PDFlib PLOP: PDF Linearization, Optimization, Protection

Criminal and Noncriminal Sexual Aggressors

Integrating Psychopathy in a Hierarchical-Mediational Confluence Model

NEIL M. MALAMUTH

University of California, Los Angeles, Los Angeles, California 90095-1538

ABSTRACT: In contrast to widely held beliefs, I suggest that research conducted with either criminal or noncriminal samples of sexually aggressive men actually reveals many similar characteristics shared by both groups. The Hierarchical-Mediational Confluence (HMC) model is presented here to integrate these findings. As relatively distal risk factors, it includes personality and behavioral characteristics associated with psychopaths and predictive of antisocial behavior generally. As more proximate risk factors, it includes personality and behavioral characteristics specifically associated with sexual aggression, such as attitudes condoning sexual aggression, dominance for sexual arousal, and heavy pornography consumption. In addition, the model predicts that the interactive combination of the various risk factors results in higher sexual aggression than expected by the additive combination of these risk factors, a prediction similar to the distinction between "primary" and "secondary" psychopaths. A series of studies supporting the HMC model is presented. Finally, some differences between criminal and noncriminal sexual aggressors are also noted. In particular, criminal sexual aggressors have often committed various other antisocial acts in addition to sexual aggression. In contrast, noncriminals primarily reveal only some elevation in personality characteristics potentiating such nonsexual antisocial behaviors, but report having committed only sexual aggression.

KEYWORDS: sexually aggressive criminals; noncriminal sexual aggressors; structural equation modeling; Confluence Model; psychopathy

INTRODUCTION AND OVERVIEW

Identifying the key factors[a] that distinguish male sexual aggressors from nonsexual aggressors is likely to elucidate the causes of such aggression. In pursuit of this goal, research has focused on two groups of sexual aggressors and compared their characteristics to those of nonaggressors. The first group were identified as sexual aggressors by the judicial system and incarcerated for their crimes. We will refer to

Address for correspondence: Neil Malamuth, Communication Studies, 334 Kinsey Hall, UCLA, Los Angeles, CA 90095-1538. Voice: 310-206-8868; fax:310-206-8901.

nmalamut@ucla.edu

[a]The term *factors* is used here to encompass such aspects as personality traits, developmental experiences, and behavioral characteristics that have been identified as correlated among men with increased risk for committing sexually aggressive acts.

this group as "sexually aggressive criminals." The second group are men who self-reported on research questionnaires that they had committed acts of sexual aggressors; they will therefore be referred to herein as "noncriminal sexual aggressors."

Are the characteristics of these two types of sexual aggressors similar or different? One might expect considerable differences since noncriminals and criminals are likely to differ in many other respects, such as socioeconomic levels, intelligence and educational attainment, and likelihood of committing other antisocial acts. If, despite these differences, the research reveals similar characteristics in both groups of sexual aggressors, it would add considerable confidence in the validity of those factors as important in the etiology of sexual aggression.

Research conducted with criminals found that such men were relatively high in characteristics such as impulsivity and callousness, traits often encompassed within the label of psychopathy. Initially, studies conducted with noncriminals sought to find similar characteristics in these self-identified sexual aggressors as were found with criminal sexual aggressors. Generally, researchers concluded that these psychopathic traits were not defining characteristics of noncriminal sexual aggressors, but that other characteristics, such as attitudes accepting of sexual aggression, were the important discriminators between sexual aggressors and nonaggressors within the noncriminal population. Believing, then, that criminal and noncriminal sexual aggressors exhibited different traits, researchers, in subsequent studies, focused primarily on only one or the other of these populations.

The following examination of important findings from studies of criminal or noncriminal sexual aggressors reveals that far from being dissimilar, there are actually many remarkably similar characteristics shared by both groups of sexual aggressors. Furthermore, it will be shown that a model we have labeled the "hierarchical-mediational" Confluence (HMC)[b] model provides an effective integration of the findings from studies of both criminal and noncriminal samples. This model yields more fruitful prediction because it incorporates both general hostile/antisocial personality characteristics associated with psychopathy in conjunction with those characteristics more specifically associated with sexual aggression. A series of studies supporting the utility of this model are presented here. The HMC model's tailored approach to the prediction of sexual aggression is compared not only to psychopathy research but also to the "broad band" Five-Factor Model of personality.

STUDIES OF CRIMINAL SEXUAL AGGRESSORS

Studies seeking to identify the attributes of criminal sexual aggressors (e.g., Prentky & Knight, 1991) have often emphasized characteristics associated with antisocial criminals generally, such as "lifestyle impulsivity" (Prentky, Knight, Lee & Cerce, 1995). In keeping with this emphasis, Hare, Clark, Grann, and Thorton (2000) argued that construct of psychopathy may be useful for the study of sexual aggressors as well as other criminals.

Cleckley (1941) described psychopaths as individuals who appeared sane and charming but were actually disturbed, particularly lacking remorse, shame, and sin-

---

[b]This model will interchangeably be referred to as either HMC or the Confluence Model.

cerity. He referred to them as wearing "masks of sanity." Although there have been various measures of psychopathy used, perhaps the most widely used one was developed by Hare (1991). Although Hare (1991) based some of his ideas on Cleckley's earlier writings, he expanded considerably the characteristics involved within this construct to emphasize individuals who are impulsive and frequently engage in exploitative, antisocial acts. He developed a 20-item scale entitled the Psychopathy Checklist-Revised (PCL-R) to assess prototypical characteristics of psychopathy (Hare, 1991). Hare et al. (2000) describe psychopathy as a personality disorder that includes three major components: the interpersonal, affective, and behavioral/lifestyle components. In describing the characteristics measured by this scale, Hare et al. (2000) note that

> on the interpersonal level, individuals with this disorder typically present as grandiose, arrogant, callous, dominant superficial, deceptive and manipulative. Affectively, they are short-tempered, unable to form strong emotional bonds with others, and lacking in empathy, guilt, remorse, or deep-seated emotions. These interpersonal and affective features are associated with a socially deviant lifestyle that includes irresponsible and impulsive behavior, and a tendency to ignore or violate social conventions and morals. (p. 626)

In empirical assessments using factor analyses, this scale has been shown to largely yield two rather than three majors factors, with the first including the interpersonal and affective items, whereas the second the lifestyle ones (see Hare et al., 2000, for a summary). In addition there are a few items that do not load on either of the factors. The detailed elements of this scale will be described later in this chapter when the model underlying psycohpathy research is compared to the HMC model.

Harpur, Hart, and Hare (2002) contend that "psychopathy as assessed by the PCL is perhaps the most reliable and well-validated diagnostic category in the field of personality disorders" (p. 319). With regard to its predictive utility, Hare et al. (2000) summarize a wide range of findings across many studies in various countries, indicating that a large number of those who commit antisocial behaviors, including sexual aggression, show elevated scores on the PCL scale. He notes that research indicates that in a recent study by Porter et al. (2000), it was found that 35.9% of rapists and 64% of rapists/child molesters scored high (30 or above) on the PCL-R scale of psychopathy. Further, Hare et al. emphasized that "the joint presence" of psychopathy and deviant sexual arousal appears to particularly characterize adult and adolescent sex offenders. He referred to a study by Rice and Harris (1997) who found that sexual reoffending was predicted by the interaction of high PCL-R scores and high sexual arousal to rape (as indicated by penile tumescence). As described below, this finding fits exceptionally well with the predictions of the HMC model.

STUDIES OF NONCRIMINAL SEXUAL AGGRESSORS

With awareness that many sexual aggressors escape identification by the criminal system, researchers attempted to identify their characteristics among noncriminal populations. Whereas criminal samples often included aggressors against strangers, noncriminal samples more typically included aggressors against acquaintances. Some of the earliest empirical work on the characteristics of noncriminal sexual aggressors assessed psychopathic traits such as impulsivity, callousness, and hostility in light of findings that these are common among criminal aggressors. Interestingly,

these studies compared the discriminant ability of measures of psychopathy to measures hypothesized to be more specific to sexual aggression, such as attitudes legitimizing such aggression. Some of these studies found support only for the latter type of measure as a correlate of sexual aggression. For example, Koss, Leonard, Beezley, and Oros (1985) conducted a discriminant analysis (a variant of regression analysis) that included various types of measures, including Scale 4 of the MMPI (Minnesota Multiphasic Personality Inventory), which assesses psychopathic deviance. Although they found that adherence to rape-supportive attitudes differentiated between sexual aggressors and nonaggressors, they also found that "measures of psychopathy did not contribute to the differentiation of self-reported forms of sexually aggressive behavior in this study. The lack of differentiation is inconsistent with published literature on incarcerated rapists" (pp. 989–990).

This conclusion that men who aggress against complete strangers (typically criminal samples) differ from those who aggress against acquaintances (typically noncriminals) led to the emergence of largely independent research literatures, which appeared to yield substantially different profiles of sexual aggressors. The prevailing view has been that the attributes associated with sexual aggressors in criminals and noncriminals differ fundamentally.

