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Men Who Target Women: Specificity of Target, Generality of Aggressive Behavior

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Two studies examined the effects of individual differences identified by the Confluence Model of aggression against women [Malamuth Linz, Hevey et al., 1995] and the General Aggression Model [GAM: Anderson and Carnagey, 2004] as predictors of male-on-female aggression. Study 1, a correlational study, found that hostile masculinity predicts self-reported sexual aggression independently of nonsexual aggression against women, and is itself predicted by proneness to general hostility, masculine gender role stress, and violent attitudes toward women. Furthermore, hostility toward women independently predicted sexual and nonsexual aggression against women, above the effects of general attitudes toward violence and general levels of hostility and aggression. Study 2, an experimental study, found that under high provocation, high hostility toward women predicted increases in male nonsexual aggression against women and slight decreases in male aggression against men. This effect remained significant even after controlling for general attitudes toward violence and for general levels of hostility and aggression, indicating that males who are highly hostile toward women specifically target women and that their aggression toward women generalizes beyond sexual aggression. The findings are discussed in terms of a model that integrates the Confluence Model with GAM. Aggr. Behav. 34:605–622, 2008. **© 2008 Wiley-Liss, Inc.**

Keywords: aggression; sexual aggression; Confluence Model; aggression against women; General Aggression Model

One of these days, Alice, one of these days. Pow! Right in the kisser.
Ralph Kramden (The Honeymooners)

INTRODUCTION

Human aggression often is trivialized, validated, and in many contexts used as a source of humor. A particularly disturbing minimization of violence effects is that which is perpetrated by males on females. Although women self-report aggressing against their male partners more than men report aggressing against their female partners [Archer, 2002; Straus and Gelles, 1986], women suffer more injuries from and are more terrorized by male partners than men suffer from or are terrorized by their female partners [Archer, 2000; Fagan and Browne, 1994; Langan and Innes, 1986; Stets and Straus, 1990]. In part, this reflects a difference in the forms of physical aggression used by men and women in relationships. Archer's [2002] meta-analysis of physical aggression tactics found that women were more likely than men to slap, kick, bite, punch, or throw something at their partner, whereas men were more likely than women to beat up, choke, or strangle their partner. For some types of partner aggression, the gender differences were quite large. For example, 72% of the respondents who reported choking or strangling their partner were men, whereas 67% of the respondents who reported slapping their partner were women. Male aggression against females is also distinguished from violence perpetrated by women or male-on-male violence because it more frequently involves multiple forms of abuse and domination that negatively affect the

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woman physically, sexually, emotionally, and economically [Kantor and Jasinski, 1998].

Male aggression against women is common worldwide [e.g., Daly and Wilson, 1988]. It is estimated that one out of every three adult women in the US is physically assaulted by an intimate partner at some time in her life [Koss et al., 1994]. Male victimization rates in intimate partner relationships are typically lower than those reported for women. For example, in the 1992–1993 National Crime Victimization Survey, which measured physical and sexual violence by an intimate that was severe enough to be classified as a crime, 1.4 per 1,000 men and 9.4 per 1,000 women reported being victimized by a partner [Bachman and Salzman, 1995].

Sexual violence perpetrated against women is similarly high, particularly in educational settings. One out of six women in the US has experienced an attempted or completed rape (one in four or five women during their college years) [Tjaden and Thoennes, 2000]. Almost 12% of female high school students experience forced sexual intercourse during high school [Centers for Disease Control and Prevention, 2004].

Domestic and intimate partner violence studies, in which men and women self-report physical aggression and victimization, have revealed that some men are physically aggressive specifically with their female partners. For example, Walker [1984] interviewed 435 battered women and found that 20% stated that their male batterers abused only them, whereas 80% stated that the batterers abused other people as well. Kandel-Englander [1992] found that of over 300 men who reported assaulting another person in the past, 67% stated that they abused only their female partners. In a study of 11th grade males and females, Hilton et al. [2000] found that males who were physically and verbally aggressive against females were more likely to aggress against an intimate partner (29.8%) than stranger females (14.5%).

