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Testing Multiple Sociometer Theory: Predicting Physical and Psychological Abuse in Dating Couples from Domain-Specific Self-Esteem Measures

Jonathon G. LaPaglia

College Station, Texas

Bachelor of Arts, The University of Texas at Austin, 2002

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Department of Psychology

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APPROVAL SHEET

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la. on Jonathon George LaPaglia

Approved by the Committee, May 2006

Lee A. Kirkpatrick Chair

Mater Constance J. Pilkington

Jennifer A. Stevens

ABSTRACT

Empirical research on the relationship between self-esteem (SE) and aggression has long yielded inconsistent or null results. However, recent research based on an evolutionary conceptualization of SE as a collection of functionally distinct, domainspecific mechanisms (Kirkpatrick & Ellis, 2000) has shown that different domains of SE are differentially predictive of aggression; for example, self-perceived superiority and social inclusion predict aggression in opposite directions, whereas global SE is unrelated to aggression (Kirkpatrick, Waugh, Valencia, & Webster, 2002).

The current study aimed to similarly identify those domains of SE that are predictive of physical and psychological abuse within romantic relationships. Both members of dating couples completed self-report measures of global and several domainspecific SE scales. Participants also completed measures of physical and psychological abuse. Multiple regression analyses were used to evaluate the differential predictive value of domain-specific versus global SE measures.

The results of the current study failed to replicate those of earlier research (Valencia, 2001). While global SE was found to negatively predict psychological abuse for males, none of the domain-specific SE scales were significant predictors. Discussion closes by addressing the various confounds that could have contributed to these null results.

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DEDICATION

To my family for all their love and support

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INTRODUCTION

To the casual observer, aggression appears to be a basic component of human social interactions. Every day, media consumers are bombarded by images of violence and aggression in both fictional entertainment and factual news reports. Some might argue that although humans can be aggressive, those who do so tend to be extremely criminological and/or pathological. Alternatively, the possibility exists that an otherwise "normal" individual can be can forced into behaving violently under extreme circumstances such as war, or as the aftermath of hurricane Katrina has shown, a natural disaster. However, aggression is not just composed of the violent behaviors such as serial killings or fighting over food and water following a hurricane. More subtle forms of aggression exist that occur under less extreme conditions, conditions under which one could argue that no aggression should occur at all. Specifically, this refers to acts of physical and psychological abuse that sometimes occur in romantic relationships.

According to the US Department of Justice Office on Violence Against Women (USDJ-OVW, 2007), domestic violence is defined as the physical, sexual, emotional, economic, or psychological actions or threats of actions that influence another person. Examples of physical abuse include hitting, slapping, shoving, grabbing, pinching, biting, hair-pulling, biting, etc. Examples of emotional abuse, the undermining an individual's sense of self-worth and/or self-esteem, include, constant criticism, diminishing one's abilities, name-calling, or damaging one's relationship with his or her children. Lastly, examples of psychological abuse, causing fear by intimidation, include threatening physical harm to self, partner, children, or partner's family or friends, destruction of pets and property, and forcing isolation from family, friends, or school and/or work. It is estimated that some form of physical or psychological abuse occurs in approximately 50% of all heterosexual romantic relationships (Olsen, 2002). The National Coalition Against Domestic Violence estimates that of the more than four million reported incidents of physical abuse per year, 95% of the victims are female (Hasenauer, 1997). In 1992, the FBI reported that every 12 seconds, a woman was beaten by her husband or boyfriend somewhere in the country (Jones, 1994). Perhaps even more distressing is that on average, 10 women a day are murdered by their romantic partner (Hasenauer, 1997).

Given these statistics, aggression researchers have focused on identifying both the situational contexts, such as threats of mortality salience (McGregor, et al., 1998), as well as the personality factors, such as attachment style (Kesner, Julian, & McKenry, 1997), in order to predict when violence will occur and how to prevent it. The current paper explores one of the most heavily cited individual characteristics linked to abuse: self-esteem (Baumeister, Smart, & Boden, 1996; Elbow, 1977; Goldstein & Rosenbaum, 1985; Meyers & Gilbert, 1983).

Self-Esteem and Aggression

In social psychology, the general consensus exists that there is a negative relationship between self-esteem (SE) and aggression; yet in literature reviews, Baumeister and colleagues found little evidence in support of this contention (Baumeister & Boden, 1996; Baumeister, et al., 1996). Studies that did empirically find a link between low SE and aggression were criticized as being problematic and unable to demonstrate directionality. For example, one study is cited in which abusive mothers were administered a single-item questionnaire expected to measure SE (Oates & Forrest,

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1985). Mothers who responded negatively to the statement "Would you like your child to grow up to be like you," were considered to have low SE. Baumeister and colleagues suggest that because participants were included in the study following a court referral for child abuse, it is hardly surprising that these women tended to respond negatively. Thus, sampling error renders these findings suspect. Directionality problems are also apparent other reviewed studies. The finding that global SE is lower in abusive husbands than non-abusive husbands is ambiguous because it is unclear as to whether low SE was the cause or simply a correlate of spousal abuse (Goldstein & Rosenbaum, 1985; Murphy, Meyer, & O'Leary, 1994).

In addition to such forms of domestic violence, low SE has also been linked with aggression in other contexts including gangs, terrorists, and armed robberies. Presumably, aggression by low SE individuals serves the function of restoring SE levels by physically dominating others. Yet this assumption is contrary to empirical evidence. If low SE causes aggression, then one would expect depressed individuals to be highly aggressive, but research has shown depression to be the one mood disorder characterized by abnormally low levels of aggression (Tennen & Affleck, 1993). Furthermore, the motivation to enhance self-image is strongest in individuals with high SE and weak or absent among low SE individuals (Baumeister, Tice, & Hutton, 1989). In their reviews, Baumeister and colleagues discovered that in many of the studies where researchers inferred a relationship between low SE and aggression an apparent discrepancy exists. In many cases, the abusers were reported as being narcissistic, egotistical, or arrogant: all traits indicative of *high* SE. At this point, it would appear that the findings of an empirical

link between low SE and aggression are suspect, and studies in which this link was supposed actually suggest a link between aggression and high SE.

Baumeister and colleagues suggest that those with higher SE should feel more entitled to the resources potentially gained from conflict and might over estimate their likelihood of success, but is there more evidence of high SE associated with aggression? Schlenker, Soraci, and McCarthy (1976) showed that high SE individuals react poorly to criticism. Further, males tend to have higher SE than females (Harter, 1993) and are also more aggressive (Crocker & Major, 1989). But not everyone with high SE is necessarily aggressive. Baumeister, Heatherton, and Tice (1993) found that people with high SE irrationally respond to ego threat with excessive and self-defeating comments. This led Baumeister and colleagues to theorize that high SE, coupled with an ego threat, should result in hostile action intended to restore the loss of SE. If correct, this theory expects aggression to be preceded by the aggressor perceiving the behavior of the victim as being threatening to the aggressor's self-image. Goldstein and Rosenbaum (1985) found that abusive husbands are more likely to interpret their wife's behavior as threatening their own favorable self-image, and spousal abuse is most likely to occur if the husband perceives his wife as having equal or greater status than himself. Interestingly, there is also evidence that inter-group violence follows a similar pattern. For example, statistics of inter-racial violent crimes (e.g., rape and murder) between Blacks and Whites show that up until the 1950's the majority of these crimes were carried out by Whites against Black victims. However, starting in the 1960's this pattern has reversed; Whites are more likely to be victims of these crimes perpetrated by Blacks. This reversal coincides with

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the rising of Black SE relative to that of Whites (for a more detailed review see Baumeister, et al., 1996).

Given that high SE, combined with ego threat, seems a probable explanation of aggression, Baumeister and colleagues rationalize that there must be subgroups of high SE individuals which are more likely to receive ego threats than others. Particularly, individuals with unrealistically inflated self-appraisal should be more likely to perceive accurate feedback as threatening because it will be less likely to affirm their erroneous self-view. This expectation must be evaluated in tandem with one additional moderating factor: affective response. Boden and Baumeister (1996) argue that when an individual is faced with situations were favorable self-views are challenged by negative feedback, the individual faces a 'choice point.' If the individual accepts the feedback, he/she must adjust their self-evaluation in a downward manner, resulting in feelings of sadness or rejection. Alternatively, if the individual rejects the feedback, he/she must also reject the , evaluator in order to maintain their positive self-appraisal. This choice path results in negative feelings such as anger. Both artificially high SE and affective predisposition can be found in psychopaths (Hare, 1993), those under the influence of alcohol (Banaji & Steele, 1989), and those with narcissism (Bushman & Baumeister, 1998). Each of these conditions has been found to artificially inflate self-image and to suppress inhibitions regarding the social appropriateness of behavioral responses.

Narcissism, a term coined by Freud to describe excessive self-love, is based on the Greek myth of Narcissus, who wasted away, unable to stop staring at his own image reflected in a pool of water. Bushman and Baumeister (1998) claim that narcissists are individuals with unrealistically high SE who are also emotionally invested in their own superiority. Not only does this inflated self-image increase the likelihood of encountering threatening feedback, but the intense emotional investment makes narcissists more likely to feel angry and to respond to the threat with aggression. Thus Bushman and Baumeister develop a model predicting that high levels of SE related to narcissism, when combined with an ego threat, are better predictors of aggression than a global SE measure such as the Rosenberg (1965) scale. To test this model, they designed a study in which participants were randomly assigned to receive either positive or negative feedback, ostensibly provided by another participant, on an essay written by the participant. After receiving feedback, the participants were then given the opportunity to aggress against the evaluator by administering a noise blast (Taylor, 1967). Contrary to earlier research, global SE did not predict aggression. Furthermore, as predicted by the researchers, aggression levels were highest in narcissists who received negative feedback.

To summarize, the relationship between low SE and aggression is dubious, and the evidence suggests that it is, in fact, high SE that can lead to aggression, particularly when the high SE is unrealistically inflated, and challenged via ego threat. Narcissism is one such form of high SE found to lead to aggressive behavior. But these findings lead to two important questions: a) why are people motivated to maintain high SE? and b) are there other forms of SE other than narcissism that could be associated with aggression? *Are people motivated to maintain high SE*?