Nevertheless, the seeds for the integrative approach advocated in the present chapter (that includes both the characteristics associated with psychopathy and those more specific to predicting sexual aggression) can be found in some of the early studies with noncriminal samples. One of these studies will be described in some detail because it yielded findings that are quite informative to the present analysis: Rapaport and Burkhart (1984) administered a questionnaire to 201 undergraduate males that included measures designed to assess a lack of social conscience and irresponsibility. They chose these instruments "… based on previous findings that convicted sex offenders received elevated scores on measures of psychopathic/antisocial characteristics" (p. 218). Specifically, the measures used were the Responsibility, Socialization, and Empathy scales from the California Psychology Inventory (CPI, Gough, 1957). Similar to the Koss et al. (1985) study mentioned above, Rapaport and Burkhart also included various scales measuring characteristics with different degrees of specific relevance to sexual aggression. These consisted of two types of measures: (1) those assessing general sex role beliefs, attitudes toward women, and sexual attitudes, and (2) those measuring attitudes about male antagonism and violence toward women. As part of this assessment, the authors included a scale designed to measure men's endorsement of the use of force on the part of the male to obtain sexual acts. The dependent measure consisted of a self-reported scale of the extent to which the man had used various coercive tactics to engage in sexual acts.

The data were analyzed by correlational and regression analyses. Of the psychopathic personality measures, the Responsibility and Socialization, but not the Empathy, scales significantly correlated with coercive sexuality. Of the attitudinal measures, there was no relationship between the general sex role attitudinal measures and coercive sexuality. In contrast, the scales measuring attitudes about male antagonism and sexual violence did consistently relate to coercive sexuality. The researchers further found that an equation that combined both the psychopathic personality and the attitude measures did significantly relate to sexual aggression, although the form in which the data are presented limits the reader's ability to evaluate the independent and/or interactive contribution of each measure. Similar find-

ings have been recently reported by Hersh and Gray-Little (1998). However, when these latter investigators compared the ability of attitude measures alone to discriminate between sexual aggressors and nonaggressors versus the discriminative ability of attitudes plus psychopathic personality characteristics, they found no greater discriminative ability with the addition of the psychopathy measures. Taken together, these studies present a somewhat ambiguous picture, but they do suggest that it may be useful to examine the role of both general antisocial characteristics (e.g., psychopathic personality characteristics) and factors more specific to sexual aggression, such as measures of attitudes endorsing the use of sexual coercion. This is, in fact, a central feature of the HMC model.

THE CONFLUENCE MODEL OF THE CHARACTERISTICS OF SEXUAL AGGRESSORS

Background to Development of Model

The development of the HMC model began with the research of Malamuth (1986) who studied a noncriminal sample of men in order to develop a coherent model capable of integrating the attributes of sexual aggressors. Malamuth's study was conducted completely independently of and without awareness of Hare's (1991) psychopathy scale and related research. It did, however, include one personality measure of the type of risk factor typically used to assess general antisocial tendencies, namely Psychoticism. In contrast, the other risk variables chosen for Malamuth's study were selected because they had been hypothesized to or shown to be specifically discriminative of sexual aggressors. These included sexual arousal to
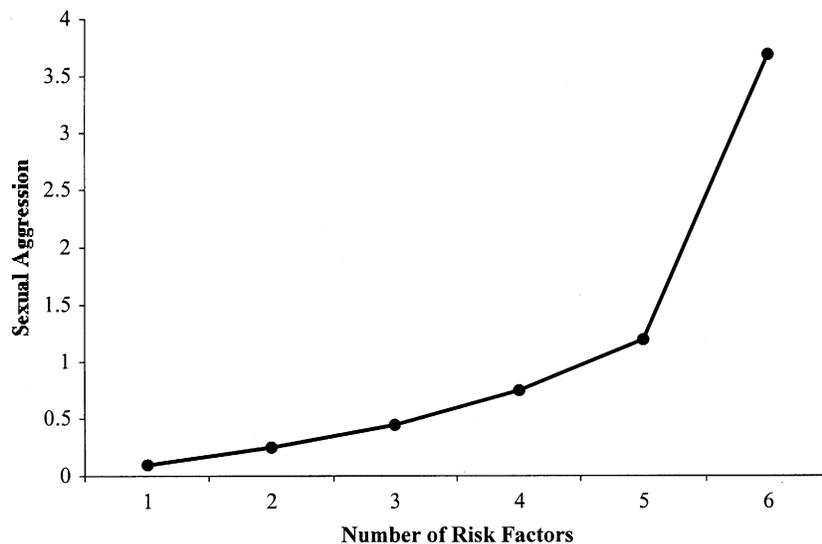

FIGURE 1. Levels of sexual aggression as a function of number of risk factors on which the men scored relatively high. (Adapted from Malamuth, 1986.)

rape (as revealed in penile tumescence assessment), callous attitudes about violence against women, dominance as a motive for sex, hostility toward women, and early sexual experience.

As revealed in simple correlations, all of these attributes discriminated between sexual aggressors and nonaggressors, except that the correlation with psychoticism only approached statistical significance. Most importantly, it was found that although these variables individually related to aggressive sexual behavior, a regression equation that included the interactive combination of all these variables was much better in predicting sexual aggression than each of the risk variables alone or even than the additive combination of all of the risk variables. This finding is illustrated in FIGURE 1, which shows the average level of sexual aggression as a function of the number of risk factors on which the man scored relatively high. As indicated in the relatively steep rise between having four and five of the risk factors (see FIG. 1), the effect is clearly more than a simple additive one. This type of effect has been continuously replicated in the series of studies described below.

These findings were the basis for the more developed version of the Confluence Model, emphasizing the importance of the interactive confluence of the relevant risk factors and the inclusion in a "hierarchical-mediational" of both general antisocial characteristics and related factors more specific and proximate to sexual aggression.

Using Structural Equation Modeling

Subsequent studies on the Confluence Model used some variant of "causal" or "structural equation" statistical modeling (Kaplan, 2000). Before proceeding to describe key follow-up Confluence Model research, it is useful to summarize this well-established statistical modeling approach because it is integrally related to the structure of the HMC model. In simple terms, structural equation modeling combines aspects of both "factor analysis" and "path analysis." It enables several types of analyses. First, the factor analytic part enables organizing several facets of a broader factor within a hierarchical framework. For example, the "shared variance" of facets such as grandiosity, impulsivity, short-tempered, and low empathy may be modeled within a broader construct that might be labeled "general antisocial personality characteristics," "psychopathy," or "general hostile personality." Statistical tests are included that indicate the degree to which the level of organization used is appropriate or not. Second, the path analytic part enables the relationship among several such hierarchically organized broader constructs to be represented statistically. At the same time, it is feasible to represent a unique variance from a facet to another factor (although this is done relatively infrequently). Third, mediation and moderation (Barron & Kenny, 1986) effects among factors and between factors and the outcome (e.g., sexual aggression) may be fully considered.

Such possible interrelationships have generally not been tested in other research on the characteristics of sexual aggressors in criminal and noncriminal populations. As noted above, some of the early research seeking to identify the characteristics of noncriminal sexual aggressors first considered general antisocial and/or psychopathic characteristics but has largely moved away from including such characteristics in favor of focusing on characteristics more specific to sexual aggression (e.g., attitudes justifying sexual aggression). This was partly due to use of the most common form of regression analysis, which includes the assessment of "main effects" only without

explicitly testing interaction and/or indirect effects. The typical outcome was that the more specific predictor (e.g., attitude legitimizing sexual aggression) significantly entered the equation but not the more general psychopathic predictor. This often led the investigators to conclude that the more specific predictor was of primary importance and that the more general psychopathic predictor was not, since it had "dropped out" once control for overlap between the two types of predictors had been accomplished by using the regression analyses.

Such conclusions based on regression analyses can easily lead to potential errors, as illustrated in the following statistical example given by Fergusson and Howood (1988):

> Let us assume that we are concerned to study the relationships between three variables: annual rainfall, annual pasture growth and the live weight of sheep at the point of slaughter. The causal model that links these three variables is intuitively clear: Rainfall → Pasture growth → Sheep weight. Next let us assume that…an investigator elects to examine these relationships by the application of a multiple regression equation in which sheep weight is regressed upon pasture growth and rainfall. The results of this analysis are predictable and will show that pasture growth is a significant predictor of sheep weight but rainfall is not. …The next step is likely to be the conclusion that while pasture growth is an important causal factor, rainfall is not." (p. 331)

Similar specious conclusions may have been reached in the research on the characteristics of sexual aggressors. By analogy, general psychopathic characteristics may be equivalent to the "rainfall," in the above example and more specific characteristics, such as attitudes legitimizing sexual aggression, may be the "pasture growth." In a regression analysis wherein only direct effects are assessed, attitudes would be found to be the only significant predictor of sexual aggression. Similarly, an analysis that compared the discriminant ability of attitudes alone versus attitudes plus psychopathic characteristics may show the same discriminative success (e.g., Hersh & Gray-Little, 1998), potentially leading to the specious conclusion that psychopathic characteristics are not important. In fact, as the above analogy suggests, general "psychopathic" characteristics may substantially affect the development of callous attitudes toward violence against women via potential processes discussed later in this chapter. Equally important, research with criminal samples that included only assessment of general psychopathic characteristics and did not include measures of characteristics potentially more proximate to sexual aggression (e.g., attitudes justifying sexual coercion) may have also missed a critical aspect of a comprehensive model of the characteristics of sexual aggressors.