Most laboratory studies of male aggression do not address the question of whether or not some males aggress specifically against female targets, mainly because the sex of the aggression target is usually held constant. Studies that have varied the sex of the aggression target typically find that males are more aggressive against other males than against females [e.g., Giancola and Zeichner, 1995], but such studies have not identified individual difference variables that predict which males specifically target women. Similarly, research has shown that male participants aggress more against female targets following failure on a masculine task [Richardson et al., 1984], when the female holds nontraditional (vs. traditional) attitudes [Follingstad and Sullivan, 1979], and when intoxicated [Giancola and Zeichner, 1995; Richardson, 1981]. Personality factors such as acceptance of interpersonal violence against women and myths about rape have been shown to predict male aggression against women [Malamuth, 1983; Malamuth and Check, 1982]. However, these studies do not rule out the possibility that these variables may equally predict aggression against male and female targets.

One early experiment included male as well as female targets [Shope et al., 1976, Experiment 2]. Male participants were either mildly or highly insulted in a "teacher-learner" task by either a male or a female confederate in front of either a male or female experimenter. The greatest amount of shock was delivered by males who were highly insulted and shocked by a female provocateur when the experimenter was male. These results suggest that men may attempt to overcome feelings of inadequacy (particularly around other men) by behaving aggressively toward women.

Malamuth [1988] also addressed this issue of target specificity by manipulating the sex of the target. He measured males' acceptance of interpersonal violence against women, traditional gender role beliefs, dominance as sexual motivation, psychoticism, earlier sexually aggressive behavior, and penile tumescence to rape depictions. Subsequently, participants aggressed against a male or a female target in an extrasensory perception task after being insulted. Zero-order correlations and regression results revealed evidence that each of the measured predictors related somewhat differently to aggression against male vs. female targets. Malamuth's [1988] experiment is particularly important because it identified personality predictors that are specific to male aggression against female targets. The results suggest an interaction between personality characteristics of the perpetrator and target sex in predicting aggression.

THE CONFLUENCE MODEL OF MALE-ON-FEMALE AGGRESSION

The Confluence Model, developed by Malamuth [1998, 2003], Malamuth et al. [1991, 1993, 1995], and Vega and Malamuth [2007], provides a clear theoretical framework for research on violence against women. This model focuses on cognitive and personality predictors of male sexual aggression

but can also be applied to male-on-female nonsexual aggression. The Confluence Model draws from feminist and evolutionary perspectives and proposes that two main paths lead to sexual and nonsexual aggression: a male sexual promiscuity path and a hostile masculinity path.

Sexual Promiscuity Path

Malamuth et al. [1995] described engagement in impersonal sex as part of the ''Ludus love style'' [Lee, 1973], which is typified by a noncommittal orientation to sexual relations. People who express this love style are said to view sex as a game to be won. In a sample of 132 adult men, path analyses revealed that impersonal sex was related to reported sexual aggression and distress in marital relationships, but not to nonsexual verbal or physical aggression toward women.

Hostile Masculinity Path

Hostile masculinity is a personality profile of men who feel hostile and distrusting toward women and are insecure about them. They are threatened by women, particularly those in positions of power over them, and seek to assert dominance over women to avoid feeling controlled by them. Dominance of women can range from sexual or nonsexual manipulativeness, verbal or physical coercion, or aggressiveness.

The Confluence Model also includes stress associated with fulfilling masculine gender role expectations and general hostility as predictors of aggression toward women. Stress associated with the traditional masculine role may differentiate between traditional men who believe that their role fulfillment is often challenged by women and those who do not. General hostility was included to address whether or not hostile masculinity mediated the relation between general hostile attitudes and sexual aggression. Path analyses revealed significant paths relating proneness to general hostility, masculine gender role stress, and violent attitudes toward women to hostile masculinity. General hostility was positively related to increases in verbal aggression against women and marital distress and indirectly influenced physical nonsexual aggression through these factors. The relation between general hostility and sexual aggression was mediated by hostile masculinity. Malamuth and colleagues concluded that general hostility more directly predicts nonsexual aggression than sexual aggression, which is influenced through the hostile masculinity component.

The present studies extend the work of Malamuth et al. [1995] by administering the same predictor variable measures to men and assessing their degree of aggression against male and female targets to determine whether some of the variables specifically predict aggression toward women (relative to men). In addition to this specificity hypothesis, the present research also extends earlier work by using a younger male population (i.e., college undergraduates). Furthermore, this article extends the Confluence Model theoretically by integrating it with the more comprehensive General Aggression Model (GAM).

The Confluence Model is mute about both the effects of situational factors (such as provocation) and of intermediate psychological processes, which presumably tie individual difference variables to aggressive behavior against women. The interactions of certain individual difference and situational factors may lead to a variety of cognitive, affective, arousal experiences, which affect the likelihood of aggressive behavior. An integration of the Confluence Model and GAM provides a framework for present and future research that addresses these issues.

