

Using the Confluence Model of Sexual Aggression to Predict Men's Conflict With Women: A 10-Year Follow-Up Study

Neil M. Malamuth
University of California, Los Angeles

Daniel Linz
University of California, Santa Barbara

Christopher L. Heavey
University of Nevada, Las Vegas

Gordon Barnes
University of Victoria

Michele Acker
University of Michigan, Ann Arbor

We tested a model describing the characteristics of sexually aggressive men that may also be useful for understanding the causes of other antisocial acts against women. This model hypothesizes that sexual aggressors can be identified by two sets of characteristics, labeled *hostile masculinity* and *impersonal sex*. To test this model, we followed up a sample of men 10 years after first studying them when they were young adults. We sought to predict which men would be in distressed relationships with women, be aggressive sexually, be nonsexually aggressive, or some combination of these. These behaviors were measured not only by questioning the men themselves but also by questioning many of the men's female partners. Some couples' videotaped conversations were also analyzed. The data supported the ability of the model to predict behavior 10 years later. We also developed the model further and identified the common and unique characteristics contributing to sexual aggression as compared with the other conflictual behaviors studied. The data supported the usefulness of hierarchical modeling incorporating both general factors that contribute to various interpersonal conflicts as well as specific factors uniquely pertaining to dominance of women.

This research is part of a series of studies analyzing the characteristics of men in the general population who are relatively likely to engage in sexual aggression and other types of conflict with women. After studying a group of men in early adulthood, we studied them again 10 years later. We examined whether we could predict, on the basis of a model we developed, which of the men would be more likely in later adulthood to have conflict with women, including distress in relationships, sexual aggression, and spouse abuse (i.e., nonsexual aggression).

THE CONFLUENCE MODEL OF SEXUAL AGGRESSION

In earlier research we suggested that sexual aggressors are characterized by the convergence of several factors that may be

meaningfully organized into two major constellations, or "paths"—the *hostile masculinity* and the *promiscuous-impersonal sex* paths (Malamuth, Heavey, & Linz, 1993; Malamuth, Sockloskie, Koss, & Tanaka, 1991).¹ We posited that sexual aggression may be best understood as the result of the confluence of these paths. Malamuth et al. (1991) successfully tested a model based on this theoretical framework with cross-sectional data from a representative sample of men enrolled in post-high-school educational institutions. As expected, the confluence of hostile masculinity and impersonal sex (previously labeled *sexual promiscuity*) produced the highest levels of sexual aggression. In the present study, we examined this model's utility for longitudinal prediction of conflict with women. Below, we describe each of the two paths constituting the model as well as related lines of research.

Hostile Masculinity

We have described the hostile masculinity path as a personal-ity profile combining two interrelated components: a) an inse-

Neil M. Malamuth, Communication Studies Program and Psychology Department, University of California, Los Angeles; Daniel Linz, Department of Communication, University of California, Santa Barbara; Christopher L. Heavey, School of Child and Youth Care, University of Nevada, Las Vegas; Gordon Barnes, Department of Psychology, University of Victoria, Victoria, British Columbia, Canada; Michele Acker, Department of Psychology, University of Michigan (Ann Arbor).

This research was supported by Grant 45058-0251 from the National Institute of Mental Health. An earlier version of this article was presented at the 1993 annual meetings of the International Communication Association, Washington, DC. We thank L. R. Huesmann for his comments.

Correspondence concerning this article should be addressed to Neil M. Malamuth, Communication Studies Program, 334 Kinsey Hall, University of California, Los Angeles, California 90024.

¹ In previous work (Malamuth et al., 1993) this model has been referred to as the *interaction model* of sexual aggression. That term appears to often suggest in readers' minds the idea of an interaction between individuals. We have now decided to consistently use the term *confluence model* to avoid such possible confusion. Also, although our model posits "contributions" of elements from both the hostile masculinity and impersonal sex paths, it does not necessarily require that these are combined in an interactive rather than an additive manner.

cure, defensive, hypersensitive, and hostile-distrustful orientation, particularly toward women, and b) gratification from controlling or dominating women.

The high-hostile-masculine man may be afraid of rejection and anxious about relationships with women, as revealed in some of this path's scales, which tap a sense of insecurity and defensiveness. The power that a woman may have by virtue of her sexual appeal may be particularly threatening to such a man. The use of coercion against women may reduce anxieties about being rejected (Malamuth, Feshbach, & Jaffe, 1977) by enabling the man to take charge and assume control. Coercive sex reduces her control over him by eliminating her ability to exercise choice. The feelings of hostility toward women included in this construct may be associated with a desire to "put them down" and therefore make them less powerful or potentially controlling. Sexual aggression may also confirm to the man that he is living up to the expectations of male superiority by "calling the shots" in this highly vulnerable arena.

The hostile masculinity profile, with its focus on the blending of two key factors, dominance and hostility pertaining to women, is congruent with research by Gurtman (1992), who found that participants who showed a profile characterized by high hostility and dominance were particularly prone to experience problems in interpersonal relations. In other personality studies, researchers have also identified two fundamental dimensions that could be similarly labeled hostility and dominance (Bakan, 1966; Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988; Wiggins, 1982). Although these dimensions appear to be relevant to interpersonal relations generally, we believe that clarifying how these dimensions pertain to relationships with women enables a more precise analysis of the factors contributing to difficulties in such relationships.

Our research is guided by a hierarchical approach (Malamuth, 1988) that includes both more "domain general" mechanisms (i.e., relevant to diverse antisocial behaviors) and domain specific mechanisms (i.e., relevant primarily to a particular behavior). Here we expanded the empirical assessment of both the masculinity and hostility elements of the hostile masculinity part of the two-path model described above. We added to the assessment of the hostile masculinity path a domain specific component—stress resulting from perceived threats to one's sense of masculinity (i.e., masculine role stress). We also added a relatively domain general factor associated with hostility (i.e., proneness to general hostility).

With regard to masculine role stress, many scholars (e.g., Gilmore, 1990; Malamuth et al., 1991; Sanday, 1981) have noted that societies, subcultures, and individuals that regard power, toughness, dominance, aggressiveness, and competitive selfishness as masculine qualities may breed men who are hostile to women and to qualities associated with femininity, such as softness, empathy, and sensitivity. The display of these traditionally feminine characteristics may signify to some men a loss of appropriate identity, whereas engaging in dominance and aggression, including in the sexual arena, may reinforce the idea that they are "real men." Perceived failure to conform to traditional role expectations may create stress in some men who can partly alleviate such stress through hostility to and dominance over women (i.e., femininity). For such men, sexual aggression may be a mechanism for reaffirming one's own sense of masculine superiority by demonstrating the ability to control women (Miedzian, 1993). Although previous

research has shown a positive correlation between stereotypical beliefs about sex roles and sexually aggressive characteristics (e.g., Check & Malamuth, 1983), individual differences among men in feeling stress as a result of failing to live up to rigid masculine expectations has not been investigated in the context of our research on hostile masculinity and sexual aggression. This gap exists despite this concept's important role in our formulation (e.g., Malamuth et al., 1991) and that of others (e.g., Lisak, 1991) of the development of the characteristics we have labeled hostile masculinity.

A second elaboration of the hostile masculinity path undertaken here involves proneness to hostility in general. We recognized that hostility toward women is likely to be related to a broader range of hostile tendencies encompassing characteristics such as hypersensitivity to rejection and criticism, irritability, high negative affect, and impulsivity. We therefore sought to separate the elements of hostility specific to women from more general tendencies. By including an assessment of general hostility we were able to use a hierarchical approach to test whether the relationship between general hostility and sexual aggression is mediated by the hostile masculinity construct.

Promiscuous-Impersonal Sex

The second model path we postulated is a noncommittal, game-playing orientation in sexual relations. We labeled it the promiscuous-impersonal sex path. Kanin (1977, 1984) and Sarwer, Kalichman, Johnson, Early, and Akram (1993) found that sexual aggression correlated with this type of orientation, referred to as a *Ludus love style* (Lee, 1973).

This impersonal sex construct is similar to the concept of *so-ciosexuality*, which refers to individual differences in willingness to engage in sexual relations without closeness or commitment (Gangestad & Simpson, 1990; Simpson & Gangestad, 1991). "Unrestricted" individuals are more likely to report having sex earlier in their relationships, more than one concurrent sexual relationship, sex with many different partners in the past, sex with partners on only one occasion, and foreseeing many different partners in the future. "Restricted" individuals, on the other hand, tend to insist on the development of closeness and commitment before engaging in sex, and they possess the opposite set of behavioral characteristics. Using independent reports provided by the individuals' romantic partners, Simpson and Gangestad (1991) found support for such self-reports.

A noncommittal orientation to sexuality is likely not only to potentially contribute to sexual aggression in early and later adulthood but also to contribute to other types of conflict in relationships with women later in life. Men with such an orientation appear relatively unlikely to be faithful in monogamous relationships. This may be a source of distress in monogamous relationships that may sometimes lead to arguments and physical aggression.

As part of the present study we examined whether the tendency toward greater sexually aggressive behavior was the result of greater interest in sex and more frequent sex or if it resulted from a specific orientation toward impersonal sexual relations. According to Ellis (1991, 1993), the tendency to use force to obtain sex is largely a function of the strength of an individual's sex drive and the drive to possess others, neither of which is learned. Ellis's model suggests that sexual aggressors are "over-

sexed." Alternatively, sexual aggression may be related to a particular type of sexual expression, for example, impersonal sex, but not necessarily to higher sex drive.

In keeping with the view that it is not sex drive per se that facilitates impersonal sex, other researchers have found that sociosexuality (the willingness to engage in sexual relations without closeness or commitment) does not covary with a measure of sex drive (how frequently an individual has sex with his or her partner; Simpson & Gangestad, 1991). However, in Simpson and Gangestad's study the authors asked only one question to assess sex drive: the frequency of sexual intercourse within the past month. We used a more thorough approach in the present study, which included other sexual activities (e.g., masturbation, sex related thoughts, etc.).

Study Goals

The present study was designed to examine the utility of, and to further develop, the confluence model of sexual aggression using cross-sectional and longitudinal analyses. First, we attempted to replicate, with a new sample of men and using cross-sectional analyses, the model of sexual aggression developed by Malamuth et al. (1991). Second, we evaluated within a longitudinal framework the utility of this model for predicting a general construct of conflict with women. This construct included sexual aggression, relationship distress, and nonsexual aggression. We reasoned that the underlying mechanisms or characteristics that lead some men to commit sexual aggression in early adulthood may continue to play a role in causing difficulties in relationships with women later in life, although the behavioral manifestations may take various forms in differing circumstances and at different stages in life (Buss, 1994; Malamuth & Briere, 1986).

