have been through some frustrating things in your life, and seem to have learned a great deal from these experiences. Some of your responses indicate that you enjoy being close to others and have many close relationships in your life.

Based on your responses, I can also tell you that your answers seem to reflect some difficulty with standing up for yourself. What I mean by that is that you might tend to allow others to insult you or do things to criticize your reputation without adequately defending yourself. This may get you into trouble because over time your reputation might be damaged, such that others do not think very highly of you. Psychologists have recently discovered that this type of trait tends to run in families, so that it is quite possible that your family members are also not likely to stand up for themselves when others insult their reputation. Some recent research suggests that families that possess these types of traits may not be well-thought-of by others. Admittedly, I may be going to a bit beyond what the test manual says here, but based on my experience with other subjects, my impressions are that at times you really struggle with standing up for yourself – perhaps even the point of being a bit submissive at times.

OK, now let's move on to the next task in the study.