THE GENERAL AGGRESSION MODEL

The GAM [Anderson and Bushman, 2002; Anderson and Carnagey, 2004; Anderson and Huesmann, 2003; Anderson et al., 2007] integrates existing theory and data concerning the learning, development, instigation, and expression of human aggression. GAM incorporates all major forms of human aggression such as affective, instrumental, and impulsive aggression. It does so by noting that the enactment of any of these forms is largely based on knowledge structures (e.g., scripts, schemas) created by social-learning processes (see Fig. 1).

GAM illustrates how person and situation factors can independently or interactively cause increases in aggressive feelings, aggressive thoughts, or physiological arousal in the present situation. For example, a person with aggressive tendencies (e.g., hostility toward women) who is insulted may have thoughts about hurting the person who insulted him. He may also feel angry and his heart rate may elevate. Next, GAM posits that the individual undergoes an appraisal process; if the individual does not have sufficient time or cognitive resources, he may rapidly characterize the situation as a hostile one (e.g., attribute blame or anger to the other person(s) in the situation) and may act impulsively and aggressively

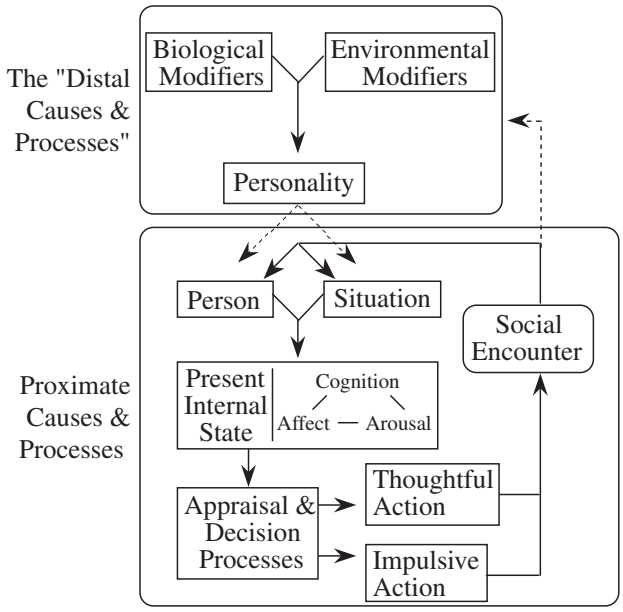

Fig. 1. The General Aggression Model overview.

toward the target. Indeed, based on cognitive research on how appraisal processes that initially required attentional resources become automatized with practice, GAM notes that the initial appraisal and behavioral response can occur very quickly and without awareness that an appraisal has been made.

Alternatively, if the person does have sufficient time and ability (e.g., is not cognitively busy) and is motivated to do so, he may allocate attentional resources to determining the guilt or innocence of the target and generating alternative explanations for the incident before acting (i.e., a thoughtful action). Regardless of whether a thoughtful or an impulsive action is taken, that action is perceived by the "provocateur" and influences the provocateur's future actions toward the individual in the social encounter. If the person's action is hostile or aggressive, then it is likely that an aggression escalation cycle will be started [Anderson et al., 2008]. Furthermore, each specific episode can be seen as another learning trial that influences the individual's personality, which, in turn, influences person variables in subsequent social encounters as well as the types of situations the individual is likely to encounter.

An example of how GAM can explain sexual assault was provided by Abbey et al. [1998]. Abbey and colleagues found that male undergraduates who held both rape supportive beliefs and expectancies that alcohol increases female sexual interest (person variables according to GAM) were more likely to misperceive a female's sexual intentions and commit sexual assault. This misperception is likely owing to the priming of sexual scripts, during interaction with the woman, which include female desire for sexual roughness. The males then acted according to their scripts, probably without experiencing reappraisal, and assaulted the females [see also Jacques-Tiura et al., 2007].