We expected that characteristics encompassed within the hostile masculinity and sexual promiscuity-impersonal sex paths would predict sexual aggression in early adulthood and that these characteristics would persist over the life span. We also tested the idea that sexual aggression in early adulthood is not merely an isolated acting out of sexual desires or similar motives but that it presages difficulties in relationships with women in later adulthood (i.e., about 10 years later).

We also anticipated that assessing the factors of our model in a longitudinal framework would enable better prediction of conflict with women later in life than that achieved by using information about early sexual aggression only. This prediction is based on the reasoning that the particular factors we are assessing as part of our model help account for sexual aggression at early adulthood, and their persistence over the life course contributes to other conflictual behavioral manifestations. Moreover, we reasoned that the existence of the characteristics we have been studying may be expressed in conflictual behavior with women in later life even when there isn't sexual aggression displayed in early adulthood. In summary, then, we predicted that conflictual behavior in later adulthood would be predicted better by measuring both early sexual aggression and the characteristics of our two-path model than by either assessment alone.

Finally, we further explicated the hostile masculinity and impersonal sex paths of the model. We assessed whether the impersonal sex path reflects a higher sex drive or a particular type

of sexual expression. For the hostile masculinity path we tested the utility of a hierarchical modeling approach by incorporating relatively general (i.e., proneness to general hostility) and specific factors (e.g., hostility and dominance pertaining to women, sex role distress) within the same model.

METHOD

Participants

Time 1 Participants

Procedures for the Time 1 data collection, conducted at the University of Manitoba in Winnipeg, Manitoba, Canada, are described in Malamuth (1986). In that earlier phase, participants had signed up for a general participant pool from which they were recruited for ostensibly unrelated studies. They were informed that they might be approached over a long period by different researchers for participation in a variety of studies.

There were three separate samples obtained between 1979 and 1981. The first two samples, composed of 199 and 155 male participants, respectively, were used as the primary databases for the follow-up study, because they contained very similar measures. These samples are composed predominately of white men, the majority (80%) of whom were undergraduate students at the time of the initial assessment, with an average age of 23 years. The difference between these two databases is that the first did not include three scales: the Hostility Toward Women Scale (HTW; Check, 1985; Check, Malamuth, Elias, & Barton, 1985), the Sexual Behavior Inventory (Bentler, 1968) and the sexual aggression measure. The third sample consisted of 69 men and contained only a few of the measures available in the other two samples. This sample was used only in a secondary manner, (e.g., simple correlational analyses whenever the measures are identical to those used in the other databases). In total, then, there were 423 participants across the three studies.

Time 2 Participants

Using local phone books, Department of Motor Vehicle Records, and National Health Insurance records, we were able to collect follow-up data from 176 men and 91 female partners of these men. This number constituted 92% of the individuals who responded to a solicitation letter (with only 8% of those responding indicating that they did not wish to participate). The remaining participants did not take part in the Time 2 assessment either because we were not able to contact them or because they did not respond to the solicitation letter.

One hundred and thirty-two of the male participants in the Time 2 data collection came from the two primary databases described above. Forty-seven couples participated in videotaped problem-solving conversations.

Descriptive statistics for the entire sample participating in the follow-up indicated that their average age was 33 years ($SD = 6$ years) for the men and 31 years ($SD = 6$ years) for the women. Average annual income was \$33,100 for the men and \$20,100 for the women. Participants were paid \$20 (Canadian) per hour for participating in the follow-up study.

Because not all Time 1 scales were available for all participants, the sample sizes for the analyses reported below vary considerably. In particular, data on earlier sexual aggression, hostility toward women, and early sexual experiences are available for 66 of the men in the sample who participated in both the Time 1 and Time 2 assessments. Thus, for analyses that involve any of these measures, the size of the available sample is reduced by more than half.

Measures

Early Risk Factors

In keeping with Malamuth et al. (1991), the early risk construct was composed of reports of family violence and child abuse, which were combined after each being transformed to a *z* score.

Family Violence

Level of family violence was represented by a combined score that was based on information provided both at Time 1 and Time 2. At Time 1, participants responded to four questions about the extent to which their parents were physically violent with each other and with the participant. These questions were assessed on 5-point scales, anchored by *never* and *very frequently*. The questions, created for this research, included: "While you were growing up how often did your father hit your mother (mother hit father)?" "How frequently did your parents have fights while you were growing up?" and "How often did your parents hit (or spank) you when you were growing up?" At Time 2, participants completed a revised version of the Family Violence Scale (Bardis, 1973). This scale consists of 17 items assessing violence between the respondent's parents and violence directed at the respondent as a child. The two scales administered at Time 1 and Time 2 correlated highly, $r(128) = .63, p < .001$.

Child Sexual Abuse

As in Malamuth et al. (1991), we augmented the early home environment variable of family violence with reports obtained at Time 2 of sexual abuse as a child. Using participants' responses to several interrelated items, we defined sexual abuse as sexual experiences before age 14 with someone who was at least 4 years older. Virtually all definitions of sexual abuse recognize that sexual contact even in the absence of coercion constitutes sexual abuse when it involves this type of age discrepancy because children are "deemed to lack the capacity to consent to such relationships" (Finkelhor, 1986, p. 26). The measure of sexual abuse used here consisted of eight behaviors ranging from "another person showed his or her sex organs to you" to "intercourse, oral, anal or vaginal, with any amount of penetration with or without ejaculation." This measure yielded a range of scores from 0 to 8.

Delinquency

The delinquency variable was composed of reports of late childhood and early adolescent delinquent behavior collected at Time 2. The items in the late childhood subscale asked participants to report on delinquency within specified time frames (e.g., January 1, 1972 to December 31, 1976): "How many times have you been suspended or expelled from school?" ". . . run away from home?" ". . . bought or drank beer, wine or liquor while under age?" and ". . . cheated on an examination?" The early adolescence subscale asked respondents if they had used marijuana; used psychedelic drugs; sold marijuana, narcotics, or psychedelic drugs; been convicted of a crime; been ticketed for a moving violation (and the number of moving violations); been stopped for drunk driving; bought or drank liquor under age; looked in the window of a person of the opposite sex; been arrested; driven while intoxicated; or been involved in a fistfight. This subscale also inquired about specific time frames.

Attitudes Supporting Violence Against Women

Burt (1980) theorized that certain attitudes play an important role in contributing to sexual aggression by acting as psychological releasers that turn off social prohibitions against injuring others. We used two scales developed by Burt (1980), the 6-item Acceptance of Interper-

sonal Violence Scale (AIV) and the 13-item Rape Myth Acceptance Scale (RMA) as a composite measure of attitudes contributing to sexual violence.

Hostile Masculinity

In the present study, the operationalization of the hostile masculinity construct included only measures consisting of reactions specific to women. In previous work (Malamuth et al., 1991) the operational definition included a more general personality assessment (the Negative Masculinity Scale; Spence, Helmreich, & Holahan, 1979). As we describe in more detail below, we sought here to more precisely test a hierarchical approach by separating the elements of a general proneness to hostility from those more specific to women. Both of these elements are hypothesized to be part of the hostile masculinity path.

A composite of three scales was used for the hostile masculinity construct: The Sexual Dominance Scale (Nelson, 1979), a revised version of the HTW Scale,² and the Adversarial Sexual Beliefs Scale (ASB; Burt, 1980). The Sexual Dominance Scale is part of the more general Sexual Functions Inventory (Nelson, 1979) that asks respondents the degree to which various feelings and sensations are important to them as motives for sexual behavior. The subscale assessing dominance (8 items) refers to the degree by which feelings of control over one's partner motivate sexuality (e.g., "I enjoy the feeling of having someone in my grasp," "I enjoy the conquest"). Responses were given on a 7-point scale.

The HTW scale is a 21-item scale containing items such as: "Women irritate me a great deal more than they are aware of," and "When I look back at what's happened to me, I don't feel at all resentful toward the women in my life."

The 9-item ASB scale assesses the degree to which participants perceive male and female relations to be adversarial. Examples are "In a dating relationship a woman is largely out to take advantage of a man," and "A woman will only respect a man who will lay down the law to her." Responses are given on a 7-point scale.

Early Sexual Experience

Time 1 sexual experience was assessed with the 21-item Sexual Behavior Inventory, developed by Bentler (1968). This scale measures participants' conventional heterosexual experiences including such acts as fondling breasts, intercourse, and oral sex.

Sexual Promiscuity

The construct labeled sexual promiscuity was measured by participants' retrospective reports of the age of their first sexual experiences and a measure (consisting of three questions) of the number of sexual partners with whom the participant has engaged in intercourse, anal intercourse, and oral sex. Both of these measures were taken at Time 2 and were open-ended questions.

Impersonal Sex

This composite was composed of three items assessed at Time 2. Participants were asked: "How often do you become sexually stimulated when you see a member of the opposite sex who you do not know?" "How often do you masturbate?" (both measured on a 6-point scale ranging from *never* to *every day*), and "About how many times (if ever)

² Several of the scales used in the present research were converted from a 2-choice item format to a 7-choice format in light of research demonstrating the superiority of such a format (Comrey & Montag, 1982) and to maintain greater consistency across the different measures included within the overall questionnaire.

have you been unfaithful to your spouse or partner?" (measured on a 7-point scale ranging from 0 to 6 or more).

Sex Drive

We included several assessments to distinguish higher "sex drive" from an "impersonal sex" orientation. To measure sex drive we used four items from the Sexual Preoccupation subscale of the Sexuality Scale developed by Snell and Papini (1989). These items, which are rated on 5-point scales, inquire about how often a person thinks and fantasizes about sex. The four items were: "I think about sex all the time," "I don't daydream about sexual situations," "I tend to be preoccupied with sex," "I probably think about sex less often than most people." We also included an item (rated on a 5-point scale) that focused on mutually consenting sex. This item was taken from a scale developed by Greendlinger and Byrne (1987): "I fantasize about sex with an imaginary lover who very much wants to have sex with me."

Coercive Sexual Fantasies

Coercive sexual fantasies were measured with two items adapted from Greendlinger and Byrne (1987) that unambiguously measure coercive fantasies. Participants were asked to rate, on a 5-point scale, the extent to which they "fantasize about raping a woman" and how frequently they engage in rape fantasies (*often to never*). This assessment was included for comparison purposes with noncoercive sexual fantasies.