Traditional social psychological theory holds that people are motivated to maintain high SE in order to maintain positive affect and avoid negative affect. However, it is argued that this explanation is insufficient in explaining the source and function of SE (Leary & Downs, 1995; Leary, Tambor, Terdal, & Downs, 1995). Instead, Leary and colleagues proposed that SE acts as an internal gauge, or "sociometer" designed to monitor an individual's success with respect to interpersonal relationships. The researchers offer the analogy of an automobile fuel gauge designed to alert the driver to refill the tank when the fuel level becomes dangerously low. In an evolutionary context, rejection by the social group would significantly decrease an individual's ability to survive and reproduce. William James (1892/1968) understood this concept when he wrote "No more fiendish punishment could be devised, were such a thing physically possible, than that one should be turned loose in society and remain absolutely unnoticed by all the members thereof," (p. 42). According to the sociometer model, low SE is not a malfunction of the self-evaluation system but rather is an adaptive cue that one's level of social inclusion is dangerously low and that corrective action must be taken in order to restore a favorable level of inclusion.

As an extension of sociometer theory, Kirkpatrick and Ellis (2001) have presented an evolutionary-psychological theory of SE as comprising numerous psychological mechanisms that are *functionally* domain-specific, including self-evaluative mechanisms designed to solve reliably occurring adaptive problems in both competitive (e.g. mate value, status) and cooperative (e.g. social inclusion) social domains. According to their theory, a gauge that simply monitors an individual's general social well being via positive and negative affect would not allow the individual to pinpoint the source of the problem. To use another automotive analogy, this is akin to the "check engine" light found in some newer-model cars. When this light is activated, the driver is only aware that there is some sort of general problem with the automobile but has not really gained any diagnostic information about how to rectify the malfunction. Instead, Kirkpartick and Ellis (2001) posit that an individual would benefit from multiple sociometers designed to monitor well being across these different social domains, each with their own unique adaptive problems.

The sociometer perspective is reminiscent of Cooley's (1902/1968) concept of the "looking glass self" whereby an individual's self-evaluation is obtained by an awareness of how the self is evaluated by others. This in itself bears resemblance to William James' (1892/1968) concept of the "social me." Indeed, James wrote that "a man has as many social selves as there are individuals who recognize him," (p. 42). To use this terminology, Kirkpatrick and Ellis (2002) are suggesting that the sociometer model proposed by Leary and colleagues is too domain general because there are multiple looking glasses. According to the multiple sociometer theory, an individual's selfevaluation can be gleaned from three spheres of reflective comparisons which each answer a specific question: a) social inclusion: what is my level of acceptance in a group? b) between-group competition: how does the quality of my group compare to other groups? and c) within-group competition: how do I compare to other members of my group?

Up to this point, the definition what exactly constitutes a social group has been neglected. Given that each domain of SE proposed by Kirkpatrick and Ellis (2002) is argued to be the result of selection pressures specific to interacting with certain social groups, it is perhaps necessary to define social groupings from an evolutionary perspective. Brewer and Caporael (in press) present a hierarchical model of four interdependent social groups formed by humans across evolutionary history: dyads, task groups, demes, and macrodemes. Dyadic relationships, by definition, involve only two individuals. There are several types of dyadic relationships, each adept at solving specific adaptive problems. For example, a parent-child relationship allows the parent to protect and nurture offspring, while at the same time allows the child to secure protection and resources from the parent. Likewise mating partnerships allow individuals to pool their resources into providing for mutual offspring.

Task groups, according to Brewer and Caporael, consist of approximately five individuals to work on commonly shared tasks such as foraging or hunting. It stands to reason that a group of hunters would be more successful than a solitary one. Cooperation in this context allows an individual to enter into a reciprocal exchange where sharing surplus food following a successful kill (that would otherwise spoil) with others in the group increases the likelihood of being the recipient of such an exchange in future times of need.

Similarly, demes are formed by the cooperation of a band of approximately 30 individuals who form a coalitional alliance to protect themselves against a rival outgroup. Macrodemes, in turn, involve around 300 individuals. According to Brewer and Caporeal, macrodemes would occur when various neighboring tribes would come together seasonally to exchange resources, people, and information.

Specific Domains of SE

Kirkpatrick and Ellis (2002) contend that there are several kinds of sociometers that should have evolved to monitor an individual's success in domains that correspond to the various aforementioned social groupings. Within the sphere of social inclusion, Kirkpatrick and Ellis posit that humans have evolved specialized psychological mechanisms for monitoring inclusion in dyadic interactions such as mating relationships, and kin-based alliances, as well as certain types of instrumental coalitions such as those formed at the task group level for the purpose of hunting. Presumably, an individual should be attentive to how accepted he/she is by a romantic partner, a family member (e.g., an investing parent), or hunting partners. Those who were not faced the possibility of being rejected by a partner resulting in a loss of mating opportunity or resources necessary for survival. Thus one probable SE domain is that of social inclusion.

Within the sphere of between-group competition, it is hypothesized that humans possess sociometers for instrumental coalitions that involved intragroup conflict, such as defensive coalitions. Knowing how the quality of one's group compared to that of an outgroup would be necessary to determine the likelihood of success resulting from a possible intragroup conflict. It is therefore probable that humans possess a form of collective SE. While these types of defensive coalitions would fall under the deme grouping category, defensive coalitions can also exist at the macrodeme level. Kirkpatrick and Ellis (2002) suspect that SE at this level is associated with feelings of patriotism and nationalism. It is important to note, however, that mating relationships and kin-based alliances can also fall into the sphere of between-group comparison if a pair of individuals compares their dyad to that of others.

Finally, an individual should monitor his/her position relative to that of other individuals within a social group. Kirkpatrick and Ellis (2002) theorize that humans do just that on several dimensions all of which are related to reproductive success. Self-

perceived mate value is one such proposed dimension. Just as it is adaptive for one group of warriors to monitor their strength relative to that of a rival group, it is vital for an individual to monitor his/her level of desirability by potential sexual partners relative to those of rivals. For example, a male who perceives his mate value as greater than that of a rival should be more willing to enter conflict over access to a contested partner.

A related sociometer is that of self-perceived social status. It is well documented that status hierarchies are formed within groups across many species. It is common knowledge that when multiple hens are introduced to each other, a pecking order quickly develops. In many species, an individual's position in the status hierarchy strongly influences his/her likelihood of successful reproduction. In harem species such as elephant seals, the alpha male virtually monopolizes sexual access to all females for the entire mating season. In social primates such as chimps and humans, a male's status is linked to the ability to acquire and retain resources. In turn, this ability is a characteristic which females find desirable in potential mates, particularly in humans (Buss, 1989).

One attempt to measure perceived social status is that of self-perceived superiority. Pellham and Swann's (1989) Self-Attributes Questionnaire allows participants to use percentile ranks to indicate their self-perceived standing relative to their peers on ten socially desirable characteristics including academic ability, athletic ability, and physical attractiveness. In theory, higher rankings should correspond to a higher position in the status hierarchy. By this point, the reader should notice that such a measure might also serve to assess narcissistic self-views. To the extent an individual's self-ranking is higher than his/her actual standing, this measure could conceivably indicate the degree to which one's self-assessment is unjustifiably inflated. Baumeister

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and Boden (1998) suggest that aggressively dominating a derogator enhances feelings of superiority and thus may boost self-esteem. However, it is potentially misleading to assume that status and dominance are interchangeable labels for the same construct despite the fact that such an associate seems to make intuitive sense. Indeed, the phrase 'alpha male' seems to almost automatically elicit images of a large individual violently forcing other males to submit to his will.

Henrich and Gil-White (2001) argue that dominance, defined as the use of force or the threat of force is but one pathway of status gaining open to an individual. The other pathway is that of prestige. In essence, an individual might be so important to a group (perhaps via some invaluable set of skills or knowledge) that others freely defer to that individual. To the extent that a loss in status threatens an individual's self-image, his/her response to such a challenge (to accept the criticism and resulting loss in SE, or to respond aggressively towards the critic and negate the criticism) might depend on the manner in which the individual attained the status in the first place.

To summarize, it is likely that humans are motivated to maintain high SE because it signals inclusion in social groups. Kirkpatrick and Ellis (2002) persuasively argue that multiple sociometers should exist, each designed by evolutionary pressures to monitor inclusion in functionally distinct social groups. Likely candidates for sociometers include social inclusion, collective SE, self-perceived mate value, and self-perceived status as related to superiority, dominance, and prestige. Conceptualizing SE as being comprised of multiple domains avoids the problem of conflation that results from treating SE as one global construct should one domain be positively correlated with some variable (e.g., aggression) while another is negatively correlated with the same variable. To the extent

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that each of these domains contribute to global SE, such conflation could be partially responsible for previous findings that both low and high global SE have been found to be associated with aggression.

Domain Specific SE and Aggression

Kirkpatrick et al., (2002) hypothesized that certain domain-specific SE measures should uniquely and differentially predict aggression above and beyond a more traditional measure of global SE. To test this theory, they designed a study similar to that of Bushman and Baumeister (1998) with a few notable differences. First, rather than use the Taylor (1967) noise-blast procedure as the measure of aggression, the researchers instead used a hot sauce allocation paradigm (McGregor et al., 1998) in which following positive or negative feedback, the participant selects how much hot sauce the evaluator must ingest as part of a bogus and ostensibly unrelated taste preference study. Lieberman, Solomon, Greenberg, & McGregor (1999) effectively demonstrate the ecological validity and advantages of this technique over alternatives. A more theoretically important addition to the Kirkpatrick et al. (2002) study is the inclusion of multiple SE scales designed tap into some of the specific domains identified by Kirkpatrick and Ellis (2001). Specifically, measures of self-perceived superiority, selfperceived mate value, social inclusion, and global SE were included.

In Study 1, participants first filled out the questionnaire packets. Upon completion, they were then asked to write a short essay about their attitudes toward the issue of abortion. When finished, there essay was taken by the researcher to be ostensibly evaluated by another participant. To aid the cover story, participants were randomly given either a pro-life or pro-choice essay ostensibly written by the other participant and asked to evaluate it. Participants were then presented with the bogus feedback that was either positive or negative regarding their writing skills. This technique is identical to that used by Bushman and Baumeister (1998). Next, participants then were informed that they would be participating in a taste preference study with their essay evaluation partner. The researcher explained that the evaluation partner was randomly assigned to the spicy food condition. As such, the participant's role was to prepare a sample of hot sauce for their partner to ingest. It was made clear to the participant that they could allocate as much are as little hot sauce as they preferred, and that the partner would have to consume the entire amount. This procedure is identical to that proposed by McGregor, et al., (1998).

In line with their predictions, the Kirkpatrick and colleagues found that selfperceived superiority was related positively to aggression while social inclusion was negatively related to aggression. Participants who rated themselves highly in this domain allocated more hot sauce following ego threat. Conversely, participants allocated less hot sauce if they indicated higher levels of social inclusion. As expected, global SE failed to predict any variance in aggression scores. Interestingly, there was no relationship between self-perceived mate value and aggression in Study 1 in which participants wrote an essay on abortion. The researchers caution that aggression in the context of an emotionally charged issue such as abortion might be confounded with other factors unrelated to SE. Further, it they note that from an evolutionary perspective, it is unclear which specific domains of SE are relevant to the procedure borrowed from Bushman and Baumeister (1998).