INTEGRATION OF THE CONFLUENCE MODEL INTO GAM

The main individual difference factors proposed by the Confluence Model are all person input variables in GAM. Proneness to general hostility, masculine gender role stress, impersonal sex, hostile masculinity, and violent attitudes toward women are all factors, which, according to GAM, predispose men to have more hostile thoughts about women, feel more hostile toward them, and possibly become more aroused when provoked by them than men who are not so predisposed. GAM describes the two types of appraisal processes—automatic vs. controlled—that may operate on these thoughts and feelings (depending upon situation and dispositional factors). The Confluence Model adds to the potential choices of specific aggressive and nonaggressive behaviors. In identifying verbal, physical (nonsexual) aggression, and sexual aggression, the model articulates the importance of separately identifying these types of aggressive behavior when measuring male aggression against females. The relations between the different input variables and the behavioral choice (verbal, physical/nonsexual, sexual) may suggest the specific paths that the input variables take as well as the influence of the two appraisal processes. For example, if a man who holds general aggressive attitudes is provoked by a small woman, he may be more likely to retaliate with physical aggression than if provoked by a larger, more threatening woman whom he may insult (for fear of her retaliation). Sexual aggression, as suggested by the findings of Malamuth et al. [1995], may be expressed more often by men high in hostile masculinity compared with those high in general aggressive attitudes.

An important additional question that must be resolved in order to test the predictive power of an integrated framework for male-on-female aggression is which (if any) of the individual difference and situational input variables differentially affect increases in aggressive thoughts, feelings, motives, and behavior against women vs. men. This is the focal question of the present studies.

THE PRESENT STUDIES: SPECIFICITY AND GENERALITY

Two studies were conducted on the same group of male participants to answer two questions crucial to a complete understanding of men who aggress against women, one involving generality across types of behavior and the other involving specificity of the target of aggression. The generality question can be framed simply as: Does the type of man who is likely to be sexually aggressive (i.e., those hostile toward women, as identified by the Confluence Model) also display relatively high levels of nonsexual aggression against women? The specificity question can be framed as: Does the type of man who is likely to be sexually aggressive specifically aggress only (or primarily) against women, or are they more generally aggressive against any target regardless of gender?

To address these questions, the present studies examined the relations between the individual difference factors posited by the Confluence Model and by the GAM and measures of sexual and nonsexual aggressive behavior. Study 1 used correlational methods and self-reported measures of male aggressive behavior toward women. Study 2 used experimental methods to assess the effects of individual difference variables, provocation, and gender of the aggression target on male physically aggressive behavior in a standard laboratory aggression paradigm. The interactive and main effects of provocation were tested because of the strong possibility that the individual difference variables (e.g., hostility toward women) would have a larger impact on aggression when the target had provoked the research participant [Anderson, 1997; Bushman, 1995]. Because of their central role in GAM, state hostility and aggressive thoughts were also measured to assess their role in the behavioral expression of aggression.

MAIN HYPOTHESES

For Study 1, based on both the Confluence Model and the GAM, we expected that hostile masculinity would independently predict both nonsexual and sexual aggression, and that proneness to general hostility, masculine sex-role stress, and violent attitudes toward women would predict hostile masculinity. Furthermore, the Confluence Model posits that hostile masculinity predicts impersonal sexual behavior, which in turn independently predicts sexual aggression. We also expected that a more general form of hostility toward women would independently affect both nonsexual and sexual aggression even after controlling for a variety of more general aggression individual difference factors such as general attitudes toward violence and general levels of hostility and aggression.

For Study 2, we expected that male targets would elicit more aggression than female targets and that provoked males would behave more aggressively than nonprovoked males in the laboratory aggression paradigm. More importantly, we expected a significant interaction between hostility toward women and sex of target. We expected the form of this interaction to consist of a more positive relation between hostile masculinity and aggression for female targets than for male targets. We had no strong prediction as to whether this pattern would reliably occur primarily under high-provocation conditions, in which case a three-way hostility $\times$ target gender $\times$ provocation interaction would appear, or whether the pattern would be essentially the same under both low and high provocation. In the latter case, only the hostility $\times$ target gender interaction would be significant.

OVERVIEW OF THE STUDIES

The studies were conducted using the same male participants in two 1-hr sessions separated by at least 1 day. The first session (Study 1) involved the completion of a large number of cognitive, personality, and self-report behavioral inventories. The second session (Study 2) involved participation in a two-phase competitive reaction time (CRT) task with a male or a female opponent (who was actually a confederate) [e.g., Anderson et al., 2000; Lindsay and Anderson, 2000]. During the first phase of the CRT task, the participant either heard loud levels of white noise "punishments" (high provocation) or quieter noise (low provocation) through headphones after every trial that he lost. The punishment levels were ostensibly set by the opponent. In the second phase of the CRT task the participant set the punishment noise levels that his opponent supposedly heard whenever the opponent lost a trial. All participants were fully debriefed about the study procedures and goals.