In the series of studies described here, we have developed the HMC model, which enables avoidance of the type of specious conclusions exemplified above. Our model is "hierarchical," in that certain higher-order constructs or factors that encompass several components or facets are included at the level designed to best encompass the variance shared by the components in their overlap and their ability to predict the outcome of sexual aggression. This has been accomplished via the modeling of "latent" constructs and/or via the creation of composites combining individual scales or measures. It is "mediational" in that some constructs or factors have proximate or direct paths into the sexual aggression outcome (e.g., components of the hostile masculinity constellation), whereas others relate to the outcome only via mediation by the more proximate factors. We will now describe some of the other key studies that led to the development of this model and elaborate here upon some key issues not discussed in previous publications.
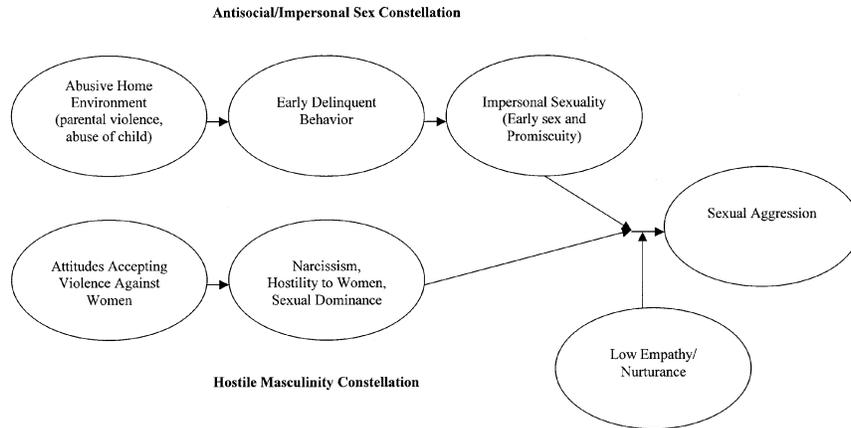
FIGURE 2. The two major constellations of factors comprising the Confluence Model as reported by Malamuth et al. (1991). (Adapted from Malamuth et al., 1991).

Development of Key Constellations

Using structural equation modeling, Malamuth, Sackloskie, Koss, and Tanaka (1991) concluded that the attributes of sexual aggressors (including the key ones studied by Malamuth, 1986) actually coalesce into two major constellations rather than being a set of unrelated independent variables. The first constellation included callous, manipulative attitudes toward women; grandiose, narcissistic personality characteristics; hostility toward women; and dominance as a motive for sex. This constellation of attributes was labeled the Hostile Masculinity path. It was also found to be associated with social isolation. The second constellation included early experiences of abusive/conflictual home environments, general antisocial tendencies reflected in adolescent delinquency, and relatively high levels of promiscuous/ impersonal sex. It was labeled the Sexual Promiscuity/Impersonal Sex path (see Fig. 2). It is noteworthy that the characteristics that constitute the Hostile Masculinity path are personality traits, whereas those of the Impersonal Sex path are experiential/ behavioral ones (i.e., early experience of abuse, engaging in early antisocial and sexual behavior and sexually promiscuous behavior).

In keeping with Malamuth (1986), the data of Malamuth et al. (1991) showed that the interaction of the two constellations of characteristics predicted sexual aggression most successfully. (They also found that in contrast to sexual aggression, nonsexual aggression is best predicted by the characteristics of the Hostile Masculinity path alone.) Malamuth et al. formally labeled the model integrating these constellations of characteristics the "Confluence Model," to emphasize that the interactive confluence of the set of characteristics included in both of these two constellations best discriminated between sexual aggressors and nonaggressors.

Inclusion of General Hostile Personality Characteristics

The next key study in this line of research on the Confluence Model was a longitudinal study by Malamuth, Linz, Heavey, Barnes, and Acker (1995). Three general hypotheses were empirically tested in this research:

(1) The same two-path "causal structure" would be useful not only for cross-sectional "prediction" but also for the longitudinal prediction of sexual aggression, above and beyond the prediction achieved by earlier sexual aggression alone.

(2) A particular subset of the same characteristics used to predict sexual aggression would also predict general dysfunction and violence in relationships with women.

(3) In keeping with the "hierarchical-mediation" approach, certain general personality and behavioral characteristics would only indirectly contribute to sexual aggression via mediation by more specific factors.

This study followed up approximately 150 men for whom we had collected data from approximately ten years earlier. All three hypotheses were supported, but I will elaborate here only on the third one. These investigators incorporated in their assessment of the men's characteristics several additional scales designed to measure general "hostile" personality characteristics not previously assessed in this line of research. The hierarchical approach emphasized here predicts that these relatively general characteristics would indirectly contribute to sexual aggression via mediation by some of the more specific factors incorporated within the Confluence Model. A particularly important general construct to consider here was labeled Proneness to General Hostility. It was a composite of four reliable and validated scales, each with multiple items (ranging from 16 to 40). More detailed descriptions of these scales are presented in Malamuth et al. (1995). Two of these scales measured impulsive tendencies. The first was the Irritability scale, assessing individual differences in reacting impulsivity or rudely to slight provocations or disagreements (characteristics likely to lead to impulsive aggression). A second related measure was the Impulsivity scale shown previously to affect various types of antisocial behavior in many populations and settings. The other two scales measured intensity of emotional reactions, with particular focus on "emotional dyscontrol." One of these was the Emotional Susceptibility scale, measuring feelings of discomfort, inadequacy, and vulnerability. The other was the Affective Intensity scale, assessing affective responses to emotion-provoking and threatening life events.

The findings of this research provided support for the HMC model. Specifically, the Proneness to General Hostility composite indirectly predicted sexually aggressive behavior only via mediation by the more proximate predictor of Hostile Masculinity (see Fig. 3).[c] In contrast, nonsexual aggression against women was directly predicted by the Proneness to General Hostility composite. Vega and Malamuth (2003) recently replicated and extended the HMC model's set of findings in another sample of noncriminals and found support for virtually all of the features of the model in Figure 3.

---

[c]Similarly, another factor, Sex Role Stress (i.e., the extent to which a person experienced stress when perceived in ways inconsistent with traditional male sex roles) indirectly predicted sexual aggression, again mediated via the Hostile Masculinity construct. Because it is less germane to the perspective presented here, it is not included in the relevant graph.
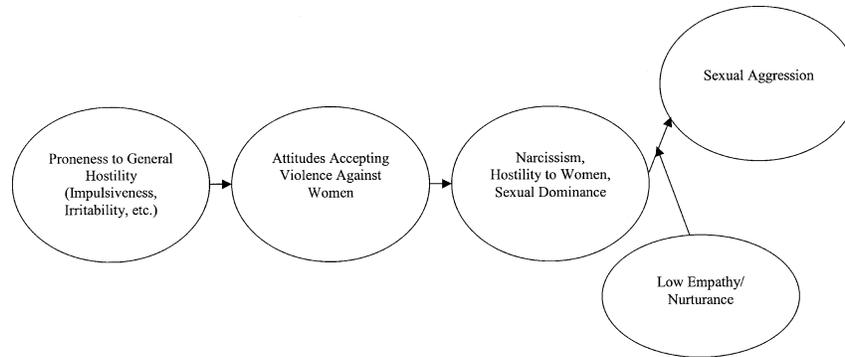
FIGURE 3. The relationship between general hostile/antisocial personality characteristics and ones more specific to sexual aggression, constituting a key aspect of the development of the hierarchical-mediational version of the Confluence Model. (Adapted from Malamuth et al., 1995).

Inclusion of Nurturance/Empathy as an Attenuator

The factors described heretofore are risk factors increasing the likelihood of sexual aggression. The next study pertaining to the development of the HMC model, by Dean and Malamuth (1997), sought, in contrast, to examine the role of empathic, nurturant personality characteristics, hypothesized as attenuators of risk. Therefore, in addition to assessing the risk factors, the investigators measured the broad personality dimensions of dominance (egotistical, self-oriented) versus nurturance (other-oriented, empathic). As predicted, Dean and Malamuth (1997) found that such a "self-centered" versus "other-concerned" dimension indeed moderated sexually aggressive behavior. These data confirmed that when a man had the risk characteristics included in the Confluence Model but was also high on his compassion and empathy for others, there was only a weak relationship between the risk factors and actual sexually aggressive behavior. When a person was relatively low on their compassion or empathy for others, there was a strong link between the risk factors and actual sexually aggressive behavior.

Replications and Extensions of Confluence Model's
Findings by Other Investigators

There have been several studies by independent researchers that have successfully replicated the findings of the Confluence Model as well as elaborating on certain aspects of the constellations constituting this model. For example, Christopher, Owens, and Stecker (1996) successfully replicated and elaborated on this model with a noncriminal sample. In particular, they assessed more fully an aspect of the Hostile Masculinity dimension, namely the feelings of antagonism, anger, rejection, and hurt vis a vis relations with women. In another study, Wheeler, George, and Dahl (2002) replicated and extended the findings of Dean and Malamuth (1997) using a different measure of the nurturance/empathy dimension. Additional support for the key aspects of the Confluence Model was found in research by Hall, Sue, Narang, and Lilly (2000).

Lim and Howard (2001) replicated the Confluence Model in Singapore and also included measures of such general constructs as Antisociality (i.e., lack of concern about how others react to one's behaviors) and Belligerence (impulsiveness and general antisocial behavior). Taken together, these closely parallel key components of Hare PCL-R Psychopathy scale. The investigators found that Belligerence had only indirect effects on sexual aggression, mediated by more specific factors, such as attitudes supportive of sexual aggression. Similarly, Antisociality exerted indirect effects on both sexual aggression (via sexual promiscuity and attitudes accepting violence against women) and on nonsexual aggression (via belligerence). In contrast, and in keeping with findings of Malamuth et al. (1995), using the similar measure of Proneness to General Hostility, Belligerence had direct effects on nonsexual aggression against women. Similarly, Bourg (2001) used a general antisocial construct composed of Nonconformity, Hypermasculinity, and Aggressiveness. The link between this relatively general construct and sexual aggression was mediated by a "specific construct" that included key aspects of Hostile Masculinity, namely Hostility toward Women, Dominance as a Motive for Sex, and Adversarial Sexual Beliefs. In addition, in a recent meta-analysis, Murnen, Wright, and Kaluzny (2002) found very strong reliability in the correlation across various studies between the various components of hostile masculinity and men's self-reported levels of sexual aggression.