To address these issues, the researchers designed a second study in which participants believed that they were writing an essay intended to persuade an opposite-sex target to meet with them. Before the target would see the essay, participants were presented with either positive or negative feedback provided by a same-sex. It was hypothesized that in this context, self-perceived mate value would be the strongest predictor of aggression. Results demonstrated that not only did mate value become a predictor of aggression in this context, but all other SE scales failed to predict any variation in the amount of hot sauce allocated. Thus, Kirkpatrick, et al., (2002) effectively demonstrated that distinct SE domains can differentially predict aggression while attempting to do so using a global SE measure suggests no relationship between SE and aggression exists. However, in discussing limitations to the studies, the authors point out that the measures of self-perceived superiority and social inclusion might not reflect specific domains of SE as postulated by Kirkpartick and Ellis (2001), but rather represent broad categories (yet not as broad as global SE). Kirkpatrick and colleagues suggest that future research should attempt to utilize more domain specific measures of SE which might be more effective in predicting aggression in various circumstances.

Domain-specific SE and Aggression in Dating Couples

In response to these limitations, Valencia (2001) sought to predict aggression in the context of romantic relationships while including more domain-specific SE measures. Specifically, she asked both the participants and their romantic partners to complete the Abusive Behavior Inventory (ABI; Shepard & Campbell, 1992) a self-report measure designed to assesses physical as well as psychological aggression in dating and marital relationships. By doing so, Valencia was able to collect reports from the both the participant and the participant's romantic partner of physical and psychological abuse committed by the participant against the romantic partner. Participants and their partners also completed Rosenberg's (1965) Global SE measure and the domain-specific SE measures of mate value, self-perceive superiority, and social inclusion used by Kirkpatrick, et al., (2002). In addition, Valencia administered a measure of collective SE devised by Luhtanen and Crocker (1992) to assess the degree to which an individual values his/her social group relative to outgroups. Also included was White's (1981) Chronic Jealousy Inventory. Previous research has found jealousy to be a leading cause of aggression against a romantic partner, (Daly, Wilson, & Weghorst, 1982). Similar to the relationship between global SE and aggression, Bringle & Phillips (2000, as cited by Valencia, 2001) found that upon reviewing the literature, the relationship between global SE and jealousy is also ambiguous. Thus, one research question Valencia (2001) sought to answer was whether the relationship between global SE and jealousy in the context of partner abuse is confounded.

In accordance with the results of Kirkpatrick, et al., (2002) Valencia (2001) expected that the competitive SE domains of self-perceived mate value and superiority would positively predict abuse while the cooperative domains of social inclusion and collective SE would negatively predict abuse. This was based on the reasoning that those with strong cooperative SE are valued group members who risk rejection should they become physically violent. Alternatively, those low in these domains have less to lose should they opt for an aggressive strategy. Similar logic can be applied regarding competitive domains of SE. In line with Baumeister, Smart and Boden's (1998) findings, those with either high self-perceived mate value or superiority were expected to be more

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aggressive due to the fact that they should have a lower threshold for the perception of ego threat.

One major finding of this study was that global SE emerged as a significant predictor of physical and psychological aggression only after controlling for other domain-specific SE measures. Furthermore, jealousy alone was found to be a stronger predictor than global SE alone. Regarding domain-specific SE scales, collective SE scores negatively predicted both physical and psychological abuse. According to Valencia's interpretation, those who perceived their social groups as unworthy, or who perceived their partners to have minimal social coalitions were more likely to physically and psychologically abuse their romantic partner.

Contrary to expectations, self-reports of social inclusion were positively predictive of physical violence against a partner, while partner reports of social inclusion were not predictive. Valencia (2001) suggested that this result is due to methodological problems involving the manner in which the collective SE and social inclusion scales were presented. Typically, the collective SE measure includes a detailed instructional paragraph that asks participants to imagine how their self-identified social groups (e.g., gender, race, religion, etc.) compare to others. However, these instructions were not included in Valencia's study. Additionally, the collective SE measure was immediately preceded by the social inclusion measure, which asked participants to think about their relationship within their social group. Valencia suggests that participants might have assumed that all items regarding social groups were part of one questionnaire. This interpretation is supported by the high correlation found between the two scales (r = .72) which suggests that collinearity influenced the statistical analyses. Given the fact that mate value should be extremely relevant in the context of a romantic relationship, it is surprising that self-perceived mate value was not predictive of either physical or psychological abuse. However, recall that husbands were more likely to be abusive when they perceived their wife as being higher in status (Goldstein & Rosenbaum, 1985). One potential explanation for this null result is that it is not the absolute mate value of an individual which is predictive of aggression but rather the mate value of the individual *relative* to that of his/her partner. The likelihood of an individual being abusive might be higher if one perceives a partner as having a higher mate value than oneself. The person with the higher mate value could presumably find a new partner (higher in mate value than the current one) with relative ease. Conversely, the partner lower in mate value might find it difficult to find a new partner higher in mate value willing to settle. In such a situation, the individual with lower mate value might resort to abuse in order to keep the partner from defecting.

Finally, Valencia (2001) cautions that an additional limitation to her study was that both individuals in a couple reported on the abusive behaviors of just one person (the participant) and suggests that future research should strive to attain self and partner reports on the abusive behaviors from both people in the relationship.

Current Study

The current study was designed to incorporate various methodological and psychometric improvements and to replicate the findings of Kirkpatrick, et al., (2002) and Valencia (2001). Physical and psychological abuse scores from both partners in dating couples will be collected. Predictor variables will consist of a global SE measure as well the domain-specific SE measures of social inclusion, collective SE, self-perceived mate value, self-perceived superiority, dominance, and prestige. Because the relationship between aggression, SE, and jealousy is somewhat ambiguous, jealousy scores will also be included in analyses to control for any shared variance (see Method section for detailed descriptions of all scales).

An additional goal is to examine whether newer, more refined measures of domain-specific SE are better predictors than those used in earlier studies. Specifically, mate value discrepancy scores should predict aggression better than absolute mate value scores. Furthermore, to the extent that superiority is associated with status, measures of dominance and prestige (two separate pathways of attaining status) should differentially account for more variance in aggression scores than superiority alone.

All predictions focused solely on which aspects of an individual's SE are associated with the likelihood perpetrating acts of physical or psychological abuse against a partner. No predictions were made concerning SE domains associated with being a victim of such aggression.

Based on the theoretical arguments and empirical findings previously discussed, the following hypotheses will be tested:

- Consistent with Kirkpatrick, et al., (2002) and Valencia (2001), global SE should not be predictive of physical or psychological abuse when controlling for jealousy.
- 2. Compared to global SE, self-perceived superiority and self-perceived mate value should be superior, positive predictors of physical or psychological abuse; social inclusion and collective SE should negatively predict physical or psychological abuse

- 3. Mate value discrepancy scores should be stronger predictors of physical or psychological abuse than absolute mate value scores. Those with high physical or psychological abuse scores are expected to have selfreported mate value scores lower than those of their partners.
- Dominance and prestige scores should predict physical or psychological abuse scores better than self-perceived superiority. Specifically, dominance should be a positive predictor of physical or psychological abuse whereas prestige should negatively predict physical or psychological abuse.

Method

Participants

A total of 238 individuals (130 females, 108 males) participated in this study. Of these 238 participants, 228 successfully completed the study. Of these 228 participants, 137 (90 females, 47 males) were undergraduates from the College of William & Mary who took part in the study for partial fulfillment of a course requirement for introductory psychology, 89 (34 females, 55 males) were a current (heterosexual) romantic partner of one of the students who completed the study (the majority of these partners either attended William & Mary as well or went to some other university), and 2 (both females) were the current partner of an student would had initially registered for the study but failed to complete it. Five couples consisted of partners who were both students. The remaining 10 (4 females, 6 males) out of the 238 participants completed the study but did not report doing so, and therefore it could not be determined whether they were a student

or not. Of the 228 participants who reported completing the study, 73 did so in the fall of 2004 and 155 in the spring of 2005. All participants were 18 and over.

The student participants were selected based on the amount of partner maltreatment in their relationship, as assessed in mass testing with an abbreviated version of the Revised Conflict Tactics Scales (CTS2; Straus et al., 1996). The sample was overrepresented with those students who had a relatively high level of reported partner maltreatment in their relationship in order to capture a greater amount of variance (a "normal" sample of students at William & Mary would have resulted in less variance in reported scores, because the majority of students on mass testing reported very low CTS2 scores). However, given reports that 20%-60% of young adults have been involved in instances of partner violence, it was not unreasonable to use a college-aged sample for the current study (Magdol, et al., 1997; Sugarman & Hotaling, 1989; White & Koss, 1991).

After this screening, student participants and their romantic partners were invited to participate via email. Participants were informed that those couples in which both partners participated would be eligible to win one of six \$100 raffle prizes. Eighty-nine non-intro student partners reported completing the study along with their intro student partner, although it appears that only 85 actually completed the study, since full data was obtained for only 90 couples (recall that 5 couples consisted of 2 intro students). The average length of a relationship *at the time of mass testing* was approximately 6-9 months, although about 15% of intro students reported at this time that they had been in the relationship for less than a month. This study took place approximately 1-2 months *after* mass testing (about 1 month for spring participants, 2 months for fall participants),

and it was assumed that no participants had ended their previous relationship and were now dating someone else (indeed part of the selection process was to make sure participants were still dating the same partner). The data for all 238 participants was used (or the data for the 108 males or 130 females was used separately).

Materials

Participants completed a battery of 17 questionnaires posted on the Internet (see Table 1 for order of presentation). Because multiple researchers collaborated in the design of the internet survey, seven of these questionnaires were part of a separate study concerning abuse in romantic relationships and are not included in the current study. The questionnaires were administered in two sessions each of which took approximately 45 minutes to complete. Both students and their partners were instructed to complete the sessions independently and to refrain from discussing their answers with each other. Participants responded to most of the questionnaires based on their self-evaluations of their own thoughts and behaviors. However, two scales required participants to additionally report the behaviors of their romantic partners, while one final scale required participants to report only the behaviors of their romantic partners.