STUDY 1

Method

Participants. Two hundred and two male undergraduates at a large Midwestern university

participated in order to receive course credit. The mean age was 19.5 and the range was 18–36 (91% were 18–21 years). This is a substantially younger sample than the 132 men in the time 2 administration in Malamuth et al. [1995], for which the mean age was 33 years.

Procedure. Participants were told that the study involved two 1-hr sessions and tested how various thoughts, feelings, and behaviors are related in different types of people. They were also told that the first session was a questionnaire session, and that the second session involved competing with an opponent on a computerized reaction time task. The confidentiality of their responses was emphasized. A thorough debriefing was conducted at the completion of the second session.

Questionnaires. We included the same questionnaires used by Malamuth et al. in their seminal study of sexual aggression, with the exception of the relationship distress scales. These latter three scales assessed marital quality, which was not appropriate for the vast majority of our participants. Minor changes were made to several scales, as noted in subsequent sections. We also included a number of scales based on the theoretical questions driving the present research. Table I lists the scales and subscales, and indicates the composites and primary factors created for subsequent analyses.

Unless otherwise indicated, all response formats on the questionnaires were 7-point Likert-type anchored at "strongly agree" and "strongly disagree." The order of the questionnaires was counterbalanced; 20 different orders were used. Item scores were reversed, as appropriate, so that higher scores would correspond with greater agreement with statements endorsing aggression, aggressive attitudes, and hostility.

Irritability. The Caprara Irritability Scale [Caprara et al., 1985] is composed of 20 statements that assess impulsive aggression-related thoughts, feelings, and behaviors (e.g., "Sometimes I really want to pick a fight"). Ten additional "friendly" statements that were included by Caprara et al. [1985] as control items (e.g., "I have never been touchy") have been reverse scored and found to load on the same trait hostility factor in previous studies [e.g.,

TABLE I. Scale Reliabilities and Placements for Replication Analyses and New Factor Analyses

Scale	α	Replication composite	High-load factor
Individual differences			
Irritability	.852	Prone gen. hos.	Gen. hos. and aggr.
Friendliness[a]	.701		Gen. hos. and aggr.
Emotional suscep.	.912	Prone gen. hos.	
Affect intensity	.865	Prone gen. hos.	
Impulsiveness	.796	Prone gen. hos.	
Gen. Physical aggression	.871		Gen. hos. and aggr.
Gen. Verbal aggression	.761		Gen. hos. and aggr.
Gen. Anger	.819		Gen. hos. and aggr.
Violence attitudes: war	.864		Gen. attitude to violence
Violence attitudes: penal code	.810		Gen. attitude to violence
Violence attitudes: children	.880		Gen. attitude to violence
Violence attitudes: intimates	.904		Hos. toward women
Sexual dominance	.907	Hostile masculinity	Imper. and dom. sex
Hostility toward women	.857	Hostile masculinity	Hos. toward women
Adversarial sexual beliefs	.784	Hostile masculinity	Hos. toward women
MGRS: inferiority	.700	Masc. role stress	
MGRS: inadequacy	.726	Masc. role stress	
MGRS: subordination	.847	Masc. role stress	
MGRS: inexpressiveness	.723	Masc. role stress	
MGRS: performance failure	.732	Masc. role stress	
Acceptance of interpersonal violence against women	.632	Vio. att. to women	Hos. toward women
Rape myth acceptance	.742	Vio. att. to women	Hos. toward women
Impersonal sex	.554	Impersonal sex	Imper. and dom. sex
Disinhibition	.879		Imper. and dom. sex
Criterion variables			
Verbal aggr. to women	.761		
Physical aggr. to women	.618		
Sexual aggression	.700		

MGRS, masculine gender role stress.
[a]Reversed.

Anderson et al., 1996; Dill et al., 1997]. Therefore, both the irritability and the friendly subscales were used in this study.

Emotional susceptibility. Caprara et al. [1985] also developed the Emotional Susceptibility Scale. This scale is composed of 20 statements designed to measure discomfort, helplessness, inadequacy, and vulnerability. Sample items include "Sometimes I cry for no reason" and "I often feel inadequate." Ten control statements that measure emotional strength (e.g., "I am not scared of the dark") were reverse scored.