Proneness to General Hostility

The approach we used to assess proneness to general hostility is consistent with recent conceptualizations and assessments of such constructs (e.g., van Goozen, Frijda, Kindt, & van de Poll, 1994) that suggest a broad definition incorporating emotional experience, intensity of emotions, and action readiness. We used four instruments (all based on 7-point scales) measuring irritability, emotional susceptibility, affect intensity, and impulsiveness. The 20-item irritability instrument (Caprara et al., 1985) was developed primarily for research on individual differences in reacting impulsively or rudely to slight provocations or disagreements, particularly the manifestation of impulsive aggression. Item examples include: "I am often in a bad mood," "When I am right, I am right," and "Sometimes I really want to pick a fight."³

The emotional-susceptibility measure, also developed by Caprara et al. (1985), has been defined as the tendency of the individual to experience feeling of discomfort, helplessness, inadequacy, and vulnerability. Scale examples include: "I am too sensitive to criticism," "I have often felt inadequate," and "Sometimes I feel I am about to explode." Both the irritability and emotional susceptibility instruments are assumed to reflect tendencies of overreactivity to frustration (e.g., Caprara & Pastorelli, 1993).

The Affect Intensity Measure (AIM; Larsen, Diener, & Emmons, 1986) is a 40-item instrument that measures the intensity of affective responses to emotion-provoking life events. High-intense respondents are said to respond to actual and hypothetical life events with stronger or more intense affective reactions regardless of whether the events elicit positive or negative affect and regardless of whether these emotional situations are judged to be slightly, moderately, or very strong. Sample items include: "My friends might say I'm emotional," "My emotions tend to be more intense than those of most people," and "My negative moods are mild in intensity."

Impulsivity has been shown to contribute to various types of antisocial behaviors in many populations and settings (e.g., Luengo, Carrillo-de-la-Peña, Otero, & Romero, 1994; Pulkkinen, 1986). We used the 16-item Impulsivity subscale of the Personality Research Form (PRF; Jackson, 1987). Sample items include: "I often say the first thing that

comes to my head," "Rarely, if ever, do I do anything reckless," and "Most people feel that I act impulsively."

Masculine Role Stress

We used the Masculine Gender Role Stress Scale (MGRS; Eisler & Skidmore, 1987) to assess masculine role stress. This 20-item instrument measures the degree of stress associated with certain situations that challenge traditional sex roles, including physical inadequacy, emotional inexpressiveness, subordination to women, intellectual inferiority, and performance failures involving work and sex. On a 5-point scale, participants indicated how stressful they would find various situations such as: "being unemployed," "being around a member of the opposite sex who is much taller than you," and "letting a member of the opposite sex take control of the situation."

Sexual Aggression

At Time 1, we measured sexual aggression with the Sexual Experiences Survey (SES; Koss & Oros, 1982). It assesses sexual coercion at various levels of sexual intimacy (from petting to intercourse) using a range of tactics, from the use of verbal pressure and arguments to physical force. Although the original scale had 10 items, 1 item was dropped from the scale because it was judged to be ambiguous (Malamuth, 1986). It asks whether the participant had ever become so sexually aroused that he could not stop himself even though the woman did not want to proceed further. In this article, the term *early sexual aggression* is used synonymously with *Time 1 aggression*.

At Time 2, we measured sexual aggression with the revised version of the SES used in Koss, Gidycz, and Wisniewski's (1987) study and in Malamuth et al.'s (1991) study. In the present study we added an additional preface that emphasized that the items pertained to sex acts that were against the recipient's will.

Although the revised SES contains 10 items, we did not include the item "Have you ever obtained sexual intercourse with a woman by deliberately getting her too drunk to resist?" This item was used by Malamuth et al. (1991) but was not used in the present study because the frequency scale accompanying it was inadvertently omitted from the questionnaire. To ensure consistency in the response scales for each item in the composite, we chose not to include it. As in Malamuth et al.'s (1991) study, men were asked to report not only their overall level of sexual aggression but also to report their frequency of sexual aggression. Each of the items comprising this scale was coded 0 if the participant indicated he had never committed the act, 1 if only once, 2 if twice, and so forth up to a maximum of 6.

In the Time 2 assessment, participants were asked about three time periods: one prior to the earlier Time 1 assessment, and two time periods since the earlier assessment. For example, participants were asked to indicate "about how many times" they engaged in various sexually coercive behaviors with a woman "between January 1, 1987 and today" or "between January 1, 1976 and December 31, 1981." Time 2 sexual aggression refers to any acts occurring since the Time 1 assessment.

Because Time 1 and Time 2 reports of sexual aggression were, as expected, not distributed normally, we performed log 10 transformations on these variables to normalize the distributions.

³ We also included the Spielberger Trait Anger Scale (Spielberger, Russell, & Crane, 1983) in this database. Because of substantial overlap between this scale and the Irritability scale, we decided to include only the latter measure in the general hostility composite. However, with the inclusion of the anger measure, the results are very similar to those reported here.

Nonsexual Aggression

This measure is a composite of two subscales of the Conflict Tactics Scale (CTS; Straus, 1979): the Physical Aggression subscale (6 items) and the Verbal Aggression subscale (5 items).

Relationship Distress

This is a composite of three measures of marital quality: the Dyadic Adjustment Scale (Spanier, 1976), the Dyadic Trust Scale (Larzelere & Huston, 1980), and the Marital Instability Scale (Booth & Edwards, 1983).

Women's Reports of Partners' Behavior

The female partners of the men also provided information regarding the key outcome measures: relationship distress, nonsexual aggression, and sexual aggression. The sexual aggression measure completed by the women focused on sexual coercion by their partner against them (e.g., "Have you had sexual intercourse . . . when you didn't want to because a male threatened or used some degree of physical force e.g., twisting your arm, holding you down etc." Participants were then asked: "If yes, has this ever happened with your current partner?" Similarly, the nonsexual aggression and the relationship distress measures concerned partners' behaviors. Because information from the partners was available for only about half of the men, the responses of the women were used to verify the men's responses but were not included in any of the path analysis models of men's behavior reported below. Because of legal and ethical considerations, however, the men's reports of sexual aggression concern women generally and are not limited to behavior directed against their current partner.

Procedure

Questionnaire Administration

Every participant (and his girlfriend or spouse, when applicable) who could be located and agreed to participate was individually administered a questionnaire. Participants were initially contacted by letter; men were reminded of their earlier participation in a study on social psychological issues including sexual relations and asked if they would be willing to consider participating in the present study. They were asked to indicate on an enclosed form whether they would be willing to consider participating in the study. If they indicated a potential willingness to participate, they were contacted by phone and scheduled for an appointment. They were assured all responses would be confidential and offered four free psychological counseling sessions at either the conclusion or during the course of the study, if needed. Participants were instructed to place all completed questionnaires in sealed envelopes, which were immediately sent by courier to the United States. This procedure ensured that no one in Canada saw the participants' responses.

Problem Solving in Videotaped Conversations

Each couple from whom we obtained permission was videotaped as they attempted to resolve an issue identified independently by each spouse. Each partner began by completing the Problem Areas Questionnaire (Heavey, Layne, & Christensen, 1993), which asks the individual to report his or her level of dissatisfaction with a variety of different areas in the relationship. Each person then identified the one area of greatest dissatisfaction that he or she was willing to discuss with his or her partner. Couples were then videotaped during two 10-min problem solving discussions, each focused on the problem identified by one and then the other partner.

We developed an interaction rating system that paralleled other marital coding systems (e.g., Sillars, 1982). Five coders who were

unaware of any information about the participants were trained to rate the man's behavior along several dimensions. Two ratings were used for the purpose of this study. First, observers rated the extent to which the man was domineering in the discussion by "treating the partner badly and without respect," by "overriding the partner's wishes," or both. This included behaviors such as: interrupting partner, not giving partner a chance to speak, continually disagreeing with the partner, discounting or denying the partner's feelings. The average coefficient alpha for the five observers' ratings of men's behaviors for this domineering dimension was .62. Second, observers rated the extent to which the man expressed hostility. This was operationalized as displays of anger, contempt, and disgust or other negative emotions directed outwardly at the partner. The mean alpha for observer ratings of this dimension was .77.

RESULTS

Overview of Analyses

The analyses reported below are divided into several sections. We present information regarding the individual measures and the component scores created. We assess the representativeness of the follow-up sample by comparing men who participated in the follow-up with those who did not. We examine the stability, as well as concurrent and predictive validity, of a number of key measures, particularly the predictive utility of Time 1 sexual aggression. We assess the correlations between Time 1 sexual aggression and Time 2 difficulties with women and antisocial acts toward them. The Time 2 reports used in these analyses include those provided by the men themselves as well as by their female partners and by neutral observers. We test a series of path analysis models; also, to further illustrate the findings and examine the model's utility for clinical prediction, we undertake a "risk analysis" using the Time 2 data. We address the question of whether sexually aggressive men are higher in sex drive or are more interested in impersonal sex.

Standardized Composites

Table 1 provides summary statistics for variables used in the analyses reported below. We present the values for the maximum number of participants available on each variable. For some variables, we created composite scores to be used in the path analyses. For this purpose, we first converted the individual scales to Z scores and then summed each of these to create the composite.

Representativeness of Follow-Up Sample: Testing for Differences Between Participants

Time 2 Participants Versus Nonparticipants

We conducted analyses to examine whether there were any differences on the various Time 1 predictor variables between men who did versus those who did not participate in the Time 2 assessment (10 years later). This analysis proceeded in two stages. First, we compared the scores for 413 participants who had data on all four measures used in all of the three Time 1 studies: the AIV, RMA, ASB, and Psychoticism scales. In the second analysis, we used the four measures listed above as well as several scales administered at Time 1 to a subset of 155 participants only. These measures included the Early Sexual Experience, HTW, and Sexual

Table 1
*Descriptive Statistics for Individual Scales Used in Composite Variables
 and Relevant Statistics for Composite Scores*