There have also been some successful replications and extensions of the HMC model with criminal samples. Johnson and Knight (2000) studied a sample of 122 juvenile offenders from five treatment centers. They examined the relevance of the Confluence Model with this sample and found that the key elements replicated very well: The investigators concluded that "...the present study does uncover commonalities between the paths leading to sexually coercive behavior in our sample of juvenile offenders and Malamuth et al.'s (1991) sample of college males" (p. 176). Knight and Sims-Knight (in press) conducted a similar analysis in a sample of 275 adult male sexual offenders and found support for a model similar to the Confluence Model. These investigators suggested that there may be a third constellation of characteristics more specific to "callous, unemotional" characteristics. However, in our view the model they presented very closely supports the two-path hierarchical-mediational model we have emphasized since they found that the Callous/Unemotional construct only indirectly affected sexual aggression, via elements of the Hostile Masculinity constellation (specifically, aggressive-sexual fantasy). Yet, I acknowlege that in Malamuth (1998) I had also suggested a similar conceptualization using a third interacting constellation with a person's scores of Dominance/Narcissism versus Nurturance/Empathy. There is clearly a need for further clarification at both the conceptual and empirical levels regarding whether the dimension of nurturance/empathy is best considered as part of the General Proneness to Hostility (or psychopathy) set of characteristics, a separate moderator dimension of such general antisocial characteristics, or a third interacting constellation with the other two constellations encompassed within the Confluence Model.[d]

Confluence Model as a Unifying Framework

The HMC model enables the unification of much research that has investigated portions of this model, though often using other labels for the same or similar con-

structs. For example, Kosson, Kelly, and White (1997) studied noncriminal men who completed the Socialization scale mentioned above (Gough, 1957), assessing impulsive antisocial behavior. This factor corresponds to the HMC model's Delinquency factor, an aspect of the Impersonal Sex constellation. Kosson et al. also administered the Narcissistic Personality Inventory (Raskin & Hall, 1981), assessing traits that closely correspond to aspects of Hostile Masculinity (e.g., see Malamuth et al., 1993).

In keeping with what we would expect based on the HMC model, Kosson et al. (1997) found that both the Socialization scale and the Narcissistic Personality Inventory as well as their interaction contributed to the prediction of sexual aggression.

Essentially, this was a test of key elements of the HMC model, although the investigators did not specifically refer to this model. We believe that this is illustrative for a great deal of the published work in this area, which may be readily positioned within the HMC framework.

Moreover, by identifying certain key factors of the profile of sexually aggressive men, the HMC model can serve as a useful framework for examining the role of other potentially relevant factors. This is due to the ability to include in the model and therefore "control" for what has already been identified as reliably associated with the characteristics of sexual aggressors prior to the addition of other factors that may simply be spurious correlates or redundant factors. This is well illustrated by the findings of Malamuth, Addison, and Koss (2000) (replicated by Vega & Malamuth, 2003). They examined the relationship between pornography and sexual aggression by embedding their assessment within the Confluence Model. With a national random sample of men, these investigators first classified participants, on the basis of the Confluence Model's dimensions, into varying levels of risk for sexually aggressing. Within these differing levels of risk they then examined the predictive utility of pornography consumption. (This is somewhat similar to the "classification tree" approach used by Steadman et al., 2000.) It was found that among those classified at relatively low risk, there was only a small difference in sexual aggression as a function of pornography use. In contrast, pornography use was indeed a very good discriminator among those previously determined to be at high risk for sexually aggressing. Among high-risk men, those who additionally were very frequent users of pornography were much more likely to have engaged in sexual aggression than

---

[d]An additional issue raised by similarities among HMC model research, extensions by Knight and associates, and development of actuarial scales predicting recidivism (e.g., Hanson & Harris, 2001) concerns the sexuality components of a risk model. Our own work has emphasized both aspects of the Impersonal Sexuality constellation (e.g., early sexual intercourse, multiple sexual partners, and fantasizing about strangers) and aspects that we believe are more related to the Hostile Masculinity constellation aspect of aggressive-sexual fusion, such as rape fantasies, dominance as a motive for sexuality, and penile tumescence to rape depictions. Knight and Sims-Knight (in press) have also emphasized sexual drive and sexual preoccupation. To evaluate the extent to which each of these is related to sexual aggression, we conducted an analysis of relevant scales using the database gathered by Malamuth et al. (1995). It was found that measures of impersonal sexuality, aggression-sexual fusion, sex drive, and sexual preoccupation all correlated with self-reported sexual aggression. Assessing the unique links between these factors and sexual aggression via computation of "beta" weights in a regression equation indicated that some components of each still remained significant contributors, although with sex drive the findings suggested more of a dissatisfaction with how much sex the person experienced rather than actual differences in amount of sexual experiences.

their counterparts who consumed pornography less frequently. The researchers suggested that the links between pornography consumption and aggressiveness toward women may be circular, whereby aggressive men are drawn to those images in pornography that reinforce their impersonal and hostile orientation to sexuality.

COMPARING THE CONFLUENCE AND PSYCHOPATHY MODELS

Similarities between Models

There is a remarkable correspondence between factors identified in the HMC model research and the characteristics within Hare's Psychopathy scale[e] (see TABLE 1). Both models have two major constellations, one encompassing personality traits and the other behavioral or lifestyle characteristics. Although the Confluence Model has

TABLE 1. Similarity between characteristics of sexual aggressors identified in Confluence Model research and in factor analysis of Hare's Psychopathy scale

| Confluence Model Research (Primarily Noncriminal Samples)	Psychopathy Based Research (Primarily Criminal Samples)
A. Personality	
Proneness to General Hostility/Antisociality Impulsivity, Irritability, Emotional Dyscontrol **Hostile Masculinity Constellation** 1. Grandiose, arrogant, self-centered 2. Callous attitudes justifying violence against women 3. Dominance/power in sex 4. Hostility toward women 5. Social isolation **Factor Included as Moderator Variable** 6. Low empathy/nurturance	**Factor 1 within Hare's Scale** *Interpersonal*: Grandiose, arrogant, callous, dominant, superficial, deceptive, and manipulative *Affective*: Short-tempered; unable to form strong emotional bonds; social isolation; lacking guilt, remorse, deep seated emotion, or empathy
B. Behavioral History	
Impersonal Sex Constellation 1. Victimized in childhood by sexual and/or physical abuse and/or experiencing parental violence 2. Adolescent delinquency 3. Promiscuous/impersonal sex (includes many short-term relationships)	**Factor 2 within Hare's Scale** Irresponsible and impulsive behavior **Additional Items/Factors for Total Score** 1. Criminal versatility 2. Promiscuous sexual behavior 3. Many short-term martial relationships
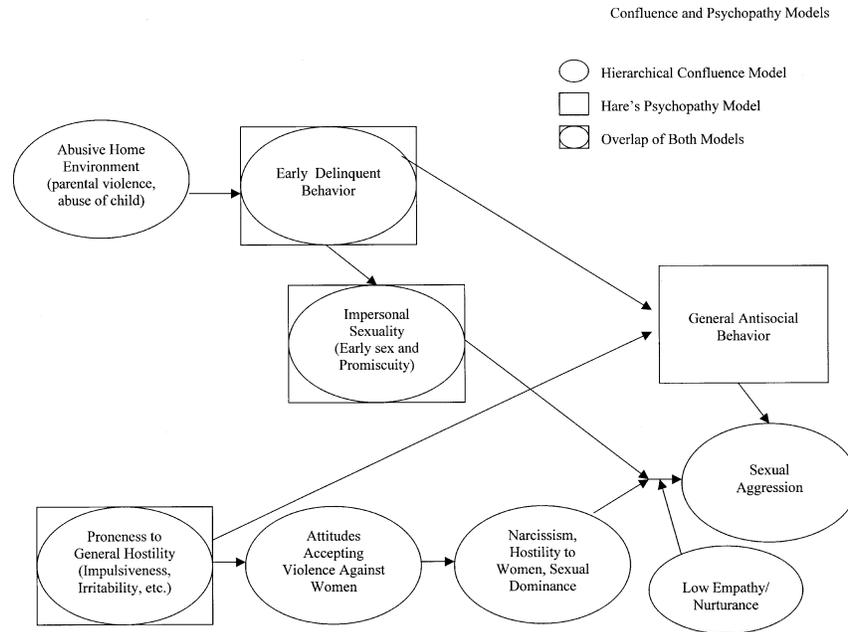
FIGURE 4. Correspondence in the characteristics identified by research on HMC model and Hare's Psychopathy research. Circles within boxes indicate overlap of models.

been tailored more to characteristics predicting sexual aggression (e.g., callous attitudes to women rather than callous attitudes generally), several of the major personality factors identified by this model are also incorporated within Hare's Psychopathy scale (see FIG. 4).[f] This should be encouraging to researchers in both lines of investigation, particularly in light of the differences in the samples used (e.g., criminal versus noncriminal). Note that in HMC research, characteristics such as Impulsivity are represented at the personality level, whereas in Psychopathy research, these are included in actual "Irresponsible and impulsive behavior." This distinction may be important in that the former line of research has been conducted primarily with noncriminal samples (who only have some elevated personality potential, but have not actually committed much general antisocial behavior), whereas the latter research has more often been conducted with actual criminals, who may have both higher elevations in the personality risk factors and have actually engaged in various types of antisocial and criminal acts.