Affect intensity. The Affect Intensity Measure created by Larsen et al. [1986] is composed of 40 statements about the intensity of emotional reactions to potentially emotional situations (e.g., "When I do something wrong I have strong feelings of shame and guilt").

Impulsivity. The 54-item Impulsivity Questionnaire [Eysenck et al., 1985] is composed of preference and behavior propensity questions, which were responded to on the 7-point Likert-type agreement scale. It contains three subscales: (a) impulsiveness (e.g., "Are you an impulsive person?"), (b) venturesomeness (e.g., "Do you quite enjoy taking risks?"), and (c) empathy (e.g., " Does it affect you very much when one of your friends seems upset?").

Aggression Questionnaire. We included the physical aggression (nine items), verbal aggression (five items), and anger (seven items) subscales of the Aggression Questionnaire [Buss and Perry, 1992]. These scales assess general levels of aggression and anger (e.g., "If somebody hits me, I hit back.").

Attitudes toward violence. The revised Attitudes Toward Violence Scale [Anderson et al., 2006] consists of four subscales: violence in war (12 items), penal code violence (7 items), corporal punishment of children (8 items), and intimate violence (12 items).

Sexual dominance. The Sexual Dominance Scale [eight items; Nelson, 1979] is composed of statements about gaining sexual pleasure from controlling a sexual partner (e.g., "I enjoy the feeling of having someone in my grasp.").

Hostility toward women. The 21-statement Hostility Toward Women Scale [Check et al., 1985] measures anger directed at women (e.g., "I feel that many times women flirt with men just to tease or hurt them.").

Adversarial sexual beliefs. The nine-statement Adversarial Sexual Beliefs Scale [Burt, 1980] measures the degree to which male and female relations are perceived as conflictual and ridden with suspicion. This scale includes negative items about both male (e.g., "A lot of men talk big, but when it comes down to it, they can't perform well sexually.") and female (e.g., "Most women are sly and manipulating when they are out to attract a man.") behavior.

Masculine gender role stress. The Masculine Gender Role Stress Scale [Eisler and Skidmore, 1987] is a 20-item instrument that requires respondents to rate phrases "in terms of their impact on you." The phrases are related to inadequacy in performing sex-role congruent behaviors (e.g., sexual impotence). The five subscales are: inferiority, inadequacy, subordination, inexpressiveness, and performance failure. A sample item is "Finding you lack the occupational skills to succeed."

Acceptance of interpersonal violence. Burt's [1980] Acceptance of Interpersonal Violence Scale consists of five statements that assess endorsement of use of physical aggression against women, such as "Being roughed up is sexually stimulating to many women."

Rape myth acceptance. Eleven items from Burt's [1980] Rape Myth Acceptance Scale were included, which were designed to measure false beliefs regarding perpetrators and victims that excuse the rapist and blame the victim (e.g., " Women who get raped while hitchhiking get what they deserve").

Impersonal sex. Malamuth et al. [1995] formed a composite of three items for this measure. Participants rated two items on a 6-point scale anchored at "never" and "every day." The items were "How often do you become sexually stimulated when you see a member of the opposite sex who you do not know?" and "How often do you masturbate?" The question "About how many times (if ever) have you been unfaithful to your spouse or partner?" was rated on a 7-point scale anchored at "0" and "6 or more."

We added the following two items: "How often do you fantasize about having a sexual encounter with a person that you do not know?" which was rated on the same 6-point scale as the first two items, and "If given the choice, please estimate how much you would prefer to know a person with whom you have a sexual encounter," which was rated on a 6-point scale ranging from "strongly prefer someone I know" to "strongly prefer someone I do not know." All of these items were included to measure sexual motives devoid of interpersonal intimacy.

Disinhibition. The disinhibition subscale of the Zuckerman et al. [1978] Sensation Seeking Scale was included. It contains ten statements (e.g., "I like wild 'uninhibited' parties.").

Conflict tactics. The physical and verbal aggression subscales (five items each) of the Straus [1979] Conflict Tactics Scale were used. The original version of the scale was designed to measure verbal and physical aggression in marital relationships. The college participants in this study were instead asked to indicate the frequency in which they have engaged in the behaviors with "a female" (instead of with their wife).

Sexual aggression. Sexual aggression was measured with the ten-item male version of the Sexual Experiences Survey [Koss et al., 1987]. Participants were asked to indicate between the numbers 0 and 6 "the number of times you have engaged in the following activities since the age of 14." The items portray various coercive sexual behaviors that range from obtaining sex play through verbal argument to gaining sex acts by threatening a woman with physical force.