Scale	No. items or components	<i>M</i>	<i>SD</i>	Skew	<i>N</i>	α
Early risk factors				1.55	129	.55
Family violence (Time 1)	4	8.0	2.4		145	.69
Family Violence (Time 2)	17	23.5	5.8		154	.87
Child sexual abuse (Time 2)	8	0.8	1.8		160	.89
Delinquency	17	14.9	12.4	1.21	157	.80
Early sex experience (Time 1)	21	14.8	7.3	-1.03	66	.97
Violence attitudes (Time 1)				-0.15	156	.72
Acceptance of Interpersonal Violence	6	18.9	5.3		158	.54
Rape myth acceptance	19	46.1	12.5		156	.83
Hostile masculinity (Time 1)				0.08	66	.67
Hostility Toward Women	30	8.3	6.2	1.05	66	.89
Dominance as sex motive	8	16.8	4.4		132	.77
Adversarial Sexual Beliefs	9	28.5	7.2		157	.64
Sexual aggression (Time 1)	9	0.8	1.5	1.25	66	.86
Sexual promiscuity (Time 2)				2.02	153	.51
Age at first intercourse	1	14.9	4.1			
No. of partners	3	31.8	61.9			
Impersonal sex (Time 2)	3	6.6	2.9	0.51	152	.33
Violence attitudes (Time 2)				1.01	157	.78
Acceptance of Interpersonal Violence	6	11.8	4.9		157	.64
Rape Myth Acceptance	13	24.7	9.1		157	.84
Hostile masculinity (Time 2)				0.33	157	.51
Hostility Toward Women	21	54.1	19.7		157	.91
Dominance as sex motive	8	15.3	4.6		157	.83
Adversarial Sexual Beliefs	9	24.5	8.5		157	.83
Outcomes against women (Time 2)	4			1.83	152	.57
Relationship distress				0.69	155	.85
Marital Instability Scale	19	22.9	16.8		155	.92
Dyadic Adjustment Scale	32	102.1	19.9		155	.94
Dyadic Trust Scale	8	42.2	11.0		155	.81
Verbal aggression	5	6.1	5.5	1.11	153	.79
Physical aggression	6	1.1	2.8	0.20	154	.88
Sexual aggression	9	0.5	2.1	3.65	157	.82
General hostility				0.60	156	.75
Affective Intensity Measure	39	167.7	25.2		156	.90
Irritability	20	64.5	19.1		157	.89
Emotional susceptibility	30	100.7	30.2		157	.93
Impulsivity	15	49.4	12.0		157	.47
Sex role stress	20	58.3	11.0	-0.16	153	.83

Note. Hostility Toward Women at Time 1 was formatted as a yes-no scale, whereas at Time 2 it was formatted as a 7-point Likert scale. The Time 2 Hostility Toward Women Scale excludes nine items used at Time 1. The Time 2 Rape Myth Acceptance scale excludes six items used at Time 1. These modifications reflect findings from subsequent research reports that have indicated that the deleted items were not highly correlated with the total scale.

Dominance scales and the scale assessing sexual aggression. In neither of these analyses did the multivariate analyses of variance (MANOVAs) or univariate analyses reach or approach statistical significance.

Men With Versus Men Without Partners

Comparisons were also made between men whose wives or girlfriends participated in the research versus those who did not have partners or whose partners did not participate. This analysis used the Time 1 predictors listed above and key outcome measures from the Time 2 assessment. These included men's reports of relationship violence, sexual aggression since the Time 1 assessment, and antisocial behavior. This analysis did not show a multivariate effect. At the univariate level, however, there was one significant

difference: Men whose partners participated in the research reported less relationship distress (with a current or previous relationship) than those without a participating partner, $F(1, 37) = 14.11, p < .001$.

Stability and Validity of Reports Cross-Sectionally and Longitudinally

Stability of Men's Personality and Attitudinal Measures Between Time 1 and Time 2

We computed the 10-year stability correlations for measures taken at both Time 1 and Time 2. First, we computed the across-time correlations for the five personality and attitudinal measures that had been administered at both times. These

scales showed significant stability across time: AIV, $r(155) = .45, p < .001$; RMA, $r(153) = .36, p < .001$; ASB, $r(154) = .21, p < .01$, HTW, $r(64) = .34, p < .01$; and sexual dominance, $r(130) = .27, p < .001$.

Stability and Predictive Utility of Time 1 Reports of Sexual Aggression

Next, we examined the correlations between the men's reports of sexual aggression at Time 1 and both men's and women's reports of Time 2 sexual aggression, nonsexual aggression, and relationship distress. All of these correlations were significant. The men's reports of sexual aggression at Time 1 correlated highly with their reports of sexual aggression at Time 2, $r(64) = .41, p < .001$, as well as with the women's Time 2 reports of the men's sexual aggression toward them, $r(34) = .38, p < .01$. Furthermore, Time 1 sexual aggression also correlated with nonsexual aggression at Time 2, both for the men's reports, $r(61) = .40, p < .001$, and the women's reports, $r(33) = .55, p < .01$. Finally, men's Time 1 reports of sexual aggression also correlated significantly with their Time 2 reports of relationship distress, $r(63) = .24, p < .05$, as well as with their partners' Time 2 reports of distress, $r(34) = .32, p < .05$.

Partner Agreement Concerning Time 2 Outcome Behaviors

To determine the level of agreement between partners regarding our outcome measures, we computed correlations between the men's and women's responses to the relationship aggression and relationship distress measures. The men's and women's reports of relationship distress correlated highly, $r(84) = .65, p < .0001$, as did their reports of the extent to which the man engaged in physical and verbal abuse of his partner, $r(84) = .60, p < .0001$.

The differences in the nature of the questions asked regarding sexual aggression precluded the computation of a true agreement correlation for this outcome measure. Nevertheless, there was a significant relationship between men's reports of their overall sexual aggression and their partner's reports of the men's sexual coercion against them, $r(85) = .30, p < .01$.

Associations With Observer Ratings

Next, we examined the correlations between Time 1 predictors and the Time 2 observer ratings of the man's behavior during the videotaped conversation. Because the observers rated the participants on their levels of hostility and domineeringness,

we focused on the correlations between the measures of hostility toward women (HTW) and of sexual dominance in addition to sexual aggression.

Time 1 sexual aggression was significantly associated with the observer ratings of hostility and domineeringness, $r(17) = .48, p < .05$, and $r(17) = .42, p < .05$, respectively. The correlation between Time 1 sexual dominance and observer ratings of men's dominance approached significance, $r(38) = .26, p < .06$, but Time 1 self-reported dominance was not related to observer ratings of men's hostility, $r(38) = -.06, n.s.$ The Time 1 HTW Scale was significantly associated with observer ratings of men's hostility and dominance, $r(17) = .49, p < .05$, and $r(17) = .43, p < .05$, respectively. Because these observational ratings do not share method variance with either Time 1 or Time 2 self-reports, significant correlations with these observations increase our confidence in the validity of the self-report data and provide additional confirmation that men who were sexually aggressive at Time 1 display the characteristics associated with hostile masculinity later in life.

The Time 2 cross-sectional associations between self-reports of conflictual behaviors and observer ratings of men's hostility and domineeringness were generally significant (see Table 2). Observer ratings of men's hostility correlated with the women's reports of the men's sexual aggression. Moreover, observer ratings of hostility and domineeringness correlated with both the men's and women's reports of nonsexual aggression and relationship distress. The only nonsignificant correlations were between men's reports of their sexual aggression and both of the observer ratings as well as between the women's ratings of men's sexual aggression and the observer ratings of men's domineeringness.

Testing the Model in Cross-Sectional and Longitudinal Frameworks

Overview of Path Analyses

We performed all path analyses using the LISREL program. Parameter estimates were based on maximum likelihood estimation. Because of the relatively small sample sizes, we did not use structural equation modeling with latent variables as in Malamuth et al. (1991). Instead, we used a path analytic approach. We formed composite variables to represent the constructs of interest to parallel as closely as possible the latent variables used in earlier research.

We present four models to address the theoretical questions of interest with the maximum available sample size. The first attempts to replicate Malamuth et al.'s (1991) model. The next

Table 2
Correlations of Observer Ratings and Time 2 Self-Report Outcome Variables (N = 47)

Observer ratings	Men's Time 2 reports			Women's Time 2 reports		
	Sexual aggression	Relationship aggression	Relationship distress	Men's sexual aggression	Men's relationship aggression	Relationship distress
Men's hostility	.09	.64***	.45***	.35**	.56***	.56***
Men's domineeringness	.05	.58***	.34*	.09	.46***	.28*

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Correlations for Variables Used in Model 1 ($n = 64$)

Measure	1	2	3	4	5	6
1. Early risk factors	—					
2. Delinquency	.50***	—				
3. Early sex experience	.28*	.34**	—			
4. Attitudes supporting violence	.20	.07	.00	—		
5. Hostile masculinity	.04	.05	.11	.50***	—	
6. Early sexual aggression	.46***	.39***	.44***	.32**	.42***	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

model focuses on relating the Time 1 predictors to the Time 2 outcomes, using the same basic causal structure as the first model. Because of the limited sample size, only the more proximate, key variables from Time 1 were retained in this second model. Earlier antecedents, such as childhood experiences, were not included in this analysis. The third model used Time 2 data only, which enabled the use of a considerably larger sample. It also attempted to replicate the causal structure identified in the previous two models. Finally, the fourth model also used this larger sample. It examines separately the antecedents of the various outcome measures and adds two antecedent constructs.

The correlations among all variables used in these models can be found in Tables 3 through 5.

Model 1: Replicating the Model of the Antecedents of Early Sexual Aggression

It is important to note that for the analyses reported in Models 1 and 2 we were able to use only participants who had all of the relevant Time 1 measures. The sample size for these models is limited by responses on three key variables: Time 1

sexual aggression, hostility toward women, and early sex experience. Thus, all models that use Time 1 data, as well as those relating Time 1 to Time 2 outcomes, are based on approximately the same number of participants (e.g., $n = 57$) for whom all the variables of interest were available.

We began by using as a guide the model of aggression against women developed by Malamuth et al. (1991). Because the subsequent models are an extension of this one, we describe it briefly here. Malamuth et al. suggested that the ontogeny of coerciveness can often be traced to early risk factors present in early home experiences and parent-child interactions. Certain home environments, such as those that include violence between parents (O'Leary & Arias, 1988) and child abuse, and especially sexual abuse (Fagan & Wexler, 1988), may lead to developmental processes that affect later aggression against women. Children that come from hostile home environments frequently associate with delinquent peers and engage in a variety of antisocial behaviors (Patterson, DeBaryshe, & Ramsey, 1989). Such delinquency experiences may affect various characteristics mediating aggression against women. One of the paths (i.e., constellation of variables) hypothesized to be relevant to sexual aggression, sexual promiscuity-impersonal sex, occurs when delinquent tendencies are expressed in sexual acting out (Elliott & Morse, 1989; Newcomb & Bentler, 1988). The other path relevant to sexual aggression, the hostile masculinity path, includes attitudes supportive of violence against women. The confluence of both paths is hypothesized to lead to sexual aggression against women.

To parallel the constructs and model developed by Malamuth et al. (1991), we tested the model shown in Figure 1. It contains two independent paths, or constellations of variables. The first includes early risk factors leading to delinquency, which in turn leads to early sex experience. The second is composed of attitudes supporting violence and the hostile masculinity composite measure. These two paths, labeled the sexual promiscuity and hostile masculinity paths (Malamuth et al., 1991), lead to sexual aggression.