On a conceptual level, both models emphasize that the impact of a combination of risk factors is greater than simply adding the effect of each factor individually. In psychopathy research, this has been reflected in distinctions between "primary" and

---

[f]Low empathy is clearly also part of the set of characteristics included in Hare's Psychopathy Model. It is not shown in FIG. 4 as part of the overlap because it is depicted in this figure as a moderator variable, as suggested by Dean & Malamuth (1997).

"secondary" psychopaths. In HMC model research, this has been consistently demonstrated in the finding that the interactive model produces a better prediction than the additive combination of each of the relevant factors. In other words, these data show that once the same individual scores relatively high on all of the relevant risk factors, their sexual aggression is much higher than would be expected by computing the additive risk from each of the risk factors individually. Recently, psychopathy researchers have also begun to more formally translate their emphasis on psychopathy as a "distinct class" into hypotheses and data supporting interaction effects of the relevant dimensions (i.e., Harpur et al., 2002).

Differences between Models and Suggested Future Research

Despite the overwhelming similarity, some differences between the Psychopathy and the HMC models are noteworthy. First, the Confluence Model approach has typically assessed each of the risk factors by using separate, reliable, multiple-item scales. In contrast, the various components of Hare's Psychopathy scale are measured by a small subset of items or even one item. Each of these approaches has certain merits. The former enables a more comprehensive assessment of each risk factor, whereas the latter enables a more practical single scale.

The second difference between the models lies in the fact that Confluence Model research gives a clear separation of the components constituting the total risk score, whereas the Psychopathy approach relies primarily on a total score. It may be that part of the ability of the Psychopathy scale to predict diverse antisocial behaviors reflects the fact that within a single PCL-R score various traits are being assessed simultaneously. Varied traits assessed by this scale may actually be predicting different behaviors. While some individuals indeed show marked elevations on all three of the relevant clusters, it is also apparent that some individuals may show elevations on some facets of this measure and not on others. The same overall score may be obtained by people who differ quite dramatically in different facets of the scale. Levenson, Patrick, Bradley, and Lang (2000) similarly note that "… individuals high in overall psychopathy are likely to differ from nonpsychopaths on a variety of traits (e.g., dominance, aggressiveness, impulsivity, sensation seeking, and harm avoidance)…. Different facets of psychopathy might have accounted for different group effects. Further research incorporating groups selected for elevations on one or the other PCL-R factor … and measures of potential trait mediators will be needed to resolve this issue." (p. 383)

Third, the HMC model has emphasized more specific predictors relevant to sexual aggression, whereas the Psychopathy research has relied on more general characteristics relevant to a wide variety of antisocial behaviors. This issue will be addressed in more detail below in comparing various approaches to assessment. It is noteworthy here, though, to comment on the emphasis in HMC research on using structural equation modeling. As noted earlier, this statistical modeling approach has several advantages. Because it combines aspects of both "factor analysis" and "path analysis" it enables several facets of a broader factor to be organized within a hierarchical framework and to relate to other relevant higher-order factors. For example, the relevant shared variance within variables such as impulsivity, irritability, and low empathy load on the "broader band" "General Hostile Personality" factor, which is linked to the more specific construct of Hostile Masculinity (which is indicated by

such measures as Hostility toward Women and Sexual Dominance). In addition, mediation and moderation (Barron & Kenny, 1986) effects may be fully considered.

Fourth, although many of the personality characteristics of both the HMC and Psychopathy Models are distinctly similar (even if different labels and assessments have been used), one key component has been emphasized in the Confluence Model but has not been included in the PCL-R assessment of Psychopathy. In the HMC model research, it has been operationalized in such measures as the penile tumescence index (assessing arousal to rape as compared to mutually consenting depictions; e.g., Malamuth, 1986), the Sexual Dominance scale (e.g., Malamuth et al., 1991, 1995), and sexually coercive fantasies (e.g., Malamuth & Dean, 1997). As noted above, when the Psychopathy scale has been used to predict sexual aggression, it has been found to be most useful when combined with measures of dominance/power in sexuality (Hare et al., 2000), as revealed in research such as that of Rice and Harris (1997), who reported that the interaction of high PCL-R scores and the penile tumescence index was particularly predictive of offenders' recidivism in sexual aggression. This is essentially comparable to using some of the key elements of the HMC model (also see Seto & Lalumiere, 2000, who point to such correspondence). The major difference is that the more specific facets relevant to sexual aggression (e.g., assessment of callous attitudes toward women rather than callous attitudes generally) were not included by Rice and Harris (1997). If they had been included we would expect even better prediction.

A fifth key difference is greater emphasis on general antisocial behavior in Psychopathy research. This is understandable in light of the types of populations typically studied in both lines of research. Confluence Model studies have been conducted primarily (but not exclusively) with noncriminals, whereas Psychopathy Model studies have been conducted primarily (but not exclusively) with criminals. Obviously, the latter samples are likely to have a higher level of general antisocial behavior. This aspect merits further concentration in future research. One issue is the extent to which general antisocial behavior can be considered a "causal" factor in the development of sexual aggression, a "marker" of some of the underlying characteristics that lead to both general antisocial and sexually aggressive behaviors or a characteristic that may help distinguish among different "types" of offenders, some more persistently antisocial in general, whereas others more "specialists" in sexually aggressive behaviors (Hunter, 2002; Moffitt, 1993; Monson & Langhinrichsen-Rohling, 2002).

An additional issue concerns the distinction between "successful" versus "unsuccessful" psychopaths. Ishikawa (2000; also see Ishikawa et al., 2001) conducted a study that demonstrated that there are "…individuals, who can be identified as psychopathic based on the traditional notion of disrupted emotional and interpersonal functioning…who show intact autonomic nervous system and frontal functioning, and also manage to avoid being convicted for their crimes. …" (p. 88) Lynam (2002) suggests that successful psychopaths are people who have some of the "… facets of psychopathy…but lack others (particularly the facets of low Conscientiousness) that are likely to contribute to occupational failures or arrests" (p. 342). Perhaps the noncriminals studied in the HMC research are more similar to "successful psychopaths," whereas those among "criminal samples" are the unsuccessful psychopaths. However, Ishikawa's (2000) research also raises questions about the conceptualization of psychopathy in terms of certain underlying physiological deficits. It therefore raises

questions about the utility of applying the label of "psychopathy" *per se*. Future studies should conduct a systematic comparison among criminals and noncriminals using the measures typically used in the HMC model and in the psychopathy lines of research to directly compare these and to also study some of the underlying mechanisms (e.g., Ishikawa, 2000) hypothesized to have caused the manifest characteristics.

In addition, better understanding of the causes of coalescing characteristics, suggested by HMC and Psychopathy lines of research, is needed. Vasqiez and Figueredo (2002) described several alternative models: One model argues that the combination of characteristics included within psychopathy may actually constitute a "package" on which evolutionary selection pressures operated, creating a "niche" that enabled successful exploitative behavior (Mealey, 1995). A second model is that, through "assortative mating," individuals with "bad" characteristics were more likely to mate with similar others who had other "bad" characteristics, eventually leading to a group of individuals who were more likely to have offspring who combine several such "bad" characteristics. Lalumiere, Harris, and Rice (2001) similarly distinguished between a model suggesting that psychopathy is the outcome of defective or perturbed development versus the successful exploitative behavior model (Mealey, 1995). In comparing various groups of offenders to nonoffenders, they found greater support for the latter model, but the findings were not unequivocal.

Finally, we do not as yet have sufficiently good comparisons on whether criminal sexual aggressors score particularly high on certain "specific" characteristics encompassed within the HMC model research. Although research has shown that traits such as Sexual Dominance and Narcissism are Hostile Masculinity characteristics on which both criminal and noncriminal sexual aggressors score high on, this has not been adequately examined with some other characteristics, namely attitudes accepting of violence against women and hostility toward women. Recall that the PCL-R Psychopathy scale, on which sexual aggressors score high, includes characteristics such as "callousness" and "short-tempered," suggesting that they would also be high on similar characteristics when the relevant targets are women and the aggression is sexual aggression. It would be useful though to assess whether they are particularly high in these characteristics when women are the targets. The limited research available at this point does suggest that sexual aggressors hold attitudes more accepting of the use of sexual and of nonsexual physical aggression, generally, but not particularly of sexual aggression or other acts of violence against women (e.g., Spaccarelli, Bowden, Coatsworth & Kim, 1997). This study also suggests that sexual aggressors are more likely to use aggression as a means of influencing or controlling others in various situations. Clearly, though, this issue requires additional more precise investigation.

COMPARING DIFFERING ASSESSMENT STRATEGIES

Different Levels of Generality

It is particularly revealing to compare the Five-Factor Model (FFM) of personality, Hare's Psychopathy PCL-R scale, and the Confluence Model on assessment and prediction issues. Each represent different levels of generality and were developed for somewhat differing purposes. Yet, they share some properties and some common goals.