Dependent Measures

The following questionnaires were completed by all participants and were used as dependant variables (see specific appendices for individual scale items):

The Subtle and Overt Psychological Abuse of Women Scale (SOPAS; Marshall, 2000) was employed to assess psychological abuse in the romantic relationship (see Appendix A). Although this scale was originally designed to assess female reports of the psychologically abusive behaviors of their male partners, changes in gender specific

pronouns (i.e. "he" was changed to "your partner") in order to create a scale appropriate to also assess male reports of the psychologically abusive behaviors of their female partners. For the sake of clarity, the scale given to women will be referred to as the SOPAS-W, and the "new" scale given to men will be referred to as the SOPAS-M. In either case, the SOPAS consists of 35 items describing various types of overt (items 1-15) and subtle (items 16-35) psychologically abusive behaviors (e.g. "play games with you head" [overt] and "blame you for his/her problems" [subtle]). For overt behaviors the phrase "How often does your partner," preceded each item, while the phrase "In a loving, joking or serious way, how often does your partner," preceded each item of subtle abuse. Responses were provided using a Likert scale from 0 (Never) to 5 (A Great Many Times).

For the regression analyses, a total SOPAS score for each participant was calculated by summing all the items regardless of subscale. The correlation between these subscales was extremely high [r = .87, p < .01 for SOPAS-W and SOPAS-M]. The reliabilities were $\alpha = .96$ for the SOPAS-W, $\alpha = .96$ for the SOPAS-M, and $\alpha = .94$ for the total SOPAS.

The Severity of Violence Against Women/Men Scale (SVAWS / SVAMS) (Marshall, 1992a; 1992b) assessed the use of physical abuse in romantic relationships (see Appendix B). The SVAWS / SVAMS consists of 46 items describing various types of violent behaviors ranging from threats of violence (19 items) such as "throw, smash or break an object" to acts of physical violence (21 items) such as "shake or roughly handle you (or your partner)." An additional subscale (6 items) of sexually aggressive such as "physically force you to have sex" was excluded due to ethical considerations. For each behavior participants were asked "How often does your partner..." as well as "How often do you..." Thus for each sex, two sets of data were collected simultaneously. For the sake of clarity, female reports of partner violence will be referred to as "SVAWS-partner violence" and female self-reports of violent behaviors inflicted upon their male partners will be referred to as "SVAWS-your violence." Identical distinctions can be made for male reports on both the "SVAMS-partner violence" and "SVAMS-your violence," respectively. Responses were provided using a Likert scale from 0 (Never) to 5 (A Great Many Times). Due to the sensitive nature of this questionnaire an additional response option of 6 (prefer not to respond) was included.

For the regression analyses, total "your violence" and "partner violence" scores were computed for each participant by summing all the "your violence" items and then all the "partner violence" items. Scores for each subscale were computed separately, but correlations between these subscales were fairly high [*r*'s ranging from .62 to .83., *p* < .01, but higher for male reports], so they were not analyzed separately). Reliabilities for the total SVAWS and SVAMS "your violence" scale and the total SVAWS and SVAMS "partner violence" scale were $\alpha = .97$ and $\alpha = .94$, respectively.

Independent Measures

The following questionnaires were completed by all participants and used as independent variables. Responses to all scales were provided using Likert-type scales (see specific appendices for individual items):

Self-Esteem Scales

Measures of SE included Rosenberg's (1965) global SE scale (see Appendix C) and several domain-specific SE scales:

Both *Self-perceived Mate Value* and *Perceived Mate Value of Partner* were assessed using an 8-item measure adapted by Buttermore, James, and Kirkpatrick, (2004) from a 12-item measure of self-perceived mate value developed by Williams (1999). Both self-report items and items reporting the perceived mate value of the partner were identical except for appropriate pronoun changes (see Appendices D and E). Reliability for the self-perceived mate value scale was $\alpha = .88$ for the males, $\alpha = .88$ for females. Reliability for perceived mate value of partner scale was $\alpha = .83$ for the males, $\alpha = .84$ for females.

Self-Perceived Social Status was assessed using a refined 21-item measure (Buttermore, et al., 2004) based on the social dominance scale adapted by Leary and Cottrell (1999) from the California Psychological Inventory (Megargee, 1972). What distinguishes the current scale from its predecessors is that the current scale was designed to avoid the problem of conflating dominance and prestige, which Henrich and Gil-White (2001) argue are two separate, but not mutually exclusive, means of attaining status (see Appendix F). Reliability for the dominance subscale was $\alpha = .82$ for the males, $\alpha = .83$ for females. Reliability for the prestige subscale was $\alpha = .75$ for the males, $\alpha = .80$ for females.

Self-Perceived Superiority was assessed using Pellham and Swann's (1989) Self-Attributes Questionnaire where participants use percentile ranks to indicate their self-perceived standing relative to their peers on ten socially desirable characteristics (see Appendix G). Reliability was $\alpha = .81$ for the males, $\alpha = .80$ for females.

The 16-item *Collective Self-Esteem* scale developed by Luhtanen and Crocker (1992) was included to assess between-group competition by asking respondents to

indicate how their social group compared relative to other social groups (see Appendix H). Reliability was $\alpha = .84$ for the males, $\alpha = .90$ for females.

Self-Perceived Social Inclusion was assessed using a measure adapted by Valencia (2001) which combined the nine-item Interpersonal Support Evaluation List (Cohen, Mermelstein, Kamarck, & Hoberman, 1985) and the nine-item Inclusionary Status Scale (Spivey, 1990) into a single 19-item scale (see Appendix I). A total social inclusion score was calculated by summing all 19-items for each participant. Reliability was $\alpha = .79$ for the males, $\alpha = .86$ for females.

Finally, participants completed the 24-item *Multidimensional Jealousy Scale* (MJS; Pfeiffer & Wong, 1989; see Appendix J). This questionnaire is designed to assess jealousy in the relationship across three dimensions: thoughts, emotions, and behaviors. The eight-item jealous thoughts subscale included items such as "I suspect that X may be attracted to someone else"). Participants were asked to indicate the frequency of these thoughts using a Likert-scale from 1 (Never) to 7 (All the Time). The jealous emotions subscale asked participants to indicate how they would feel in eight hypothetical situations such as "X hugs and kisses someone of the opposite sex" using a Likert-scale from 1 (I would be very pleased) to 7 (I would be very upset). For the eight-items of jealous behaviors subscale, participants indicated how often they engaged in behaviors such as "Pay X a surprise visit just to see who is with him or her" using a Likert-scale from 1 (Never) to 7 (All the Time). No items were reverse scored and a total score for each subscale was computed by summing the items for each subscale, and a total MJS score was calculated by summing all 24 items. Reliabilities were $\alpha = .89$ for the thoughts

subscale, $\alpha = .84$ for the emotions subscale, $\alpha = .85$ for the behaviors subscale, and $\alpha = .89$ for the total MJS.

Procedure

All participants were invited to visit a website that included instructions and the actual questionnaires. When registering to participate, each couple was told to create a login id name and password for the website that would be linked to their data. By sharing an id name, each partner's responses would be linked to those of their partner. However, this could have potentially mislead individuals into thinking a partner could have access to their responses. To avoid this potential confusion, participants were told that access to responses was not possible and instructed to complete the questionnaires in private and without discussing their responses with their partner at any time. Participants were allotted two separate sessions at 45 minutes each (a certain number of questionnaires were included in each session) to fill out the questionnaires at their leisure. All participants completed all questionnaires in the same order (see Appendix K). After completion, each participant was debriefed online and following the debriefing each participant was told to email the researchers with the "randomly generated" confirmation number provided upon completion (everyone received the same confirmation number but did not know this). The confirmation email asked the participants to include their name and email address in order to allow researchers to assign credit for research pool participation and to create a contact list for the raffle prizes. This confirmation email did not provide a link between the participant's identity and their completed data (unless their email address was used as the website id name), therefore assuring that all data would remain anonymous.
Results

Descriptive Statistics

Descriptive statistics for each independent and dependent variable for both males and females can be found in Table 2.

Preliminary Analyses

The Severity of Violence Against Women/Men scale (Marshall, 1992a; 1992b) assesses physical abuse in romantic relationships. For both males and females, mean scores were calculated separately for self-reports of a participant's own physically abusive behaviors as well as the participant's reports of the physically abusive behaviors of their partner. Recall that this yields four separate variables: severity of violence against men - "your" (SVAMS-Y) and "partner" (SVAMS-P), and severity of violence against women -- "your" (SVAWS-Y) and "partner" (SVAWS-P). As shown in Table 2, self-reports of physical aggression against a partner were practically non-existent in both males (M= 0.29, SD= 0.71) and females (M= 0.13, SD= 0.21). Similar results were found for self-reports of physical aggression by a partner with males reporting little abuse by their female partners (M=0.24, SD=0.48) and females reporting almost no abuse by their male partners (M=0.17, SD=0.33). Thus the average score on this 0-5 likert response scale was approximately 0.20. Due to this severe positive skew, there was virtually no variance of physical abuse scores to predict via regression (see Figures 1-4). Because logarithmic transformation of these data failed to yield a more normalized distribution, analyses regarding physical abuse could not be carried out (see Figures 5-8).

The SOPAS (Marshall, 2000) assesses psychological abuse in romantic relationships. Mean scores for males and females, as well as couple mean scores were

calculated. Examination of the frequencies and distribution of these means revealed a slightly more normalized distribution (relative to those of physical abuse measures) with .9% males, 1.5% of females, and .7% of couples reporting no incidence of psychological abuse *by* their romantic partner. In other words, psychological abuse occurred in some form in approximately 99% of all romantic relationships. Although these data were also positively skewed (see Figures 9 and 10), a logarithmic transformation did result in a more normalized distribution (see Figures 11 and 12). Therefore psychological abuse scores were retained for subsequent regression analyses. It is important to note that although both males and females completed the SOPAS, each participant was asked only about psychological abuse committed by their partner. Thus the analyses will regress SOPAS scores from one partner onto SE and jealousy scales completed by the other partner in a couple. This allows using SE and jealousy measures obtained from one individual to predict psychological abuse committed by the same individual as reported by that individual's partner.

Correlational Analyses

All domain-specific SE measures were found to be significantly correlated with Rosenberg's (1965) global SE scale (see Table 3) effectively demonstrating that it is reasonable to refer to these scales as measures of SE. Further, the fact that these correlations were low to moderate in strength (highest r = .63) indicates that none of the domain-specific SE scales was simply measuring the same construct of global SE.

All SE scales were positively and significantly correlated with each other (p < .05) with the exception of perceived mate value of the romantic partner which was correlated (positively) only with social inclusion and collective SE.

The correlation between social inclusion and collective SE in this sample (r = .54) was not as high as that yielded by Valencia's (2001) sample (r = .72) and is virtually identical to the correlation (r = .55) reported by Kirkpatrick, et al., (2002). These comparisons not only offer support to Valencia's interpretation that methodological problems present in her study artificially inflated this relationship, but suggest that participants in the current study did not erroneously assume that social inclusion and collective SE items belonged to the same measure.