The results show that this model replicated quite well the one devised by Malamuth et al. (1991). All of the hypothesized re-

Table 4
Intercorrelations for Variables Used in Model 2 ($n = 57$) Assessing Longitudinal Relationships

Measure	1	2	3	4	5	6	7	8	9
1. Early sex experience	—								
2. Hostile masculinity (Time 1)	.06	—							
3. Attitudes (Time 1)	.04	.51***	—						
4. Sexual aggression (Time 1)	.47***	.45***	.37**	—					
5. Number of sex partners	.35**	-.11	.14	.30*	—				
6. Impersonal sex	-.04	.08	.03	.22	.23	—			
7. Hostile masculinity (Time 2)	.16	.28*	.20	.30*	.23	.39**	—		
8. Attitudes (Time 2)	-.08	.31*	.61***	.20	.06	.04	.56***	—	
9. Conflict with women	.19	.22	.25*	.50***	.13	.43***	.54***	.36**	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5
Intercorrelations for Variables Used in Models 3 and 4 ($n = 145$)

Measure	1	2	3	4	5	6	7	8	9	10
1. Attitudes	—									
2. Hostile masculinity	.58***	—								
3. Impersonal sex	.10	.31***	—							
4. Relationship distress	.17*	.25**	.24**	—						
5. Verbal aggression	.12	.26**	.24**	.43***	—					
6. Physical aggression	.14	.16*	.23**	.34***	.60***	—				
7. Sexual aggression	.24**	.23**	.27***	.00	.17*	.10	—			
8. Conflict with women	.25**	.33***	.36***	.66***	.81***	.76***	.47***	—		
9. Masculine role stress	.25**	.36***	.16	.17*	.24**	.09	.10	.22**	—	
10. Proneness to general hostility	.25**	.42***	.24**	.32***	.46***	.25**	.19*	.45***	.42***	—

Note. All data were collected at Time 2.
* $p < .05$. ** $p < .01$. *** $p < .001$.

relationships were significant. However, the overall model did not sufficiently account for all the covariation in the data, $\chi^2(9, N = 57) = 17.8, p < .04$, Goodness of Fit Index (GFI) = .92, Adjusted Goodness of Fit Index (AGFI) = .82. To improve the fit of this model we added one path (based on the modification indices), shown as a dotted line in Figure 1, from early risk factors to sexual aggression. This revised model fit the data well, $\chi^2(8, N = 57) = 5.38, p = ns$, GFI = .97, AGFI = .93. Figure 1 presents this model. In summary, the data showed that all of the structural links found in Malamuth et al. (1991) were successfully replicated here, although one additional path was suggested by the modification indices.

To test the replicability of the interaction effect reported by

Malamuth et al. (1991), we followed their procedures for computing hierarchical multiple regression. When we computed the interaction between hostile masculinity and early sex experience on sexual aggression, we found that the interaction was significant, $F(1, 62) = 11.56, p < .002$. An analysis that also included the main effect of the early risk variable (which in the model yielded a direct effect on sexual aggression) did not alter the conclusion, with the interaction between hostile masculinity and early sex experience remaining significant, $F(1, 59) = 11.28, p < .002$.

Model 2: Path Analysis of Longitudinal Relationships

Having replicated the causal structure in the Time 1 variables, our interest was in modeling the relationships between

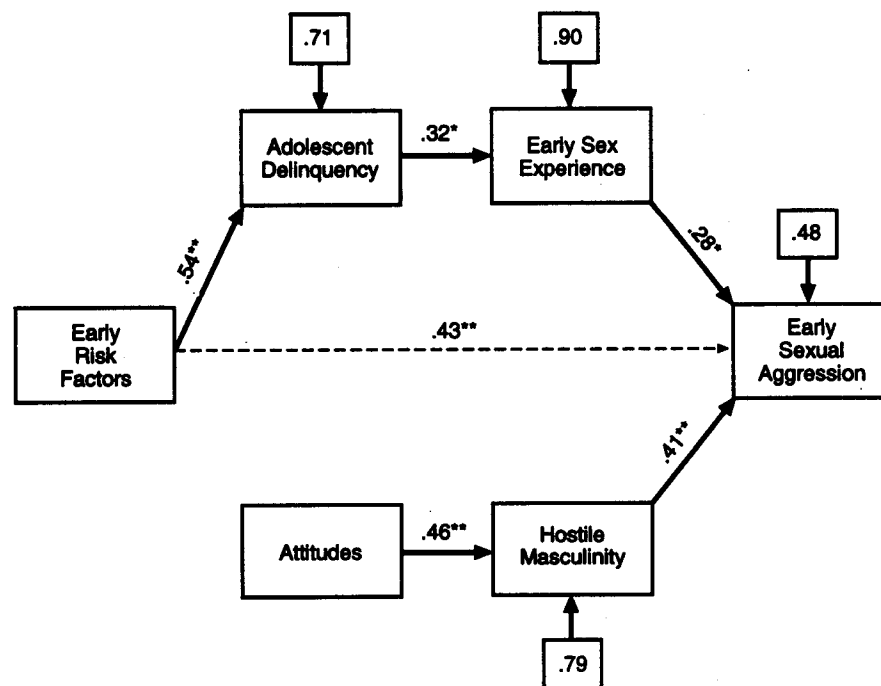


Figure 1. Cross-sectional prediction of early sexual aggression using sexual promiscuity and hostile masculinity paths. Standardized regression coefficients are shown for revised model. Dashed lines indicate path added on the basis of modification indices. * $p < .01$. ** $p < .001$.

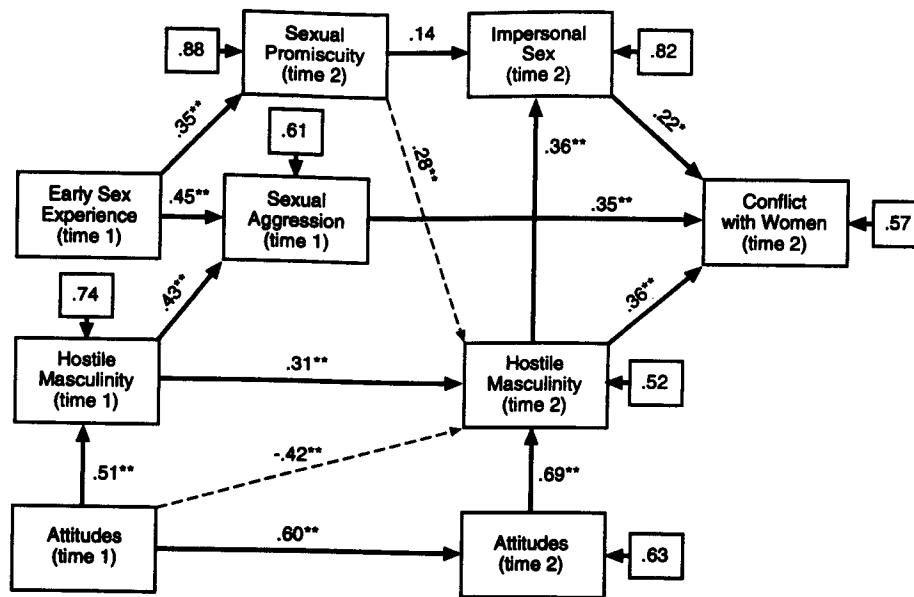


Figure 2. Longitudinal prediction of conflict with women using similar causal structure as in cross-sectional model. Standardized regression coefficients are shown for revised model. Dashed lines indicate path added on the basis of modification indices. * $p < .05$. ** $p < .01$.

the Time 1 and Time 2 data. We specified a path model (see Figure 2) to test the following hypotheses; first, we expected a direct relationship between Time 1 sexual aggression and Time 2 conflict with women (composed of sexual aggression, nonsexual aggression, and relationship distress). Second, we hypothesized that there would be stability in the causal structure between Time 1 and Time 2. For example, we expected that the Time 2 relationship between attitudes and hostile masculinity should be similar to the Time 1 relationship between these two variables. We also expected that there would be some stability across time between Time 1 and Time 2 attitudes as well as between Time 1 and Time 2 hostile masculinity. Third, we hypothesized that the two-path structure would enable prediction of the Time 2 outcomes above and beyond the prediction achieved by the Time 1 sexual aggression measure alone. This is anticipated because the underlying mechanisms that led to sexual aggression at Time 1 are, to the extent that they persist later in life, likely to be expressed in other behaviors that lead to conflict and difficulties with women.

We estimated this model using 57 participants. Although the hypothesized paths were generally significant, the overall model fit was not sufficient, $\chi^2(23, N = 57) = 37.8, p < .03, GFI = .89, AGFI = .78$. To improve the fit of this model, two additional paths were estimated on the basis of the modification indices. These are depicted by a broken line (see Figure 2). The revised model incorporates what appears to be a suppressor relationship between violence attitudes (i.e., attitudes supporting violence against women) at Time 1 and hostile masculinity at Time 2. Once the effects of violence attitudes at Time 2 and hostile masculinity at Time 1 were held constant, violence attitudes at Time 1 had an inverse relationship with hostile masculinity at Time 2.

In addition, a connection was added between sexual promiscuity and hostile masculinity at Time 2. The influence of sexual

promiscuity on the main outcome variable, conflict with women, was now mediated through hostile masculinity and through the impersonal sex variable. With these additions, the model fits the data quite well, $\chi^2(21, N = 57) = 25.4, p = ns, GFI = .92, AGFI = .82$.

Model 3: Replicating the Relevant Portions of the Model Using the Time 2 Sample Only

Once the influence of the Time 1 variables on Time 2 variables had been identified, we focused on the cross-sectional analyses of Time 2 data. In so doing, we were able to use the larger sample ($n = 145$), which included men who had missing Time 1 data and who had been excluded from previous analyses.

The first step was to establish the comparability of the part of the previous model (the right side of Figure 2) that focused on the Time 2 structure. We focused on the Time 2 variables of violence attitudes, hostile masculinity, impersonal sex, and conflict with women. The overall fit of the model was excellent, $\chi^2(2, N = 145) = 3.1, p = ns, GFI = .99, AGFI = .95$. The path coefficients were very similar to those found with the smaller sample (attitudes to hostile masculinity = .58, hostile masculinity to impersonal sex = .31, hostile masculinity to conflict with women = .24, impersonal sex to conflict with women = .22), although the overall amount of unexplained variance in the outcome variable, conflict with women, was considerably larger (i.e., .81 in the larger sample vs. .57 in the smaller one). This difference may be due both to the sample differences and the fact that the model with the larger sample does not include the direct and indirect effects of Time 1 variables.