The FFM approach is a broad-band approach that attempts to encompass as much of the variance across all of the descriptors of personality as possible by extracting a few higher-order factors. If one's purpose is to predict across a wide range of behaviors or criteria, then this may be the best and most parsimonious strategy (for discussions of the advantages and disadvantages of different levels of "broad band" vs. "narrow band" assessment strategies, see Paunonen & Adelheid, 2001 and Paunonen & Ashton, 2001).

The HMC model represents a relatively narrow band approach but also encompasses some broad-band aspects. It was designed to develop the best prediction for a particular outcome, namely sexual aggression. Consequently, researchers using this strategy attempted to (1) identify all of the risk factors shown to predict this particular outcome, (2) to organize them in the most coherent and parsimonious manner, and (3) create a replicable predictive model of the characteristics of sexual aggressors. Therefore, "higher order" factors were extracted and used only to the extent that they effectively encompassed common variance of the risk factors shown to predict sexual aggression. For example, scales such as Hostility toward Women, Adversarial Sexual Beliefs and Sexual Dominance were found to consistently have key common variance that could be encompassed in a latent construct or alternatively in a composite labeled Hostile Masculinity. By using structural equation modeling, we not only used the factor analysis strategy (represented by the FFM approach encompassing a much wider range of characteristics), but also incorporated "mediation," whereby certain more general factors (e.g., our General Hostility) are included as predictors of sexual aggressors only if the man also has certain attributes (e.g., Hostile Masculinity) more proximate to sexual aggression.

Hare's psychopathy approach may be thought of as a strategy of predicting a specific class of behaviors (i.e., antisocial behavior) rather than a particular behavior only (i.e., sexual aggression). It "bundles together" in a single scale (1) the most relevant parts of the broader bands of personality and (2) previous antisocial behavior. Using an FFM analysis, Lynam (2002) argued that psychopathy correlates with a diverse set of behaviors because it is, in fact, a collection of diverse traits that has not been adequately shown to constitute a taxon. He notes that there has been evidence for the taxonicity of the antisocial lifestyle and childhood antisocial behavior items (Factor 2 of Hare's Psychopathy scale) but not for the taxonicity of the interpersonal and affective items of Factor 1 of this scale. He suggests that "… the differences observed between psychopathic and nonpsychopathic individuals are matters of degree rather than differences in kind" (p. 344). He further notes that

> … certain individuals seem to have little control over their actions. On this basis, these individuals may ask how can such a disorder be a collection of facets? Is this not evidence for the distinctiveness of psychopathy? I believe it is not evidence for the taxonicity of psychopathy. Instead, I believe that psychopathy consistently comes to the attention of mental health professionals and criminal justice workers because it is such a virulent collection of traits… high Antagonism, low Conscientiousness, and low anxiety. … In its most full-blown form, the psychopathic individual is not restrained by fear, concern for others, or the ability to reflect on the longer term outcomes of his or her behavior. (pp. 343–344)

In contrast, Harpur et al. (2002) argue that "the prototypical characteristics of the psychopath combine several dimensions of the FFM. … These characteristics form a unified whole when seen in a psychopathic inmate but are presented by distinct dimensions in the FFM" (p. 316). The debate therefore focuses on the question of
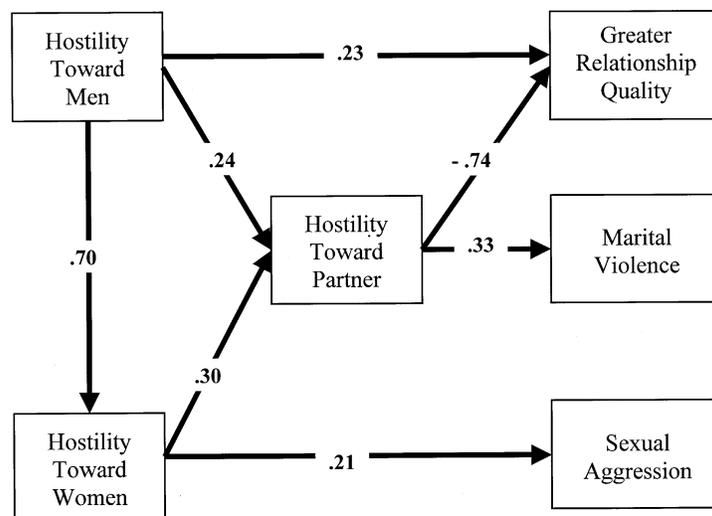
FIGURE 5. Men's reported quality of relationship with their female partner as a function of three types of hostility: Hostility toward Men, Hostility toward Women, and Hostility toward Partner. (Note: Numbers indicate path coefficient values, all of which are statistically significant.)

whether, when the various risk factors combine in the same individual, they create more risk than expected based on an additive combination of the risk factors? The view that there is a "synergistic" or "interactive" effect has been an important emphasis in HMC Model research. Indeed, it is what led to the use of the term *confluence*. Research on the Confluence Model has repeatedly demonstrated such an interaction (e.g., Malamuth, 1986; Malamuth et al. 1991; 1995). Psychopathy researchers have also recently begun to turn their attention to examining interaction effects (e.g., Harpur et al., 2002). Also, some researchers claim to have obtained other types of evidence for psychopathy as a discrete class (Harris, Rice & Quinsey, 1994; Skilling, Harris, Rice & Quinsey, 2002).

Each of these three approaches (FFM, Psychopathy, and HMC) may be best suited for particular purposes: the FFM approach for a parsimonious assessment strategy for predicting a wide variety of behaviors; the PCL-R Psychopathy scale for predicting across a variety of antisocial behaviors only; and the HMC Model for predicting sexual aggression. The HMC approach emphasizes the selection of predictors at a level of specificity or broadness that is most suited for a particular criteria or outcome. To illustrate the potential importance of such differentiation, we conducted analyses on the database used by Malamuth et al. (1995). Participants in this research had been administered several variants of the Hostility toward Women (HTW) scale embedded within a much larger set of questions. The referent of each scale item (e.g., "women," "men," or "your partner") was altered to reflect different relationships. For example, the HTW item "I am not easily angered by women" was phrased as "I am not easily angered by men" in the Hostility toward Men version, and "I am not easily angered by my partner" on the Hostility toward Partner version.[g]

TABLE 2. Mean quality of marital relationships as a function of men's scores on three types of hostility: Hostility to Men, Hostility to Women, and Hostility to Partner

		Low Hostility to Men		High Hostility to Men	
		Hostility to Women		Hostility to Women	
		Low	High	Low	High
Hostility to Partner	Low	1.50 ($n = 43$)	1.60 ($n = 10$)	1.20 ($n = 10$)	2.30 ($n = 12$)
	High	−1.40 ($n = 14$)	−2.20 ($n = 11$)	−0.40 ($n = 8$)	−1.60 ($n = 46$)

FIGURE 5 shows the findings of path analyses using these scales to predict several outcomes: Relationship quality with the man's female partner, nonsexual violence against the man's partner, or sexual aggression against women generally. As expected, these analyses show that while Hostility toward Men (used here as an indicator of general hostile tendencies) and Hostility toward Women are highly correlated, the relationship between Hostility toward Men and sexual aggression against women is mediated via the more proximate predictor of Hostility toward Women. Similarly, while both Hostility toward Men and Hostility toward Women had an indirect influence on violence toward his female partner, the version of the scale that specifically assessed Hostility toward the Partner was the more proximate, direct predictor. It mediated the effects of the other versions of the hostility scale.

Interestingly, relationship quality had a strong direct link from Hostility toward the Partner in the expected direction (i.e., the more hostility toward the partner the lower the quality of the relationship), but, surprisingly, there was an additional pathway suggesting a positive association between Hostility toward Men and relationship quality with the partner. To explore this unexpected association further, we classified the men as high or low in hostility based on median splits. TABLE 2 shows the mean scores on relationship quality based on these classifications. In general, the results reflect what we expected. Men high on all three types of hostility ($x = −1.6$, $n = 46$) reported much lower relationship quality with their spouses than men low on all three types of hostility ($x = 1.5$, $n = 43$). Yet, men high in hostility toward other men and women but low in hostility toward their partner actually report the highest quality of partner relationship ($x = 2.3$, $n = 12$). Perhaps these individuals have dif-

[g]We believe that the different versions of the hostility scales we developed correlate highly with key aspects of the conceptualization of psychopathy (particularly the superficial, manipulative pretense of sincerity) and that they reflect both some common variance and unique variance relevant to different targets. To assess this, we also created modified versions of the Machiavelianism Scale, which is designed to assess a dispositional inclination to manipulate and exploit others (Christie, 1968). An example of an item on this scale is "Never tell women (or men) the real reason you did something unless it is useful to do so." We found that the Hostility toward Women and the Machivialiianism toward Women scales correlated very highly ($R = .73$, $P < .0001$), as did the Hostility toward Men and the Machivialilianism toward Men scales ($R = .69$, $P < .0001$). As expected, when comparing "across targets," the correlations are somewhat lower but still strong: The Hostility toward Men and the Machivialianism toward Women scales correlated .58 ($P < .0001$), and the Hostility toward Women scale and the Machivalianism toward Men correlated .52 ($P < .0001$).

ficulty in their relations with people generally but have found a particularly suitable partner with whom they get along with very well. These data reveal the usefulness of assessing varying levels of broadness and specificity, depending on the particular processes and outcome of interest.