Significant correlations found between superiority and dominance (r = .38), and between superiority and prestige (r = .56) suggests that superiority possibly conflates dominance and prestige. If it is shown that the predictive strength (if any) of superiority is eliminated upon adding dominance and prestige as predictors to regression equations, this theory will be further supported.

Correlations between all SE and jealousy scales were also obtained (see Table 4). Jealous thoughts were negatively and significantly correlated (p < .01) with all SE measures with the exception of dominance and self-perceived mate value with which no relationship existed. Jealous behaviors were found to be negatively and significantly correlated with global as well as collective SE. All other correlations between jealous behaviors and SE measures were non-significant. No significant correlations between reports of jealous emotions and any SE measures were found. Regarding correlations between jealous between jealous subscales, a significant and positive correlation (p < .01) was found between jealous thoughts and jealous behaviors as well as between jealous behaviors and emotions. The correlation between jealous thoughts and jealous emotions was non-

Results show significant correlations between psychological abuse as measured by the SOPAS and two of the three jealousy subscales (see Table 5). These correlations were almost identical to those between jealousy subscales and log-transformed SOPAS scores. Specifically, jealous thoughts (r = .31) and jealous behaviors (r = .46) were significantly related to psychological abuse. The correlation between jealous emotions and psychological abuse was not significant. These findings, in addition to those revealing significant relationships between jealousy and SE, suggest that jealousy, SE, and aggression are possibly confounded. Therefore, controlling for jealousy (especially jealous thoughts and behaviors) should enhance the power of the various SE measures when predicting psychological abuse.

One final correlational matrix was calculated between the various SE measures and SOPAS scores (see Table 6). Global SE, self-perceived mate value, perceived mate value discrepancy, prestige, social inclusion, superiority, and collective SE were all negatively correlated with psychological aggression. Perceived mate value of the romantic partner and dominance scales were not correlated with SOPAS scores. These relationships are identical to those found when correlating the SE measures with logtransformed SOPAS scores.

Planned Regression Analyses

Regression analyses were used to identify the SE predictors of psychological abuse separately for both males and females. To the extent that some of the psychological abuse inflicted by an individual could have occurred in response to being psychologically abused (perhaps in the course of an argument) by the individual's partner, reports of psychological abuse committed by the partner were included as a predictor variable in all regression analyses.

One aim of the current study was to first replicate the findings of Kirkpatrick et al., (2002) and Valencia (2001). To do so, a set of analyses were run where (logtransformed) SOPAS was regressed onto global SE alone. Then in the second step, measures of self-perceived mate value, social inclusion, superiority, and collective SE were added, hereafter referred to as the "full model."

Further research goals involved determining: a) whether perceived mate value discrepancy is a superior predictor of psychological abuse compared to absolute perceived mate value; and b) whether dominance and prestige predict psychological abuse more strongly than self-perceived superiority. To test the first hypotheses, the mate value discrepancy variable was added to the full model. For each individual, this variable was calculated by subtracting his/her own ratings of the perceived mate value of his/her romantic partner from his/her own self-perceived mate value. In a separate analysis, dominance and prestige were added to the full model to test the second hypothesis.

One final research question is whether the relationship between partner abuse and SE is due in part to jealousy. To examine this, each of the regression equations described above were re-run with the inclusion of the jealousy subscale measures to control for any possible conflation between jealousy, SE, and psychological abuse.

Global SE findings

Results of the initial model (see Table 7) found global SE to be a significant negative predictor of psychological abuse by males ($\beta = -.24$, p<.05) but not by females ($\beta = -.04$, n.s.). Receiving psychological abuse from a romantic partner significantly

predicted psychological abuse scores for both males ($\beta = .31$, p<.001) and females ($\beta = .39$, p<.001). These relationships remained significant even after the variables of jealous thoughts, behaviors, and emotions were added to the equation. In this model jealousy subscales were not significant predictors of psychological abuse.

Global vs. Domain Specific SE

In the first step of this model, psychological abuse committed by individuals was regressed on measures of global SE, psychological abuse committed by romantic partners, and the domain-specific SE measures of self-perceived mate value, social inclusion, self-perceived superiority, and collective SE (see Table 8). Results show a trend in males for global SE scores to be predictive of psychological abuse ($\beta = -.26$, p<.01). While this finding was not present in females, psychological abuse committed by the partner was again predictive of individuals' psychological abuse scores for both males ($\beta = .34$, p<.001) and females ($\beta = .42$, p<.001). None of the domain-specific SE scales was predictive of psychological abuse in either males or females. The inclusion of jealousy subscales did not alter these results. Again, none of the jealousy subscales was predictive of psychological abuse, although for males the relationship between jealous behaviors and psychological abuse approached significance ($\beta = .25$, p<.10). *Absolute Mate Value vs. Mate Value Discrepancy*

Variables included in this analysis were those listed in the previous model with the addition of mate value discrepancy scores. The pattern of results was identical to earlier models (see Table 9). The relationship between global SE and psychological abuse scores was marginally significant for males ($\beta = -.26$, p<.10) but not for females. Reports of psychological abuse inflicted by a romantic partner were again significant predictors of psychological abuse in both males (β = .34, p<.001) and females (β = .42, p<.001). The beta coefficient for self-perceived mate value decreased from a value of .17 to .12 upon including mate value discrepancy scores. In either case, no domain-specific SE scores were predictive of psychological abuse. This pattern remained unchanged following the inclusion of the jealousy subscales, which again were not predictive of psychological abuse in either gender.

Superiority vs. Dominance and Prestige

In the final set of analyses, dominance and prestige scores were added to the model that included global SE, reports of psychological abuse committed by the partner, and the four domain-specific SE scales of self-perceived mate value, social inclusion, self-perceived superiority, and collective SE. The pattern of results is identical to earlier models (see Table 10). The relationship between global SE and psychological abuse scores was significant for males ($\beta = -.30$, p<.05) but not for females. Reports of psychological abuse committed by a romantic partner were again significant predictors of psychological abuse for both males ($\beta = .35$, p<.001) and females ($\beta = .43$, p<.001). The beta coefficient for self-perceived superiority remained virtually unchanged following the inclusion of dominance and prestige scores. No domain-specific SE scores were found to be predictive of psychological abuse for males or females, which again were not predictive of psychological abuse in either gender.

Post hoc Analyses

Despite the findings of previous researchers, the results of the current study yielded no link between reports of psychological abuse and domain-specific SE

measures. One major difference between these analyses was the inclusion of partners' psychological abuse scores as a predictor. The presence of this variable in the regression equations could explain the current study's null findings. Perhaps previous research has found significant relationships between domain-specific SE and psychological abuse solely because their analyses did not correct for the variance in psychological abuse scores due to being the recipient of psychological abuse from the partner. To test this possibility, this variable was removed and the analyses were re-run. Doing so only resulted in jealous behaviors becoming a significant predictor of psychological abuse for males (a result that was already marginally significant in most analyses). No other findings were influenced by the removal of this variable.

DISCUSSION

The findings of the current study failed to provide evidence in support of the predictions, particularly those concerning physical abuse which could not even be tested. Although regression analyses were run for reports of psychological abuse, these scores first had to be log transformed and the results must therefore be interpreted with caution.

Physical Abuse

It was not possible to use regression analyses to predict physical abuse from SE scores because the sample distributions of this dependent measure were not normal. Despite efforts to recruit those participants with relatively high level of reported partner maltreatment as assessed in pre-testing via the CTS2, examination of the frequency and distributions of these mean scores revealed that their distributions were severely

positively skewed. For males, 31% reported no incidence of physical abuse *against* their partner, and 31% reported no incidence of physical abuse *by* their partner. For females, 39% reported no incidence of physical abuse *against* their partner, and 31% reported no incidence of physical abuse *against* their partner, and 31% reported no incidence of physical abuse *by* their partner. Further examination of these frequencies and distributions collapsed across couples revealed that 25% of participants in a couple reported no physical abuse *against* their partner, while 20% of participants reported no physical abuse *by* their partner. Overall, approximately 90% of the participants had an average score less than 1. Thus, reported forms of physical abuse in this particular college-aged sample were virtually non-existent.

Psychological Abuse

For both males and females, having a psychologically abusive partner is predictive of psychological abuse against that partner. This finding might stem from the possibility that several of the SOPAS items tap into behaviors that might typically occur in the course of an argument between romantic partners. For example, Joe might remind Sally of a time he was right and she was wrong, which in turn could prompt Sally to use one of Joe's mistakes against him. Although such a finding is not that surprising, it does account for a significant amount of variance that would otherwise be lost to error.

While a null finding between global SE and aggression would have supported the evolutionary perspective, a positive finding would have supported the narcissistic view that high SE can be a cause of aggression. However, neither was the case; global SE scores were consistently found to negatively predict psychological abuse, but only for males. Thus being psychologically abusive toward a female partner was related to male's

possessing low global SE. Contrary to expectations no domain-specific SE measure was found to be a predictor of psychological abuse. Further, none of the more refined domain-specific SE measures (i.e., mate value discrepancy, dominance, and prestige) emerged as superior predictors. The possibility that these null findings were due to the inclusion of psychological abuse committed by the romantic partner was not supported. Finally, the current study failed to replicate Valencia's (2001) finding of jealousy emerging as a significant predictor of psychological abuse. In this sample, only the jealous behaviors of males were associated with the likelihood of being psychologically abusive. The fact that this finding more clearly emerged when scores of psychological abuse committed by the romantic partner were removed suggests that there is perhaps a relationship between a couple's psychologically abusive arguments and a male's jealous behaviors.

Limitations

Several methodological issues could each be partially responsible for the observed data pattern. First, recall that the questionnaires of the current study were presented online in tandem with several of those from another researcher. One possibility is that the participants found the process of answering so many questionnaires in two 45-minute sessions either too overwhelming or monotonous. Although the current study did not include any items intended to assess this possible perception, the fact that the male and female means for each measure were roughly equivalent, coupled with the high reliability values found for each independent measure suggest that this was most likely not the cause.