Model 4: The Fully Elaborated Time 2 Model

We now focus on the hypothesis suggesting somewhat different antecedents of sexual aggression as compared with the other

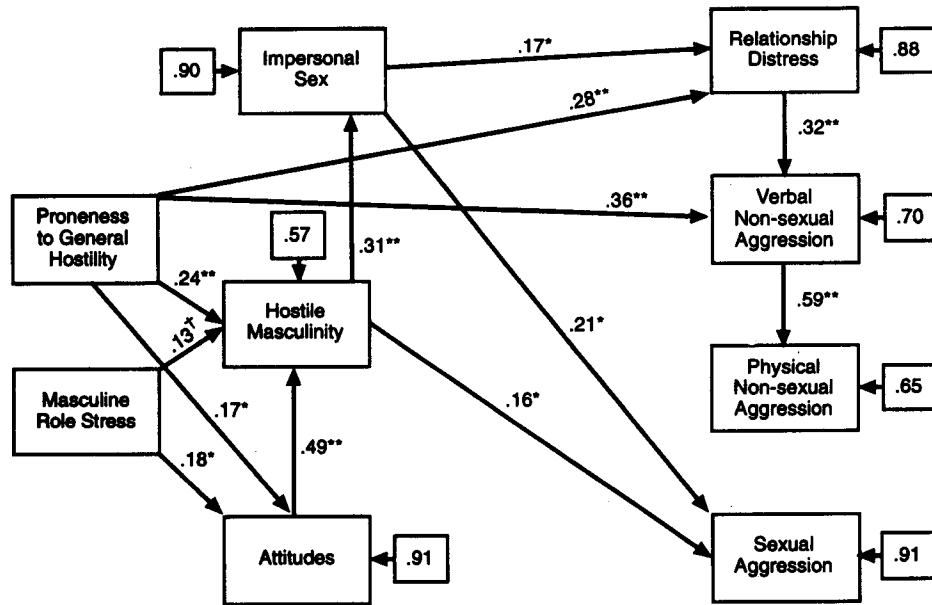


Figure 3. Elaborated model using cross-sectional Time 2 data. † $p < .06$. * $p < .05$. ** $p < .01$.

components of the conflict with women composite. Once we had found similarity in the longitudinal model and the portion of it replicated using Time 2 data only, we tested a more fully explicated Time 2 model. It included paths to individual components of the outcome variables and a more complete explication of the hostile masculinity construct.

Decomposing the conflict with women construct. With the larger sample available for Time 2, we decomposed the dependent variable into its four component variables. Figure 3 illustrates this more fully explicated model. In this model, relationship distress has a path into verbal aggression, which then leads to physical aggression. Although similar factors are hypothesized to directly or indirectly contribute to these outcomes and to sexual aggression, no direct path exists between sexual aggression and these other outcomes.

Key antecedents of hostile masculinity. We next turned to elaborating the antecedents and mediators of the hostile masculinity path. We included two variables which, as suggested earlier, were expected to contribute to this path. The first was the proneness to general hostility construct, which contributes to hostile masculinity both directly and indirectly through violent attitudes regarding women. Proneness to general hostility also has a direct influence on relationship distress and verbal aggression and affects physical aggression through these factors. Masculine role stress also directly affects hostile masculinity and indirectly affects hostile masculinity through violent attitudes regarding women.

Influence of hostile masculinity and impersonal sex on sexual aggression. Consistent with the structural model developed by Malamuth et al. (1991) and the models used above in both cross-sectional analyses and longitudinal prediction, the current model also shows that at Time 2, sexual aggression was predicted by both hostile masculinity and impersonal sex. However, the link between general hostility and the other outcomes (e.g., nonsexual aggression) is primarily direct or not mediated

by hostile masculinity. The model shown in Figure 3 fit the data well, $\chi^2(22, N = 145) = 24.2, p = ns, GFI = .97, AGFI = .93$.

Risk Analysis

To further illustrate the findings and examine the model's utility for clinical prediction, we performed the following analysis. For each Time 2 predictor, a relatively high score was defined as one that fell in the upper third of the distribution of the sample. We then divided participants according to the number of predictors for which they scored either high or low, using the impersonal sex, masculine role stress, proneness to general hostility, violence attitudes, and hostile masculinity variables. This approach consists, therefore, of classifying a characteristic as present or not by defining presence as a relatively high score (Malamuth, 1986). A person scoring in the top third on all of the variables would possess all the variables or characteristics.⁴ This classification scheme yielded six groups (see Figure 4). An analysis of variance (ANOVA) comparing the sexual aggression levels of these groups yielded a significant effect, $F(5, 139) = 3.68, p < .005$. Post hoc comparisons obtained with the least squared differences (LSD) test showed that the group with all of the characteristics present was significantly different than all other groups.

Figure 4 shows the percentage of participants who indicated at least some level of sexual aggression (i.e., above 0) as a function of the six groups. This figure also indicates the number of participants who fell into each group. As shown, of the 9 participants who scored in the top third of the distribution on all five variables, 8 reported engaging in some form of sexual aggression (i.e., 89%). In contrast, of the 27 participants who

⁴ A median split was also used for the risk analysis and showed essentially the same conclusions as the analysis described here.

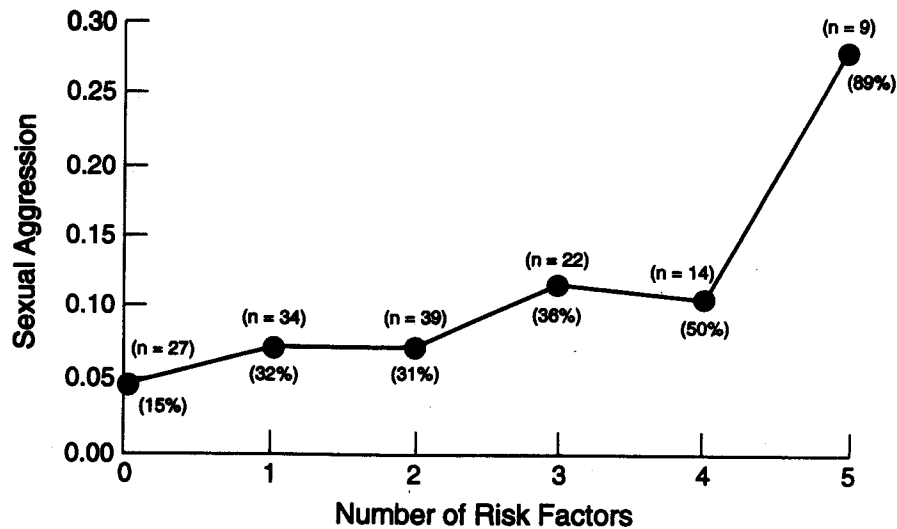


Figure 4. Sexual aggression (log 10 transformed) as a function of the number of risk variables on which participants scored relatively high. Percentages refer to those who indicated at least some level of sexual aggression.

did not score in the top third of the distribution on any of the five predictors, only 15% showed some level of sexual aggression. In keeping with our model's emphasis on the confluence of several variables, as indicated above, the clearest difference was between the group that scored relatively high on all five risk factors, and all other participants.

Impersonal Sex or Higher Sex Drive?

If sexual aggression were a product of a generally higher sex drive, we would expect sexual aggressors to score higher not only on impersonal sex items but also on sex drive responses that do not necessarily involve an impersonal orientation.

Impersonal Sex Items

Although we found in the structural modeling that the impersonal sex composite was correlated with sexual aggression, here we examined the correlations with the individual components of that composite. The pattern of individual correlations was also supportive of a greater orientation to impersonal sex among sexually aggressive men. They reported greater frequency of becoming aroused by a stranger, $r(156) = .25, p < .001$, and a greater number of extramarital affairs, $r(157) = .27, p < .001$. They also reported a slightly higher frequency of masturbation, $r(155) = .16, p < .05$ (one-tailed). The interpretation of this item, however, is somewhat unclear because of the lack of information about when "impersonal" or "personal" sexual fantasies may have accompanied the masturbation. Finally, for comparisons with the findings based on noncoercive sexual fantasies, we found that sexual aggression was correlated with a higher number of coercive sexual fantasies, $r(138) = .21, p < .05$.

Sex Drive Items

The pattern of correlations generally did not support the high sex drive notion, but the findings were somewhat ambiguous.

Sexually aggressive men did not report a larger number of orgasms per week, $r(153) = .03, ns$, or greater frequency of sex with women, $r(156) = .07, ns$. They did not report deriving more pleasure and enjoyment from sex than less aggressive men. Furthermore, there was no association between noncoercive sex fantasies and sexually aggressive behavior, $r(138) = .03, ns$. However, when asked about subjective evaluations of their needs, sexually aggressive men reported a tendency to need a higher number of orgasms per week to be satisfied, $r(156) = .15, p < .05$ (one-tailed). Furthermore, sexually aggressive men did report greater frequency of thinking about sex as measured by items from the sexual preoccupation scale, $r(156) = .23, p < .01$.

DISCUSSION

Replication of the Model

Overall, the results of this study strongly support the utility of the confluence model as a guide in identifying the variables that may contribute to sexual aggression and to other types of conflict with women. In the cross-sectional analysis we tested the assertion that sexually aggressive behavior may be predicted by the confluence of the hostile masculinity and impersonal sex paths. We successfully replicated Malamuth et al.'s (1991) model, using a different sample of men and a somewhat different construct operationalization.

Longitudinal Extension of the Model

We hypothesized that there would be a direct relationship between Time 1 sexual aggression and a broadly conceived construct labeled conflict with women (composed of sexual aggression, nonsexual aggression, and relationship distress) measured 10 years later, at Time 2. The data supported this prediction. They are therefore consistent with the view that some of the mechanisms contributing to sexual aggression at early adult-

hood also contribute to a broader set of conflictual behaviors with women in later life. Consequently, Time 1 sexual aggression may serve as a useful "marker" for presaging later difficulties in relationships with women.

We proposed that there would be stability in the causal structure (or underlying mechanisms) from Time 1 to Time 2. Hostile masculinity, attitudes toward violence, and early sex experience measured at Time 1 were generally predictive of similar constructs measured 10 years later. However, within the impersonal sex path some of the relationships were weak. This path requires better conceptualization and development in future research.

We hypothesized that the two-path structure would enable prediction of conflict with women at Time 2 above and beyond that achieved by using the Time 1 sexual aggression measure alone. This also proved to be the case. These findings may be due to two interrelated possibilities. First, the mechanisms we assessed as part of the confluence model may partly account for sexual aggression at early adulthood, and their persistence over the life course helps further predict conflict with women later in life. Second, for some men the existence of characteristics comprising the two-factor model may be expressed in conflictual behavior with women later in life even when there *was no* sexual aggression shown in early adulthood.