Related data have also been reported by Anderson (1996) who assessed both laboratory aggression and self-reported naturalistic aggression. She found that "under conditions of high provocation, hostility toward women predicted increases in male aggression against women and decreases in male aggression against men. This effect remained even after general hostility was controlled for" (p. iii). These findings provide further support for the importance of assessing constructs at a level of specificity tailored to the outcome (e.g., particular target) under investigation.[h]

Assessing Levels Within a Hierarchy

The various research findings described in this chapter suggest that a comprehensive model of the characteristics of sexual aggressors needs to include various levels of "broad band" and more "narrow band" characteristics. As indicated above, the Five-Favor Personality Model, the Psychopathy Model, and the Confluence Model represent different levels of assessment, moving from the more general to the more specific (although the latter includes some general and some specific). Recent developments in personality theory and assessment may provide some relevant guidance regarding the utility of assessment at each of these levels:

> Description based on a few higher-order traits offers a convenient and parsimonious way to communicate about personality. … Specific treatment decisions, however, seem to require the detailed evaluation of personality provided by description of the lower-order traits. … It is not clear whether the lower-order traits are simply subcomponents of the higher-order traits or whether they are separate entities that co-occur to create the higher-order trait. … Behavior-genetic analyses of twin study data are beginning to provide an answer to this question… that the specific facet traits of the five-factor model have substantial residual variance when the effects of the five higher-order dimensions are removed. …Personality phenotypes are based on a large number of genetic building blocks that have relatively specific effects and a few factors with more widespread effects. … For this reason, the most important level in the hierarchy for coding relevant traits is in the basic or lower-order level. (Livesley, 2001, p. 32)

The above quote not only strengths the rationale for the relatively "lower-order" level of the HMC model but also highlights the need for research to more precisely elucidate the mechanisms that link "higher-order" general hostile/antisocial factors

---

[h]In a wide-ranging analysis, Felson (2002) recently argued that sexual coercion specifically, and aggression against women generally, is caused by the same factors that cause other forms of antisocial behaviors. In contrast to the integrative approach suggested here, he therefore argues that there is little need for consideration of "specialization." In one part of this analysis, Felson (2002) discusses our research using self-reported likelihood of raping (e.g., Malamuth, 1981). Felson (2002) writes that "… there is no attempt to compare the likelihood measure for rape to likelihood measures for other crimes to see if some men have a special proclivity to rape." (p. 139) Unfortunately, Felson has overlooked research that has precisely done what he argues is needed, namely in Malamuth (1989a; 1989b). That research indicates that although there is indeed some variance common to various forms of self-reported likelihood to antisocial behavior generally (e.g., theft and murder), there is also clearly unique variance to reports of likelihood of engaging in sexual aggression. Further, the mechanisms leading to acts of sexual aggression may share some properties with those leading to other forms of antisocial behavior, but the data presented indicate that there may also be certain unique factors of considerable importance (Malamuth, 1989a; 1989b; Anderson, 1996, Malamuth, 1988).

(or traits) to the "narrower" more proximate factors directly predictive of sexual aggression. A full description of the various possibilities is beyond the scope of this chapter, but for illustrative possibilities, two will be highlighted. One possibility is that the presence of relatively general antisocial attributes may increase "receptivity" to more specific, related ones. For example, a person who has more general hostile emotions may be more open to cultural or other messages that encourage hostility, and domination of and prejudice toward certain "outgroups," such as minorities, women, and gays. The particular subgroups toward which particular hostile feelings become directed may vary dramatically from one cultural (and/or individual developmental) context to another. Therefore, a person possessing general hostile personality characteristics may in one context develop hostile feelings toward one group and not another, whereas in a different context, a totally different group may become the "legitimate" target for developing those hostile emotions and related characteristics. Therefore, it may be only partially informative to determine whether an individual has general hostile characteristics. It may also be critical to evaluate whether these have become directed toward women, thereby possibly increasing the likelihood of sexual aggression.

A second possibility is "combinatorial," both additive and interactional. For example, high levels of hostility alone may result in greater likelihood of various forms of general antisocial behavior, including but not particularly, sexual aggression. However, high hostility combined with high sexual dominance may be particularly likely to result in high levels of sexual aggression and only the same increase in various forms of other antisocial behaviors as suggested in the previous sentence. High sexual dominance without high hostility may result in engagement in some forms of sexual expression and fantasy (e.g., sadomasochism) but may not be expressed in physical sexual aggression. Also relevant would be the combination with attenuating factors such as empathy.

Hypothesized combinatorial effects are illustrated in the following newspaper description of a recent study by Dr. Christian Guilleminault of "violent sex sleep" (appearing in the *Journal of Psychosomatic Medicine,* Vol. 64, 2002, pp. 328–336), in which people commit violent sexual acts in their sleep:

> Each of the patients in their study had additional emotional problems, which Guilleminault said influenced the form the sleep disorder took. Had the patients not had emotional problems—which included obsessive-compulsive personality disorder, generalized anxiety disorder, and major depressive disorders—the sleep disorder, he said, would still have existed but might have emerged as sleepwalking, sleep eating or sleep talking." (*Los Angeles Times Newspaper*, August 19, 2002, S Section, p. 1)

Attention to combinatorial analyses in future research may also help clarify the differences between criminal and noncriminal sexual aggressors. Although I am suggesting that members of both groups will often show some elevations on both general hostile/antisocial characteristics (i.e., psychopathic) and the more specific factors pertaining to sexual aggression (e.g., hostile masculinity characteristics), they may differ in the degree to which each group is high on one or the other set of characteristics. The criminal samples may be particularly high on the hostile/antisocial characteristics and only show relative moderate elevations on some of the specific characteristics, whereas the noncriminals may show the opposite pattern. Moreover, the criminal samples are likely to have other relevant combinatorial factors (e.g., lower intelligence and social skills, and higher comorbidity of other negative factors).

CLOSING COMMENTS

The examples given above are possibilities, but clearly there is much work to be done. This work may be guided by three features of the HMC Confluence Model discussed here. In closing, it is worth summarizing and highlighting these points.

The first concerns the relationship among the predicting factors themselves: They are organized into two major interrelated constellations. The probability of the occurrence of various factors within a constellation is affected by the presence or absence of other factors. For example, the likelihood that a person will exhibit sexual promiscuity is affected by the extent to which he has shown evidence of delinquent tendencies in adolescence, which, in turn, is affected by the likelihood that he came from a home where there was child abuse and violence between the parents.

The second feature of the HMC concerns the relationship between the predictor factors and sexual aggression: The presence of each additional risk factor increases the probability that a male will be sexually aggressive. However, the presence of all of the risk factors creates a considerably greater likelihood of sexual aggression than the simple additive combination of each of the risk factors. This is reflected in the reliable interaction effect consistently found (e.g., Malamuth, 1986; Malamuth et al., 1991). At the same time, the presence of certain "protective" factors (e.g., high levels of nurturance/empathy) may attenuate the association between risk factors and actual sexual aggression.

The third feature that has been highlighted here is that it is a "hierarchical-mediational" model. For example, the link between more broad or general factors (e.g., Proneness to General Hostility) and the outcome of sexual aggression is mediated by more specific factors (e.g., Hostile Masculinity). We suggest that this approach leads to more accurate accounting for the relationships among general factors, more specific facets and factors, and specific outcomes than by typical regression or discriminate analyses, such as those used by Hersh and Gray-Little (1998). As noted above, those investigators found that the combination of psychopathic personality and "specific" attitudinal measures was not preferable to the use of the attitudinal measures alone. However, the comparable "hierarchical-mediational" Confluence Model's analyses enable the inclusion within a coherent framework of both general psychopathic (or hostile) personality characteristics that create the potential for sexual aggression (e.g., high impulsivity/irritability and/or low empathy) and factors more specific to sexual aggression (e.g., hostile masculinity, impersonal sex) that affect whether the potential actually leads to sexual aggression.

Finally, the striking similarity between the characteristics of sexual aggressors in criminal and noncriminal populations identified independently by the HMC model and the findings of psychopathy research is worth restating: Both models (1) have yielded two major constellations (or factors): antisocial personality and behavioral characteristics; (2) include early sexual experience/promiscuous sexual behavior component; and (3) have found that "Dominance/Power" as a source of sexual arousal is an important aspect of the characteristics of sexual aggressors. In addition, both models suggest that the interactive combination of the various factors results in a higher risk than a simple additive model, a prediction that has received considerable support. All in all, the remarkable correspondence between the findings of these two lines of research is very encouraging, for it provides independent verification that such characteristics are likely to provide a reliable basis for prediction, prevention, and treatment.

ACKNOWLEDGMENT

REFERENCES

ANDERSON, K.B. (1996). *Cognitive and personality predictors of male-on-female aggression: An integration of theoretical perspectives*. Unpublished doctoral dissertation. University of Missouri-Columbia.

BARRON, R.M. & KENNY, D.A. (1986). The moderator-mediator variable distinction social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology 51,* 1173–1182.

BOURG, S.N. (2001). *Sexual and physical aggression within a dating/acquaintance relationship: Testing models of perpetrator characteristics.* Unpublished doctoral dissertation, Auburn University.

CHRISTOPHER, F.S., OWENS, L.A. & STECKER, H.L. (1993). Exploring the darkside of courtship: A test of a model of male premarital sexual aggressiveness. *Journal of Marriage & the Family, 55*, 469–479.

CLECKLEY, H. (1941). *The mask of sanity.* St. Louis: C. V. Mosby.

COHEN, J. & COHEN, P. (1983). *Applied multiple regression/correlation for the behavioral sciences.* Hillsdale, NJ: Erlaum.