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Another potential confound also related to the presentation manner is that of confidentiality. It was exceptionally difficult to develop a way to match an individual's responses to those of their romantic partner but also preserve the confidentiality of the responses of all participants. To do this, each participant was asked to create a log-in ID and password to be shared with his or her romantic partner. All submitted responses were automatically entered in an electronic database with the log-in ID as the only means of identification. Because the study was restricted to heterosexual couples only, gender could be used to keep the responses of individuals within each couple separate. However, this process may have been too confusing for the participants and might have led them to the erroneous assumption that because they shared a log-in ID their partner could view their responses despite the fact that the instructions explicitly stated that this was not the case. Additionally, although each participant was instructed to complete the survey on a personal computer and in private, there is a chance that these instructions were not followed. It could be the case that participants who used a public computer or completed the questionnaires in the presence of others could have misrepresented themselves when responding to the SVAMS/SVAWS, arguably the most intrusive questionnaire.

One final problem could be with the SVAMS/SVAWS (Marshal 1992a; 1992b) itself. Recall that the earlier work the current study attempted to replicate did not use this scale as a measure of physical abuse. Whereas Kirkpatrick et al., (2002) directly measured aggressive behavior via the hot sauce allocation technique, Valencia (2001) measured physical abuse in romantic relationships via the ABI. Because the research project with which the current study was coupled had already selected the SVAMS/SVAWS as the measure of physical aggression, the current study's reliance on this scale is more as a matter of convenience rather than a one of empirical justification. Although Marshall (1992a; 1992b) indicates that the application of the scale has been effective with college students, the scale was initially designed to assess the amount abuse suffered by women upon admittance to a shelter or other type of assistance group. In other words, the scale was originally indented to be applied to a specialized population that might not be represented in the average college student sample.

One ideal way to test the validity of the SVAMS/SVAWS scale would have been to compare responses on it with those on the CTS2 during pre-testing. In theory, a strong positive correlation between these two measures would be evidence of convergent validity. Unfortunately, the aspects of the experimental design that ensured the confidentiality of the participants' responses made such a comparison impossible due to ethical considerations.

Conclusions

Although previous research based on a domain-specific perspective has found a relationship between aggression and SE in various situations, the current study was unable to replicate these findings in the context of dating relationships. One major reason for this failure to replicate is the fact that these earlier studies used measures of physical aggression (Kirkpatrick, et al., 2002; Valencia, 2001). Although the current study was designed to potentially expand these findings by including both measures of physical, as well as psychological aggression, several methodological issues rendered the measure of physical abuse useless. Theoretically, the relationships between various SE domains and physical aggression should have been mirrored in analyses involving psychological

abuse. Contrary to this expectation, no measure of domain-specific SE significantly predicted reports of psychologically abuse. The finding that receiving psychological abuse from a partner was associated with behaving in a psychologically abusive manner toward that partner suggests that a reciprocal relationship of aggression within romantic couples. Given the magnitude of methodological concerns, these null findings should not be interpreted as evidence against an evolutionary perspective towards SE.

DESCRIPTIVE STATISTICS FOR INDEPENDENT AND DEPENDENT VARIABLES

		Males			Female	S
Scale	М	SD	Range	М	SD	Range
Global SE	5.61	1.12	2.30 - 7.00	5.42	1.05	2.90 - 7.00
Self-Perceived Mate Value	4.55	1.15	1.50 - 7.00	5.01	1.13	1.75 - 7.00
Perceived Mate Value of Partner	5.46	0.88	3.29 - 7.00	5.12	0.95	2.43 - 7.00
Dominance	4.00	1.11	1.63 - 7.00	3.99	1.04	1.63 - 6.63
Prestige	5.10	0.91	1.83 - 7.00	5.32	0.89	3.17 - 7.00
Social Inclusion	4.47	0.67	3.28 - 5.98	4.68	0.68	2.89 - 5.89
Superiority	7.49	1.01	4.60 - 10.00	7.24	0.94	4.53 - 9.33
Collective SE	5.07	0.71	3.44 - 6.75	5.27	0.85	2.88 - 6.88
SOPAS	1.40	1.00	0.00 - 4.77	1.17	0.93	0.00 - 4.74
Severity of Violence-Your	0.29	0.71	0.00 - 5.88	0.13	0.21	0.00 - 2.68
Severity of Violence- Partner	0.24	0.48	0.00 - 3.23	0.17	0.33	0.00 - 1.33
Jealous Thoughts	2.42	1.13	1.00 - 7.00	2.18	1.07	1.00 - 7.00
Jealous Behaviors	2.43	1.16	1.00 - 7.00	2.50	1.04	1.00 - 7.00
Jealous Emotions	5.05	0.89	1.38 - 7.00	5.16	0.77	2.63 - 7.00

CORRELATIONS BETWEEN SELF-ESTEEM MEASURES

Independent Variables		5	8	ব	Ś	Q	٢	Ø	6
1. Global SE	1	.54**	.18**	.40**	.25**	·63**	**0 <u>5</u> .	.52**	.52**
2. Self-Perceived Mate Value		1	.41**	.69***	.37***	:57**	44 * *	.46**	.40**
3. Perceived Mate Value of Partner			1	37**	.13	.14	.28**	.16	.19*
4. Mate Value Discrepancy					.28**	.47**	.23**	.34**	.25**
5. Dominance						.38**	.17*	.38*	.21**
6. Prestige							÷€03÷	.56**	.49**
7. Social Inclusion								.40**	.¥*
8. Superiority								ł	.40**
9. Collective SE									1

p* <.05, *p* <.01

CORRELATIONS BETWEEN JEALOUSY SUBSCALES

|--|

Independent Variables	Jealous Thoughts	Jealous Behaviors	Jealous Emotions
Global SE	30**	24**	03
Self-Perceived Mate Value	05	03	.02
Perceived Mate Value of Partner	.33**	.16	.06
Mate Value Discrepancy	31**	16	20
Dominance	.05	.10	.12
Prestige	23**	15	.02
Social Inclusion	22**	15	.01
Superiority	28**	15	.08
Collective SE	27**	17*	.14
Jealous Thoughts		.51**	.04
Jealous Behaviors			.36**
Jealous Emotions			

CORRELATIONS BETWEEN JEALOUSY SUBSCALES

Scales	1	2	3	4	5
1. SOPAS		.98**	.31**	.46**	.14**
2. SOPAS (log transformed)			.28**	.42**	.11**
3. Jealous Thoughts				.51**	.35**
4. Jealous Behaviors					.36**
5. Jealous Emotions					

AND PSYCHOLOGICAL ABUSE

* *p* <.05, ** *p* <.01

CORRELATIONS BETWEEN SELF-ESTEEM MEASURES

Independent Variables	SOPAS	SOPAS (log trans.)
Global SE	41**	40**
Self-Perceived Mate Value	25**	24**
Perceived Mate Value of Partner	.02	.02
Mate Value Discrepancy	27**	26**
Dominance	.03	.04
Prestige	25**	23**
Social Inclusion	29**	28**
Superiority	20*	18*
Collective SE	27*	21*
SOPAS		.98**
SOPAS (log transformed)		

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AND PSYCHOLOGICAL ABUSE

* *p* <.05, ** *p* <.01

REGRESSION ANALYSIS: PREDICTING PSYCHOLOGICAL ABUSE FROM GLOBAL SELF ESTEEM (WITH AND WITHOUT JEALOUSY)

		Males			Females	
Variables	В	SE B	β	В	SE B	β
Step 1						
Global SE	09	.04	24*	02	.04	04
Psych Abuse by Partner	.30	.10	.31**	.40	.11	.39**
Step 2						
Global SE	10	.04	26*	02	.04	04
Psych Abuse by Partner	.22	.11	.22*	.38	.12	.38**
Jealous Thoughts	04	.05	11	03	.04	09
Jealous Behaviors	.09	.05	.24	.03	.05	.08
Jealous Emotions	00	.05	00	.06	.06	.11

FOR MALES AND FEMALES

* *p* <.05, ** *p* <.01

REGRESSION ANALYSIS: PREDICTING PSYCHOLOGICAL ABUSE FROM GLOBAL AND DOMAIN SPECIFIC SELF ESTEEM MEASURES (WITH AND WITHOUT JEALOUSY) FOR MALES AND FEMALES

		Males Females					
Variables	В	SE B	β	В	SE B	β	
Step 1							
Global SE	10	.05	26†	05	.05	13	
Psych Abuse by Partner	.33	.11	.34**	.42	.11	.42**	
Self-Perceived Mate Value	.07	.04	.17	.03	.04	.09	
Social Inclusion	05	.07	08	.12	.08	.18	
Self-Perceived Superiority	06	.05	14	05	.05	11	
Collective SE	.07	.06	.12	.02	.06	.04	
Step 2							
Global SE	10	.05	26†	04	.05	11	
Psych Abuse by Partner	.27	.12	.27*	.42	.12	.41**	
Self-Perceived Mate Value	.07	.05	.18	.03	.04	.09	
Social Inclusion	04	.07	07	.12	.09	.17	
Self-Perceived Superiority	07	.05	16	07	.05	16	
Collective SE	.05	.07	.09	.06	.06	01	
Jealous Thoughts	05	.05	13	03	.04	08	
Jealous Behaviors	.09	.05	.25†	.02	.05	.04	
Jealous Emotions	02	.05	05	.08	.07	.14	

* p < .05, ** p < .01, † p < .10

REGRESSION ANALYSIS: SELF-PERCEIVED MATE VALUE VS. MATE VALUE DISCREPANCY AS PREDICTORS OF PSYCHOLOGICAL ABUSE (WITH AND WITHOUT JEALOUSY)

FOR MALES AND FEMALES

		Males			Females	
Variables	В	SE B	β	В	SE B	β
Step 1						
Global SE	10	.05	26†	05	.05	13
Psych Abuse by Partner	.33	.11	.34**	.42	.11	.42**
Self-Perceived Mate Value	.05	.06	.12	.03	.05	.07
Social Inclusion	05	.07	09	.12	.08	.18
Self-Perceived Superiority	06	.05	13	05	.05	12
Collective SE	.07	.07	.12	.02	.06	.04
Mate Value Discrepancy	.03	.05	.07	.12	.05	.04
Step 2						
Global SE	10	.05	26†	04	.05	11
Psych Abuse by Partner	.27	.12	.27*	.41	.12	.40**
Self-Perceived Mate Value	.05	.07	.14	.03	.06	.07
Social Inclusion	04	.07	07	.12	.09	.18
Self-Perceived Superiority	06	.05	16	07	.06	15
Collective SE	.06	.07	.09	.01	.06	.02
Mate Value Discrepancy	.02	.05	.05	.01	.05	.03
Jealous Thoughts	04	.06	10	03	.05	07
Jealous Behaviors	.09	.05	.24	.02	.05	.05
Jealous Emotions	02	.05	05	.08	.07	.14