Incorporating General and Specific Mechanisms

Using the cross-sectional data collected at Time 2, we elaborated on the predictor and outcome variables of the confluence model. On the predictor side of the model we included masculine role stress, a variable that we hypothesized would be an important contributor to the hostile masculinity path. We also included a measure of proneness to general hostility, which encompassed elements such as sensitivity to rejection, irritability, high negative emotionality, and impulsivity. On the outcome side of the model, we decomposed the four components of the conflict-with-women construct (relationship distress, verbal nonsexual aggression, physical nonsexual aggression, and sexual aggression) to analyze the differences in the antecedents leading to these behaviors. As hypothesized, the findings showed that masculine role stress contributed to the hostile masculinity path.

Consistent with our hypotheses, the analyses also showed that the impact of general hostility on sexual aggression was mediated by the hostile masculinity construct (i.e., hostility toward women and sexual dominance). In contrast, general hostility had a direct impact on the other types of conflict with women not mediated by the specific elements of hostile masculinity. This latter finding is consistent with those of other researchers who found that general aggressive and defensive tendencies had a direct impact on psychological aggression against spouses (O'Leary & Arias, 1988; O'Leary, Malone, & Tyree, 1994). In both that research and the present work, psychological aggression appeared to be a precursor of physical aggression.

The findings obtained in the present study are consistent with a hierarchical model, which suggests that some of the factors contributing to sexual aggression (e.g., proneness to general hostility) underlie various types of conflict and aggression in intimate relations, whereas other factors (e.g., hostility to women, sexual dominance) are more specific to sexual aggres-

sion itself. This conclusion, reached here on the basis of incorporating both types of behavior in the same model, is consistent with our examination of research on risk factors for either sexual or nonsexual aggression against women. In the sexual aggression literature the most prominent risk factors relate to power and sex vis à vis women (Frank, 1989). In the literature on nonsexual aggression (i.e., violence among intimates), the prominent risk factors are far more general ones (Dutton & Hart, 1992; Hotaling & Sugarman, 1986).

On a broader level, however, we might ask about the factors that contribute to general antisocial behavior rather than to those contributing to conflict with intimates. Although contributors to general antisocial behavior were included here by incorporating the assessment of impulsivity within the proneness to general hostility variable, there may be additional elements that need to be examined. Some investigators have emphasized a common etiology for a seemingly diverse set of antisocial behaviors, including sexual aggression (e.g., Ageton, 1983; Elliott, Huizinga, & Ageton, 1985). Their model, guided by social control theory, suggests that sexual aggression is primarily caused by the same factors as other forms of delinquent behavior, for example, identification with delinquent peers. Their model does *not* require the inclusion of more specific variables (e.g., Ageton, 1983). In contrast, we suggest that a more complete model of the causes of sexual aggression requires both the integration of general and specific variables.

We suggest expanding the hierarchical approach suggested by Malamuth (1988) to include four increasingly specific variables. First are general variables that may contribute to various forms of antisocial and conflictual behaviors, such as impulsivity (Farrington, 1989; Kelly & Conley, 1987; Prentky & Knight, 1986). Similarly, general hostility may contribute to various difficulties in close interpersonal relations (e.g., O'Leary et al., 1994). Second are less general variables with particular relevance to certain types of intergroup conflict. For example, authoritarianism or social dominance orientation may contribute to taking advantage of weaker targets or out-groups (e.g., Sidanius, Pratto, & Bobo, 1994; Walker, Rowe, & Quinsey, 1993). Even more specific are variables particularly relevant to interactions toward women. For example, suspiciousness of women may contribute to various forms of relations with women (e.g., Malamuth & Brown, 1994). Finally, most specific to sexual coercion are factors that contribute to deriving gratification from sexual aggression and similar acts such as sexual dominance (e.g., Nelson, 1979). Sexual aggression may be result of the combination of factors at all of these levels, whereas nonsexual aggression toward women may be primarily the result of relatively general factors. Although the present study makes significant advances in this direction of developing a hierarchical model, more work is needed to more clearly identify the network of interrelated factors contributing to sexual aggression.

Risk Analysis and a Network Approach

The notion of incorporating multiple variables with differing degrees of generality (e.g., proneness to general hostility) and specificity (e.g., hostility-dominance, consisting of sexual dominance and hostility toward women) was further supported in our risk analysis. We classified men according to their scores on

the five variables of our model. This classification yielded six groups, ranging from those who scored low on all variables to those scoring high on all variables. The results showed that the group that scored high on all five variables differed significantly from all other groups in sexual aggressivity. Of the 9 participants in this group, 8 reported some sexual aggression. This was much higher than the percentages found in the other groups.

These findings provide further support for the idea that several converging characteristics contribute to sexual aggression. It appears that the presence of any of the variables on which we have focused in the context of the others substantially increases the likelihood of such aggression. This approach fits with Berkowitz's (1993) conception of "associative networks" of interconnected feelings, ideas, memories, and motor tendencies. Although Berkowitz's work focused on social processes more generally, our primary interest here is on individual differences in the likelihood of the activation of such associative networks.

Our approach differs from models such as that of Hall and Hirschman (1991). They suggested that sexually aggressive men are primarily motivated by a particular characteristic (e.g., sexual arousal to aggression or cognitions that justify that aggression, etc.). Instead, we suggest that it is the confluence of several mutually enhancing variables that characterizes sexual aggressors.

Validity of Findings

The validity of the conclusions based on the men's self-reports is strengthened by the fact that their reports of conflictual and aggressive behaviors and verbal abuse toward women generally correlated highly with the reports independently provided by their female partners. The men's self-reports also correlated well with neutral observers' ratings of the men's domineeringness and hostility in videotaped conversations with their mates. Furthermore, we found substantial across-time correlations between men's self-reports of sexual aggression and their female partners' independent reports 10 years later. These correlations increase our confidence further in the validity of the self-report data and the predictive value of the earlier behavior.

The Impersonal Sex Path

As predicted, we found that the impersonal sex path contributed to sexual aggression. In keeping with Malamuth et al. (1991), it did not contribute to nonsexual aggression. However, here it did contribute to relationship distress, possibly because men who are not monogamous or who display interest in other women cause distress in relationships assumed to be exclusive.

We also more fully explicated the impersonal sex path and its possible role in the etiology of sexual aggression. The correlations generally did not support the high-sex-drive notion: Sexual aggression did not relate to reports of frequency of sex, sexual fantasies, number of orgasms, or thoughts about sex. However, self-reports of how much sex it takes to satisfy the men and how preoccupied they personally were with sex were correlated with sexual aggression levels. Although this pattern of correlations presents a slightly ambiguous picture, overall, the findings of the present study were not supportive of the idea that sexually aggressive behavior is an extension of a higher sex drive, as suggested by Ellis (1991, 1993). Instead, sexual aggression

appears to be the result of a more particular orientation to sex, specifically, an impersonal orientation.

Such an orientation rather than more personal, intimate sex enables gratification from coercive sex. In contrast, an orientation toward highly personal or intimate sexual activity would preclude coercive sex as it would be incompatible with coercion. An intimate orientation would imply that a person was concerned with his or her partner's reactions, feelings, and pleasure, and particularly concerned that the partner not be injured or his or her feelings hurt. Within such an orientation, much of the gratification from sex may be based on the feedback a person receives from knowing that he or she was worthy enough to have been freely chosen by his or her sexual partner. The impersonal orientation to sex, in contrast, enables a dismissal of concerns about the partner's choice and feelings and sets the stage for the possibility of coercive sex (also see Gregor, 1990).

Future Research: Explicating the Role of Empathy in Sexual Aggression

Recent research by Dean and Malamuth (1995) shows that hostile masculinity also accounts well for individual differences in the degree to which men imagine themselves aggressing sexually, even if they don't actually behave aggressively. That study and the present one point to a common set of characteristics that contribute to the appeal of aggression and to a variety of conflictual behaviors with women. Now it is important to focus on possible moderator variables that may attenuate the relationships between the risk factors and actual behavior. One promising candidate is dispositional empathy (Davis, 1980). High empathy scores would be expected to block or reduce considerably the actual acting out of coercive sexual behaviors even when some risk factors are present as indicated by the findings of Malamuth, Heavey, and Linz (1995) and of Dean and Malamuth (1995). It would be useful in future longitudinal research to identify men at an early age (e.g., early teenage years) who may show differing configurations of risk and attenuation that may be used to predict their future behavior in light of the confluence model.

References

- Ageton, S. S. (1983). *Sexual assault among adolescents*. Lexington, MA: Lexington Books.
- Averill, J. (1982). *Anger and aggression: An essay on emotion*. New York: Springer-Verlag.
- Bakan, D. (1966). *The duality of human existence*. Chicago: Rand McNally.
- Bardis, P. (1973). Violence: Theory and quantification. *Journal of Political and Military Sociology*, 1, 121-146.
- Bentler, P. M. (1968). Heterosexual behavior assessment 1: Males. *Behaviour Research and Therapy*, 6, 21-25.
- Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive-neoassociationistic perspective for the analysis of anger and other emotions. In R. S. Wyer & T. K. Srull (Eds.), *Perspectives on anger and emotion* (Vol. 6, pp. 1-46). *Advances in social cognition*. Hillsdale, NJ: Erlbaum.
- Booth, A., & Edwards, J. (1983). Measuring marital instability. *Journal of Marriage and the Family*, 45, 387-393.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology*, 38, 217-230.
- Buss, D. (1994). Personality evoked: The evolutionary psychology of