DEAN, K. & MALAMUTH, N.M. (1997). Characteristics of men who aggress sexually and of men who imagine aggressing: Risk and moderating variables. *Journal of Personality and Social Psychology, 72*, 449–455.

FELSON, R.B. (2002). *Violence and Gender Reexamined.* Washington, D.C.: American Psychological Association.

FERGUSSON, D.M. & HORWOOD, L.J. (1988). Structural equation modeling of measurement processes in longitudinal data. In M. Rutter (Ed.), *Studies of psychosocial risk: The power of longitudinal data*. (pp. 325–353). Cambridge: Cambridge University Press.

GOUGH, H.G. (1994). Theory, development, and interpretation of the CPI Socialization Scale. *Psychological Reports*, Monograph Supplement 1-V75.

HALL, G.C.N., SUE, S., NARANG, D.S. & LILLY, R.S. (2000). Culture-specific models of men's sexual aggression: Intra- and interpersonal determinants. *Cultural Diversity & Ethnic Minority Psychology, 6*, 252–268

HANSON, R.K. & HARRIS A.J.R. (2001). A structured approach to evaluating change among sexual offenders. *Sexual abuse: A journal of research and treatment, 13,* 105–122.

HARE, R.D. (1991). *Manual for the psychopathy checklist-revised*. Toronto, Ontario, Canada: Multi-health systems.

HARE, R.D., CLARK, D., GRANN, M. & THORTON, D. (2000). Psychopathy and the predictive validity of the PCL-R: An international perspective. *Behavioral Sciences and the Law, 18,* 623–645.

HARPUR, T.J., HART, S. & HARE, R.D. (2002). Personality of the psychopath. In P.T. Costa Jr. & T. A. Widiger, (Eds.), *Personality disorders and the five-factor model of personality (2nd ed.).* (pp. 299–324). Washington, D. C.: American Psychological Association.

HERSH, K. & GRAY-LITTLE, B. (1998). Psychopathic traits and attitudes associated with self-reported sexual aggression in college men. *Journal of Interpersonal Violence*, 13, 456–471.

HUNTER, J. (2002). Youth Aggression: Subtypes and trajectories. Proposal submitted to the National Institute of Mental Health.

ISHIKAWA, S.S. (2000). *Psychophysiological, neurophysiological, and psychosocial differences between psychopaths with and without a history of criminal conviction.* Unpublished doctoral dissertation, UCLA.

ISHIKAWA, S.S., RAINE, A., LENCZ, T., BIHRLE, S. & LACASSE, L. (2001). Autonomic stress reactivity and executive functions in successful and unsuccessful criminal psychopaths from the community. *Journal of Abnormal Psychology, 110*, 423–432.

JOHNSON, G.M. & KNIGHT, R.A. (2000). Developmental antecedents of sexual coercion in juvenile sexual offenders*. Sexual Abuse: A Journal of Research and Treatment, 12,* 165–178.

KAPLAN, D. (2000). *Structural equation modeling: foundations and extensions.* Thousand Oaks, Calif.: Sage.

KNIGHT, R.A. & SIMS-KNIGHT, J.E. (in press). The developmental antecedents of sexual coercion against women in adolescents. In R. Geffner & K. Franey (Eds.), *Sex offenders: Assessment and treatment*. New York: Haworth Press.

KOSS, M.P., LEONARD, K.E., BEEZLEY, D.A. & OROS, C.J. (1985). Non-stranger sexual aggression: A discriminant analysis of psychological characteristics of nondetected offenders. *Sex Roles, 12,* 981–992.

KOSSON, D.S., KELLY, J.C. & WHITE, J.W. (1997). Psychopathy-related traits predict self-reported sexual aggression among college men. *Journal of Interpersonal Violence*, *12*, 241–254.

LALUMIERE, M., HARRIS, G.T. & RICE, M.E. (2001). Psychopathy and developmental instability. *Evolution & Human Behavior*, *22*, 75–92.

LIM, S. & HOWARD, R. (1998). Antecedents of sexual and non-sexual aggression in young Singaporean men. *Personality and Individual Differences, 25,* 1163–1182.

LIVESLEY, W.J. (2001). Conceptual and taxonomic issues. In W.J. Livesley (Ed.), *Handbook of personality disorders: Theory, research and treatment* (pp.3–38). New York, NY: The Guilford Press.

LYNAM, D.R. (2002). Psychopathy from the perspective of the five-factor model of personality. In P.T. Costa Jr. & T.A. Widiger (Eds.), *Personality disorders and the five-factor model of personality (2nd ed.*) (pp. 325–348). Washington, DC: American Psychological Association.

MALAMUTH, N.M. (1981). Rape proclivity among males. *Journal of Social Issues*. *37,* 138–157.

MALAMUTH, N.M. (1988). Predicting laboratory aggression against female vs. male targets: Implications for research on sexual aggression. *Journal of Research in Personality*, *22*, 474–495.

MALAMUTH, N.M. (1998). An evolutionary-based model integrating research on the characteristics of sexually coercive men. In J.G. Adair & D. Belanger (Eds.), *Advances in psychological science, Vol. 1* (pp. 151–184). Psychology Press: Erlbaum (UK).

MALAMUTH, N.M. (1986). Predictors of naturalistic sexual aggression. *Journal of Personality and Social Psychology, 50,* 953–962.

MALAMUTH, N.M. (1989). The attraction to sexual aggression scale: Part one. *The Journal of Sex Research, 26,* 26–49.

MALAMUTH, N.M., (1989). The attraction to sexual aggression scale: Part two. *The Journal of Sex Research, 26,* 324–354.

MALAMUTH, N.M., LINZ, D., HEAVEY, C.L., BARNES, G. & ACKER, M. (1995). Using the confluence model of sexual aggression to predict men's conflict with women: A ten-year follow-up study. *Journal of Personality and Social Psychology, 69,* 353–369.

MALAMUTH, N.M., SACKLOSKIE, R., KOSS, M. & TANAKA, J. (1991). The characteristics of aggressors against women: Testing a model using a national sample of college students. *Journal of Consulting and Clinical psychology, 59,* 670–681.

MALAMUTH, N.M., ADDISON, T. & KOSS, M. (2000). Pornography and sexual aggression: Are there reliable effects and can we understand them? *Annual Review of Sex Research, 11,* 26–91.

MEALEY, L. (1995). The sociobiology of sociopathy: An integrated evolutionary model. *Behavioral & Brain Sciences*, *3,* 523–599.

MOFFITT, T.E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 4,* 674–701.

MONSON, C.M. & LANGHINRICHSEN-ROHLING, J. (2002). Sexual and nonsexual dating violence perpetration: Testing an integrated perpetrator typology. *Violence and Victims*, *17*, 403–428.

MURNEN, S.K., WRIGHT, C. & KALUZNY, G. (2002). If "boys will be boys" then girls will be victims? A meta-analytic review of the research relating masculine ideology to sexual aggression. *Sex Roles, 46,* 359–375.

PAUNONEN, S.V. & ADELHEID, A.A.M. (2001). The personality hierarchy and the prediction of work behaviors. In B.W. Roberts & R. Hogan (Eds.), *Personality psychology in the workplace*. (pp. 161–191). Washington, DC: APA.

PAUNONEN, S.V. & ASHTON, M.C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality & Social Psychology, 3*, 524–539.

PORTER, S., FAIRWEATHER, D., DRUGGE, J., HERVÉ, H., BIRT, A. & BOER, D.P. (2000). Profiles of psychopathy in incarcerated sexual offenders. *Criminal Justice and Behavior, 27,* 216–233.

PRENTKY, R.A., KNIGHT, R., LEE, A.F.S. & CERCE, D. (1995). Predictive validity of lifestyle impulsivity for rapists. *Criminal Justice and Behavior, 22,* 106–128.

PRENTKY, R.A. & KNIGHT, R.A. (1991). Dimensional and categorical discrimination among rapists. *Journal of Consulting and Clinical Psychology, 59*, 643–661.

RAPAPORT, K. & BURKHART, B.R. (1984). Personality and attitudinal characteristics of sexually coercive males. *Journal of Abnormal Psychology, 93*, 216–221.

RICE, M.E. & HARRIS, G.T. (1997). Cross-validation and extension of the Violence Risk Appraisal Guide for child molesters and rapists*. Law and Human Behavior, 21,* 231–241.

SPACCARELLI, S., BOWDEN, B., COATSWORTH, J.D. & KIN, S. (1997). Psychosocial correlates of male sexual aggression in a chronic delinquent sample. *Criminal Justice and Behavior*, 24, 71–95.

STEADMAN, H.J., SILVER, E., MONAHAN, J., APPELBAUM, P.S., ROBBINS, P.C., MULVEY, E.P., GRISSO, T., ROTH, L.H. & BANKS, S. (2000). A classification tree approach to the development of actuarial violence risk assessment tools. *Law and Human Behavior, 24,* 83–100.

VASQIEZ, G & FIGUEREDO, A.J. (2002). The "dark side" of assortative mating: The "genetic dregs" hypothesis. Paper presented at the Annual Meetings of the Human Behavior and Evolution Society. Rutgers University, New Jersey.

VEGA, V. & MALAMUTH, N.M. (2003, May) *A hierarchical-mediational model of sexual aggression*. Paper presented at the International Communication Association Meetings, San Diego, CA.

WHEELER, J.G., GEORGE, W.H. & DAHL, B.J. (2002). Sexually aggressive college males: Empathy as a moderator in the "Confluence Model" of sexual aggression. *Personality and Individual Differences, 33*, 759–775.