* *p* < 05, ** *p* < 01, † *p* < 10

REGRESSION ANALYSIS: SELF-PERCEIVED SUPERIORITY VS. DOMINANCE AND PRESTIGE AS PREDICTORS OF PSYCHOLOGICAL ABUSE (WITH AND WITHOUT JEALOUSY) FOR MALES AND FEMALES

n an						
-		Males			Females	
Variables	В	SE B	β	В	SE B	β
Step 1						
Global SE	11	.05	30*	04	.06	09
Psych Abuse by Partner	.34	.12	.35**	.44	.11	.43**
Self-Perceived Mate Value	.06	.05	.16	.05	.05	.13
Social Inclusion	07	.07	11	.14	.09	.21
Self-Perceived Superiority	08	.05	19	04	.05	10
Collective SE	.05	.07	.09	.02	.06	.04
Dominance	.01	.04	.03	02	.04	05
Prestige	.07	.06	.16	.05	.07	.10
itep 2						
Global SE	11	.05	30*	03	.06	08
Psych Abuse by Partner	.29	.12	.29*	.42	.12	.42**
Self-Perceived Mate Value	.06	.05	.17	.04	.05	.12
Social Inclusion	06	.07	10	.13	.10	.20
Self-Perceived Superiority	06	.05	20	06	.06	14
Collective SE	.03	.07	.05	.01	.06	.02
Dominance	01	.05	03	01	.05	03
Prestige	.08	.06	.18	03	.08	07
Jealous Thoughts	05	.05	13	03	.04	08
Jealous Behaviors	.09	.06	.27	.02	.05	.05
	00	05	02	07	07	12

* *p* <.05, ** *p* <.01, † *p* <.10

Histogram: Severity of Violence Scale – Male Reports of Partner (Raw Data)



Severity of Violence Scale - Male Reports of Partner (Raw Data)

Histogram: Severity of Violence Scale – Male Self-Reports (Raw Data)



Histogram: Severity of Violence Scale - Female Reports of Partner (Raw Data)



Severity of Violence Scale - Female Reports of Partner (Raw Data)

Histogram: Severity of Violence Scale – Female Self-Reports (Raw Data)



Severity of Violence Scale - Female Self-Reports (Raw Data)





Histogram: Severity of Violence Scale – Male Self-Reports (Log Transformed Data)



SVS - Male Self-Reports (Log Transformed)





SVS - Female Reports of Partner (Log Transformed)

Histogram: Severity of Violence Scale – Female Self-Reports (Log Transformed Data)



SVS - Female Self-Reports (Log Transformed)





SOPAS - Male Reports of Partner (Raw Data)





SOPAS - Female Reports of Partner (Raw Data)





SOPAS - Male Reports of Partner (Log Transformed)
FIGURE 12





SOPAS - Female Reports of Partner (Log Transformed)

Subtle and Overt Psychological Abuse Scale (SOPAS)

0	1	2	3	4	5
never	once				a great many times

Most of these things happen in all relationships. These are things your partner may do in a loving, joking or serious way. Choose a number from the above scale to show how often he does each thing.

HOW OFTEN DOES YOUR PARTNER... [SUBTLE ITEMS]

- _____ play games with your head
- act like he/she knows what you did when he/she wasn't around
- blame you for him/her being angry or upset
- change his/her mind but not tell you until it's too late
- discourage you from having interests that he/she isn't part of
- do or say something that harms your self-respect or your pride in yourself
- encourage you to do something then somehow make it difficult to do it
- _____ belittle, find fault or put down something you were pleased with or felt good about
- _____ get more upset than you are when you tell him/her how you feel
- _____ make you feel bad when you did something he/she didn't want you to do
- _____ make you feel like nothing you say will have an effect on him/her
- make you choose between something he/she wants and something you want or need
- _____ say or do something that makes you feel unloved or unlovable
- _____ make you worry about whether you could take care of yourself
- _____ make you feel guilty about something you have done or have not done

IN A LOVING, JOKING OR SERIOUS WAY, HOW OFTEN DOES YOUR PARTNER... [OVERT ITEMS]

use things you've said against you, like if you say you made a mistake, how often does he/she use that against you later

- _____ make you worry about your emotional health and well-being
- make you feel like you have to fix something he/she did that turned out badly
- _____ put himself/herself first, not seeming to care what you want
- get you to question yourself, making you feel insecure or less confident
- remind you of times he/she was right and you were wrong
- say his/her actions, which hurt you, are good for you or will make you a better person
- say something that makes you worry about whether you're going crazy ______act like he/she owns you
- somehow make you feel worried or scared even if you're not sure why
- somehow make it difficult for you to go somewhere or talk to someone
- somehow keep you from having time for yourself
- _____ act like you over-react or get too upset
- get upset when you did something he/she didn't know about
- tell you the problems in your relationship are your fault
- interrupt or sidetrack you when you're doing something important

- blame you for his/her problems
 try to keep you from showing what you feel
 try to keep you from doing something you want to do or have to do
 try to convince you something was like he/she said when you know that isn't true

Appendix B

Severity of Violence Against Women Scale and Severity of Violence Against Men Scale (sexual aggression items included)

0	1	2	3	4	5	6
never	once				a great many times	prefer not to answer

The next questions are about things that are more physical and threatening; acts that are not pleasant. Everyone gets frustrated or upset sometimes. Sometimes these acts occur during fights, but sometimes they just happen. First answer describing your partner's behavior then for your own behavior.

How often did your partner... How often did you...

partner you

		hit or kick a wall, door or furniture
		throw, smash or break an object
		drive dangerously with you (your partner) in the car
		throw an object at you (your partner)
		shake a finger at you (your partner)
		make threatening gestures or faces at you (your partner)
<u> </u>		shake a fist at you (your partner)
		act like a bully toward you (your partner)
		destroy something belonging to you (your partner)
		threaten to harm or damage things you (your partner) care(s) about
		threaten to destroy property
		threaten someone you (your partner) care(s) about
		threaten to hurt you (your partner)
		threaten to kill himself/herself (yourself)
		threaten to kill you (your partner)
		threaten you (your partner) with a weapon
		threaten you (your partner) with a club-like object
		act like he/she (you) wanted to kill you (your partner)
		threaten you (your partner) with a knife or gun
		hold you (your partner) down pinning you (him/her) in place
		push or shove you (your partner)
		grab you (your partner) suddenly or forcefully
		shake or roughly handle you (your partner)
	,	scratch you (your partner)
		pull your (your partner's) hair
		twist your (your partner's) arm
		spank you (your partner)
		bite you (your partner)
		slap you (your partner) with the palm of his/her (your) hand

- _____ slap you (your partner) with the back of his/her (your) hand
- slap you (your partner) around your (his/her) face and head
- hit you (your partner) with an object
- _____ punch you (your partner)
- _____ kick you (your partner)
- stomp on you (your partner)
 - _____ choke you (your partner)
- burn you (your partner) with something
 - use a club-like object on you (your partner)
- _____ beat you (your partner) up
- use a knife or gun on you (your partner)

Appendix C

Rosenberg Self-Esteem Scale

Indicate the degree to which you disagree or agree with each statement below by writing a number between 1 and 7 in the space provided.

1=Strongly	2=Disagree	3=Slightly	4=Neutral	5=Slightly	6=Agree	7=Strongly
disagree		disagree		agree		agree

- I feel that I am a person of worth, at least on an equal basis with others.
- I feel that I have a number of good qualities.
- All in all, I am inclined to feel that I am a failure.
- I am able to do things as well as most other people.
- I feel I do not have much to be proud of.
- I take a positive attitude toward myself.
- _____ On the whole, I am satisfied with myself.
- I wish I could have more respect for myself.
- I certainly feel useless at times.
- At times I think I am no good at all

Appendix D

Self-Perceived Mating Success Scale

Indicate the degree to which you disagree or agree with each statement below by writing a number between 1 and 7 in the space provided.

1=Strongly	2=Disagree	3=Slightly	4=Neutral	5=Slightly	6=Agree	7=Strongly
disagree		disagree		agree		agree

- _____ Members of the opposite sex that I like, tend to like me back.
- _____ Members of the opposite sex notice me.
- I receive many compliments from members of the opposite sex.
- _____ Members of the opposite sex are not very attracted to me.
- _____ I receive sexual invitations from members of the opposite sex.
- Members of the opposite sex are attracted to me.
- I could have as many sexual partners as I choose.
- _____ I do not receive many compliments from members of the opposite sex.

Appendix E

Perceived Mating Success of Partner Scale

Indicate the degree to which you disagree or agree with each statement below by writing a number between 1 and 7 in the space provided.

1=Strongly	2=Disagree	3=Slightly	4=Neutral	5=Slightly	6=Agree	7=Strongly
disagree		disagree		agree		agree

_____ Members of the opposite sex that my partner likes, tend to like him/her back.

Members of the opposite sex notice my partner.

My partner receives many compliments from members of the opposite sex.

Members of the opposite sex are not very attracted to my partner.

My partner receives sexual invitations from members of the opposite sex.

Members of the opposite sex are attracted to my partner.

My partner could have as many sexual partners as he/she chooses.

_____ My partner does not receive many compliments from members of the opposite sex.

Appendix F

Self-Perceived Social Status Scale

Indicate the degree to which you disagree or agree with each statement below by writing a number between 1 and 7 in the space provided.

1=Strongly disagree	2=Disagree	3=Slightly disagree	4=Neutral	5=Slightly agree	6=Agree	7=Strongly agree		
I son Mer I den Othe I fee Mer I hav I hav The I ow Peop I mu I t is I am I enj I lik	netimes do favo nbers of my peo fer to others wh ers do not value el inferior to me nbers of my peo ve high status in re are some mat 'n many things ole often "let it ist admit that I to pretty easy for ing charge com- d to dominate s willing to use oy having cont e to give orders not like to com	brs for people to r group respect en decisions has my opinion. mbers of my p er group do not n my social gro tters on which that others wis slide" when I f try to see what people to win es easily to me social situation aggressive tact rol over others	to get on their ct and admire ave to be mad eeer group. t want to be li- bups. I am consider h they had. fail to meet m others think i arguments wi s. s. tics to get my	y obligations. before I take a th me.	y others. stand.			
I believe I have to fight my way to the top. I demand respect from members of my peer group.								

I am easily intimidated by dominant individuals.