- stability and change. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 41–57). Washington, DC: American Psychological Association.
- Caprara, G. V., Cinanni, V., D'Imperio, G., Passerini, S., Renzi, P., & Travaglia, G. (1985). Indicators of impulsive aggression: Present status of research on irritability and emotional susceptibility. *Personality and Individual Differences, 6*, 665–674.
- Caprara, G. V., & Pastorelli, C. (1993). Early emotional instability, prosocial behavior and aggression: Some methodological aspects. *European Journal of Personality, 7*, 19–36.
- Check, J. V. P. (1985). *The hostility towards women scale*. Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Manitoba, Canada.
- Check, J. V. P., & Malamuth, N. (1983). Sex role stereotyping and reactions to depictions of stranger versus acquaintance rape. *Journal of Personality and Social Psychology, 45*, 344–356.
- Check, J. V. P., Malamuth, N. M., Elias, B., & Barton, S. (1985). On hostile ground. *Psychology Today, 19*, 56–61.
- Comrey, A. L., & Montag, I. (1982). Comparison of factor analytic results with two-choice and seven-choice personality item formats. *Applied Psychological Measurement, 6*, 285–289.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS: Catalog of Selected Documents in Psychology, 10*, 85.
- Dean, K., & Malamuth, N. M. (1995). *Characteristics of men who aggress sexually and of men who imagine aggressing: Risk and moderator variables*. Manuscript in preparation.
- Dutton, D. G., & Hart, S. H. (1992). Risk markers for family violence in a federally incarcerated population. *International Journal of Law & Psychiatry, 15*, 101–112.
- Eisler, R. M., & Skidmore, J. R. (1987). Masculine gender role stress: Scale development and component factors in the appraisal of stressful situations. *Behavior Modification, 11*, 123–136.
- Ellis, L. (1991). A synthesized (biosocial) theory of rape. *Journal of Consulting and Clinical Psychology, 59*, 631–642.
- Ellis, L. (1993). Rape as a biosocial phenomenon. In G. N. Hall, R. Hirschman, J. Graham, & M. Zaragoza (Eds.), *Sexual aggression: Issues in etiology, assessment and treatment* (pp. 17–41). Washington, DC: Hemisphere.
- Elliott, D. S., Huizinga, D., & Ageton, S. S. (1985). *Explaining delinquency and drug use*. Beverly Hills, CA: Sage.
- Elliott, D. S., & Morse, B. J. (1989). Delinquency and drug use as risk factors in teenage sexual activity. *Youth and Society, 21*, 32–60.
- Fagan, J., & Wexler, S. (1988). Explanations of sexual assault among violent delinquents. *Journal of Adolescent Research, 3*, 363–385.
- Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims, 4*, 79–138.
- Finkelhor, D. (1986). *A sourcebook on sexual abuse*. Newbury Park, CA: Sage.
- Frank, J. G. (1989). *Risk factors for self-reported rape in prisoners and college students*. Unpublished doctoral dissertation, University of South Carolina.
- Gangestad, S. W., & Simpson, J. A. (1990). Toward an evolutionary history of female sociosexual variation. *Journal of Personality, 58*, 69–96.
- Gilmore, D. D. (1990). *Manhood in the making: Cultural concepts of masculinity*. New Haven, CT: Yale University Press.
- Goozen, S. H. M. van, Frijda, N. H., Kindt, M., & Poll, N. E. van de (1994). Anger proneness in women: Development and validation of the anger situation questionnaire. *Aggressive Behavior, 20*, 79–100.
- Greendlinger, V., & Byrne, D. (1987). Coercive sexual fantasies of college men as predictors of self-reported likelihood of rape and overt sexual aggression. *Journal of Sex Research, 23*, 1–11.
- Gregor, T. (1990). Male dominance and sexual coercion. In J. W. Stiegler, R. A. Shweder, & G. Herdt (Eds.), *Cultural psychology* (pp. 477–495). Cambridge, MA: Cambridge University Press.
- Gurtman, M. B. (1992). Trust, distrust, and interpersonal problems: A circumplex analysis. *Journal of Personality and Social Psychology, 62*, 989–1002.
- Hall, G. C. N., & Hirschman, R. (1991). Toward a theory of sexual aggression: A quadripartite model. *Journal of Consulting and Clinical Psychology, 59*, 662–669.
- Heavey, C. L., Layne, C., & Christensen, A. (1993). Gender and conflict structure in marital interaction: A replication and extension. *Journal of Consulting and Clinical Psychology, 61*, 16–27.
- Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureño, G., & Villaseñor, V. S. (1988). Inventory of Interpersonal Problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology, 56*, 885–892.
- Hotaling, G. T., & Sugarman, D. B. (1986). An analysis of risk markers in husband to wife violence: The current state of knowledge. *Violence and Victims, 1*, 101–124.
- Jackson, D. N. (1987). *Personality Research Form—Form E*. Port Huron, MI: Research Psychologists Press.
- Kanin, E. J. (1977). Sexual aggression: A second look at the offended female. *Archives of Sexual Behavior, 6*, 67–76.
- Kanin, E. J. (1984). Date rape: Unofficial criminals and victims. *Victimology: An International Journal, 9*, 95–108.
- Kelly, E. L., & Conley, J. J. (1987). Personality and compatibility: A prospective analysis of marital instability and marital satisfaction. *Journal of Personality and Social Psychology, 52*, 27–40.
- Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology, 55*, 162–170.
- Koss, M., & Oros, C. (1982). Sexual Experiences Survey: A research instrument investigating sexual aggression and victimization. *Journal of Consulting and Clinical Psychology, 50*, 455–457.
- Larsen, R. J., Diener, E., & Emmons, R. A. (1986). Affect intensity and reactions to daily life events. *Journal of Personality and Social Psychology, 51*, 803–814.
- Larzelere, R., & Huston, T. (1980). The Dyadic Trust Scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family, 43*, 595–604.
- Lee, J. A. (1973). *The colors of love*. Englewood Cliffs, NJ: Prentice-Hall.
- Lisak, D. (1991). Sexual aggression, masculinity, and fathers. *Journal of Women in Culture and Society, 16*, 238–262.
- Luengo, M., Carrillo-de-la-Peña, M. T., Otero, J. M., & Romero, E. (1994). A short-term longitudinal study of impulsivity and antisocial behavior. *Journal of Personality and Social Psychology, 66*, 542–548.
- Malamuth, N. M. (1986). Predictors of naturalistic sexual aggression. *Journal of Personality and Social Psychology, 50*, 953–962.
- Malamuth, N. M. (1988). Predicting laboratory aggression against male v. female targets: Implications for research on aggression. *Journal of Research in Personality, 33*, 474–495.
- Malamuth, N. M., & Brown, L. M. (1994). Sexually aggressive men's perceptions of women's communications: Testing three explanations. *Journal of Personality and Social Psychology, 67*, 699–712.
- Malamuth, N. M., Feshbach, S., & Jaffe, Y. (1977). Sexual arousal and aggression: Recent experiments and theoretical issues. *Journal of Social Issues, 33*, 110–133.
- Malamuth, N. M., & Briere, J. (1986). Sexual violence in the media: Indirect effects on aggression against women. *Journal of Social Issues, 42*, 75–92.
- Malamuth, N. M., Heavey, C., & Linz, D. (1993). Predicting men's antisocial behavior against women: The interaction model of sexual aggression. In G. N. Hall, R. Hirschman, J. Graham, & M. Zaragoza (Eds.), *Sexual aggression: Issues in etiology, assessment and treatment* (pp. 63–97). Washington, DC: Hemisphere.
- Malamuth, N. M., Heavey, C., & Linz, D. (1995). *Penile tumescence*,

- empathy levels and longitudinal prediction of sexual aggression. Manuscript in preparation.
- Malamuth, N. M., Sockloskie, R., Koss, M. P., & 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.
- Mehrabian, A., & Hines, M. (1978). A questionnaire measure of individual differences in dominance-submissiveness. *Educational and Psychological Measurement, 38*, 479-484.
- Miedzian, M. (1993). How rape is encouraged in American boys and what we can do to stop it. In E. Buchwald, P. R. Flecher, & M. Roth (Eds.), *Transforming a rape culture* (pp. 153-163). Minneapolis, MN: Milkweed Editions.
- Nelson, P. A. (1979). *Personality, sexual functions, and sexual behavior: An experiment in methodology*. Unpublished doctoral dissertation, University of Florida.
- Newcomb, M. D., & Bentler, P. M. (1988). *Consequences of adolescent drug use: Impact on the lives of young adults*. Beverly Hills, CA: Sage.
- O'Leary, K. D., & Arias, I. (1988). Prevalence, correlates and development of spouse abuse. In R. D. Peters & R. J. McMahon (Eds.), *Social learning and systems approaches to marriage and the family* (pp. 105-127). New York: Brunner/Mazel.
- O'Leary, K. D., Malone, J., & Tyree, A. (1994). Physical aggression in early marriage: Pre-relationship and relationship effects. *Journal of Consulting and Clinical Psychology, 62*, 594-602.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist, 44*, 329-335.
- Prentky, R. A., & Knight, R. A. (1986). Impulsivity in the lifestyle and criminal behavior of sexual offenders. *Criminal Justice and Behavior, 13*, 141-164.
- Pulkkinen, L. (1986). The role of impulse control in the development of antisocial and prosocial behavior. In D. Olweus, J. Block, & M. Radke-Yarrow (Eds.), *Development of anti-social and prosocial behavior* (pp. 149-175). New York: Academic Press.
- Sanday, P. (1981). The socio-cultural context of rape: A cross-cultural study. *Journal of Social Issues, 37*, 5-27.
- Sarwer, D., Kalichman, S., Johnson, J., Early, J., & Akram, S. (1993). Sexual aggression and love styles: An exploratory study. *Archives of Sexual Behavior, 3*, 265-275.
- Sidanius, J., Pratto, F., & Bobo, L. (1994). Social dominance orientation and the political psychology of gender: A case of invariance? *Journal of Personality and Social Psychology, 67*, 998-1101.
- Sillars, A. L. (1982). *Verbal tactics coding scheme: Coding manual*. Unpublished manuscript, Ohio State University.
- Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology, 60*, 870-883.
- Snell, W. E., & Papini, D. R. (1989). The sexuality scale: An instrument to measure sexual-esteem, sexual-depression, and sexual-preoccupation. *Journal of Sex Research, 26*, 256-263.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage in similar dyads. *Journal of Marriage and the Family, 38*, 15-28.
- Spence, J. T., Helmreich, R. L., & Holahan, C. K. (1979). The negative and positive components of psychological masculinity and femininity and their relationship to self-reports of neurotic and acting out behaviors. *Journal of Personality and Social Psychology, 37*, 1673-1682.
- Spielberger, C. D., Russell, J. S., & Crane, R. S. (1983). Assessment of anger: The State-Trait Anger Scale. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances in personality assessment* (Vol. 2, pp. 161-189). Hillsdale, NJ: Erlbaum.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family, 41*, 75-85.
- Walker, W. D., Rowe, R. C., & Quinsey, V. L. (1993). Authoritarianism and sexual aggression. *Journal of Personality and Social Psychology, 65*, 1036-1045.
- Wiggins, J. S. (1982). Circumplex models of interpersonal behavior in clinical psychology. In P. C. Kendall & J. N. Butcher (Eds.), *Handbook of research methods in clinical psychology* (pp. 183-221). New York: Wiley.

Received June 8, 1994

Revision received December 30, 1994

Accepted February 2, 1995 ■