Appendix G

Self-Perceived Superiority Scale

This questionnaire has to do with your attitudes about some of your activities and abilities. For the first ten items below, you should rate yourself relative to *other college students* your own age (and sex) by using the following scale:

Α	В	С	D	E	F	G	Η	Ι	J
bottom	lower	lower	lower	lower	upper	upper	upper	upper	top
5%	10%	20%	30%	50%	50%	30%	20%	10%	5%

An example of the way the scale works is as follows: if one of the traits that follows were "height", a woman who is just below average in height would circle "E" for this question, whereas a woman who is taller than the 80% (but not taller than 90%) of her female classmates would circle "H", indicating that she is in the top 20% on this dimension.

intellectual/academic ability	Α	В	С	D	E	F	G	Η	Ι	J
social skills/social competency	Α	В	С	D	E	F	G	Η	Ι	J
artistic and/or musical ability	Α	В	С	D	E	F	G	Η	·I	J
athletic ability	Α	В	С	D	E	\mathbf{F}	G	Η	Ι	J
physical attractiveness	Α	В	С	D	E	F	G	Η	Ι	J
leadership ability	Α	В	С	D	E	F	G	Η	Ι	J
common sense	Α	В	С	D	E	F	G	Η	Ι	J
emotional stability	Α	В	С	D	Е	F	G	Η	Ι	J
sense of humor	Α	В	С	D	Е	F	G	Η	Ι	J
discipline	Α	В	С	D	E	F	G	Η	Ι	J
moral/ethical ideals	Α	В	С	D	Е	F	G	Η	I	J
trustworthiness/loyalty	Α	В	С	D	E	F	G	Η	Ι	J
generosity/helpfulness	Α	В	С.	$^{\circ}$ D	Е	F	G	Η	Ι	J
creativity	Α	В	С	D	Е	F	G	Η	Ι	J
unique talents/abilities	Α	В	С	D	Е	F	G	Η	Ι	J

Appendix H

Collective Self-Esteem Scale

We are all members of different social groups or social categories. Some of such social groups or categories pertain to gender, race, religion, nationality, ethnicity, and socioeconomic class. We would like you to consider your memberships in those particular groups or categories, and respond to the following statements on the basis of how you feel about those groups and your memberships in them. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by writing the appropriate number in the space provided using the following scale:

- 1 =Strongly disagree
- 2 = Disagree
- 3 = Disagree somewhat
- 4 = Neutral
- 5 =Agree somewhat
- 6 = Agree
- 7 =Strongly agree
- I am a worthy member of the social groups I belong to.
- I often regret that I belong to some of the social groups I do.
- Overall, my social groups are considered good by others.
- ____ Overall, my group memberships have very little to do with how I feel about myself.
- I feel I don't have much to offer to the social groups I belong to.
- In general, I'm glad to be a member of the social groups I belong to.
- -----Most people consider my social groups, on average, to be more ineffective than other social groups.
- _____ The social groups I belong to are an important reflection of who I am.
- I am a cooperative participant in the social groups I belong to.
- Overall, I often feel that the social groups of which I am a member are not _____ worthwhile.
- In general, others respect the social groups that I am a member of.
- The social groups I belong to are unimportant to my sense of what kind of a _____ person I am.
- I often feel I'm a useless member of my social groups.
- I feel good about the social groups I belong to. _____
- In general, others think that the social groups I am a member of are unworthy.
- In general, belonging to social groups is an important part of my self-image.

Appendix I

Self-Perceived Social Inclusion Scale

Indicate the degree to which you disagree or agree with each statement below by writing a number between 1 and 5 in the space provided.

- 1 =Strongly disagree
- 2 =Slightly disagree
- 3 = Neither agree nor disagree
- 4 =Slightly agree
- 5 =Strongly agree
- If I decide on a Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me.
- No one I know would throw a birthday party for me.
- There are several different people with whom I enjoy spending time.
- If I wanted to have lunch with someone, I could easily find someone to join me.
- I don't often get invited to do things with others.
- Most people I know don't enjoy the same things that I do.
- When I feel lonely, there are several people I could call and talk to.
- I regularly meet or talk with members of my family or friends.
- I feel that I'm in the fringe in my circle of friends.
- _____ If I wanted to go out of town for the day, I would have a hard time finding someone to go with me.
- I sometimes feel that other people avoid interacting with me.
- I can't rely on my friends or family in times of need.
- People often seek out my company.
- If I want to socialize with my friends, I am generally the one who must seek them out.
- I am fortunate to have many caring and supportive friends. _____
- Others shun me.
- I think there are many people who like to be with me.
- I often feel like an outsider in social gatherings.
- I feel welcome in most social situations.

Appendix J

Multidimensional Jealousy Scale

Please answer the following questions about your current romantic partner, whom we will call X.

Using the following 7-point scale, please indicate how often you have the following thoughts about X:

1 2 3 4 5 6 7 Never All the time

- ____1. "I suspect that X is secretly seeing someone of the opposite sex."
- 2. "I am worried that some member of the opposite sex may be chasing after X."
- ____3. "I suspect that X may be attracted to someone else."
- 4. "I suspect that X may be physically intimate with another member of the opposite sex behind my back."
- 5. "I think that some members of the opposite sex may be romantically interested in X."
- ____6. "I am worried that someone of the opposite sex is trying to seduce X."
- ____7. "I think that X is secretly developing an intimate relationship with someone of the opposite sex."
- 8. "I suspect that X is crazy about members of the opposite sex."

Using the following 7-point scale, please indicate how you would emotionally react to the following situations:

1	2	3	4	5	6	7
would b	be					I would be
very plea	sed					very upset

- 1. X comments to you how great looking a particular member of the opposite sex is.
- 2. X shows a great deal of interest or excitement in talking to someone of the opposite sex.
- 3. X smiles in a very friendly manner to someone of the opposite sex.
- 4. A member of the opposite sex is trying to get close to X all the time.
- 5. X is flirting with someone of the opposite sex.
- 6. Someone of the opposite sex is dating X.
- ____7. X hugs and kisses someone of the opposite sex.
- 8. X works very closely with a member of the opposite sex (in school or office).

Using the following 7-point scale, please indicate how often you engage in the following behaviors:

1 2 3 4 5 6 7 Never All the time

- 1. Look through X's drawers, handbags, or pockets.
- ____2. Call X unexpectedly, just to see if he or she is there.
- 3. Question X about previous or present romantic relationships.
- 4. Say something nasty about someone of the opposite sex if X shows an interest in that person.
- ____5. Question X about his or her telephone calls.
- 6. Question X about his or her whereabouts.
- ____7. Join in whenever I see X talking to a member of the opposite sex.
- 8. Pay X a surprise visit just to see who is with him or her.

Appendix K

Presentation Order of Questionnaires

- 1) Multidimensional Jealousy Scale Thoughts
- 2) Multidimensional Jealousy Scale Emotions
- 3) Multidimensional Jealousy Scale Behaviors
- 4) Global SE
- 5) Self-Perceived Mate Value
- 6) Perceived Mate Value of Partner
- 7) Self-Perceived Social Status Scale
- 8) Social Inclusion
- 9) Self-Perceived Superiority
- 10) Collective SE
- 11) Subtle and Overt Psychological Abuse Scale
- 12) Severity of Violence Scale Partner
- 13) Severity of Violence Scale You

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Jonathon G. LaPaglia

OFFICE • UNIVERSITY OF MINNESOTA • DEPT. OF PSYCHOLOGY • ELLIOTT HALL • MINNEAPOLIS, MN 55455 HOME • 1900 3RD AVE SOUTH APT 24 • MINNEAPOLIS, MN 55404 PHONE 612-345-4099 • EMAIL <u>LAPAG002@UMN.EDU</u>

EDUCATION

University of Minnesota

- Ph.D., Social Psychology May 2011 (expected)
- Advisors: Professors Jeffry Simpson and Mark Snyder

The College of William and Mary

- M.A., Psychology August 2008
- Major Concentrations: General Experimental Psychology
- MA Thesis Supervisors: Professors Lee A. Kirkpatrick and Constance Pilkington

The University of Texas at Austin

- B.A., Psychology, May 2002
- High honors (G.P.A. 3.82) with Departmental Honors
- Honors Thesis Supervisors: Professors Randy Diehl and Catherine Echols

RESEARCH EXPERIENCE

College of William and Mary

• Master's Research Thesis

- Testing Multiple Sociometer Theory: Predicting Physical and Psychological Abuse in Dating Couples From Domain-Specific Self-Esteem Measures with Lee A. Kirkpatrick and Constance Pilkington (co-advisors)

- designed and encoded internet based web survey using Cold Fusion
- First Year Research Project

- Sex Differences in Domain Specific Self-Esteem with Lee A. Kirkpatrick (advisor)

The University of Texas at Austin

- Undergraduate Honors Research Thesis
 - Fall 2001-Spring 2002
 - Hesitation Phenomena in Spontaneous Human Speech with Dr. Randy Diehl (advisor)
- Undergraduate Research Assistantships
 - Summer 2000-Summer 2001
 - Laboratory for the Cognitive Neuroscience of Categorization and Decision Making with Dr. Todd Maddox
 - Fall 2001
 - Visual Neuroscience Lab with Dr. Larry Cormack

TEACHING ASSISTANTSHIPS

University of Minnesota

- Spring 2008
 - -Intro to Psychology with Dr. Gary Starr
 - -Intro to Social Psychology with Anita Kim
- Fall 2007
 - -Intro to Personality with Heike Winterheld
- Spring 2007
 - -Intro to Psychology with Emily Stark
- Fall 2006
 - -Research Methods with Dr. Mark Stellmack
- Spring 2006
 - -Human Sexuality with Linde Althaus
- Fall 2005

-Intro to Personality with Dr. Jeffry Simpson

The College of William and Mary

- Spring 2005
 - -Advanced Research in Developmental Psychology with Dr. Peter Vishton
- Fall 2004

-Intro to Psychology as a Natural Science with Dr. Constance Pilkington

-Research Methods with Dr. Jennifer Stevens

• Summer 2004

-Research Methods with Dr. Chris Ball

• Spring 2004

-Research Methods (2 sections) with Dr. Jennifer Shaver

• Fall 2003

-Intro to Psychology as a Natural Science with Dr. Constance Pilkington -Research Methods with Dr. Edward Tiller

PRESENTATIONS

Poster Presentations

• LaPaglia, Jonathon G. & Simpson, Jeffry A. (2008, February). *Testing the Strategic Pluralism Model of Human Mating*. Poster presented at the Annual Meeting of the Society for Personality and Social Psychology, Albuquerque, New Mexico

• LaPaglia, Jonathon G. & Kirkpatrick, Lee A. (2007, February). *Predictors of Aggression in Romantic Relationships*. Poster presented at the Annual Meeting of the Society for Personality and Social Psychology, Memphis, Tennessee

• LaPaglia, Jonathon G. & Kirkpatrick, Lee A. (2004, July). Sex Differences in Domain Specific Self-Esteem. Poster presented at the Annual Meeting of the Human Behavior and Evolution Society, Free University of Berlin, Germany.