RESULTS

Two different sets of analyses were conducted to maximize the gain of new information from these data. As in Malamuth et al. [1995], maximum likelihood path analyses were used to simplify the testing of hypotheses and presentation of findings from this complex data set.[1] Participants who had excessive missing data on any key measure (i.e., 20% of items from a subscale) or who reported that their sexual preference was homosexual were dropped from the analyses, resulting in a final sample size of 194 (out of the original 202).

Confluence Model Replication

We first created composite scores similar to Malamuth et al. [1995], and attempted to replicate their cross-sectional path analysis findings reported in their Figure 3 (p 364). Our analysis differs in two important ways. First, we did not measure relationship distress, because that measure concerns marital relationships, which are rare in our participant sample. Second, because preliminary analyses revealed essentially the same results for verbal and physical nonsexual aggression, we combined these two measures (average *z*-scores) into a simpler general measure of nonsexual aggression against women.

Panel A of Figure 2 displays the initial path model, derived from Malamuth et al. [1995]. This initial model did not fit our data very well from a statistical standpoint, primarily because the path linking impersonal sex to sexual aggression and the path linking masculine role stress to violent attitudes toward women were not significant, and because several paths not present in the initial model proved significant in our data. The model was modified based on modification indexes, guided by theoretical factors.

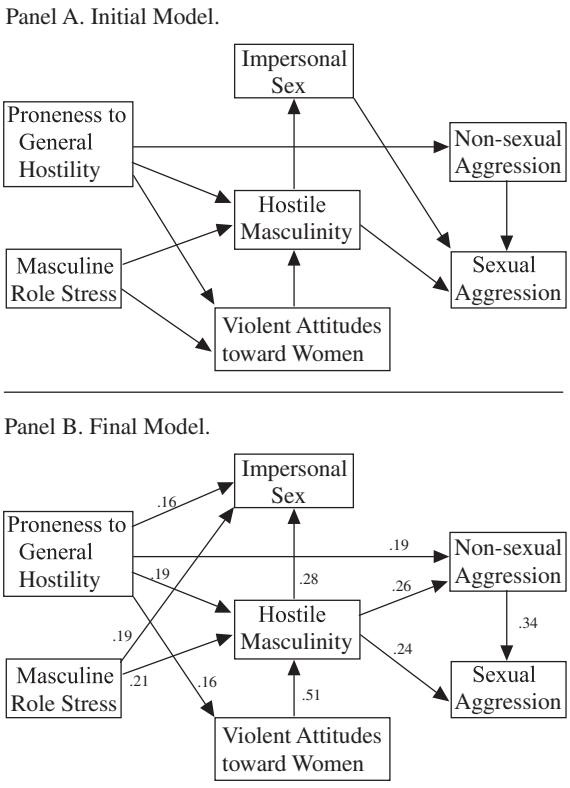

Fig. 2. Confluence Model of male aggression against women: replication results. Panel A. Initial model. Panel B. Final model. *Notes*: For the final model, GFI = .986, AGFI = .956, RMR = .045, $\chi^2(9) = 9.76$, $P > .30$. Path weights are standardized, and all are significant at $P < .05$. GFI, goodness of fit index; AGFI, adjusted GFI; RMR, root mean square residual.

Panel B of Figure 2 presents the final model, along with standardized path coefficients. This final model included only paths that were statistically significant. At a conceptual level, this model fits the Confluence Model pretty well. Hostile masculinity was affected by proneness to general hostility, masculine role stress, and violent attitudes toward women. Furthermore, hostile masculinity was a significant predictor of sexual aggression against women and (less critically) impersonal sexual behavior. These findings, in many respects, confirm the key predictions of the Confluence Model.

The three additional paths are interesting. The new path linking hostile masculinity to nonsexual

[1]We used the Proc Calis maximum likelihood procedure from SAS.

aggression against women makes considerable sense, especially in light of the composition of hostile masculinity. Two of the three subscales—hostility toward women and adversarial sexual beliefs—would both seem to predispose males toward aggressive encounters with women in nonsexual contexts as well as sexual ones. This new link is especially important from the standpoint of our main theoretical question concerning the generality of the hostile males' aggressive behavior toward women; it suggests that such males are generally aggressive toward women, not just sexually aggressive. The other two new paths—linking general hostility and masculine role stress to impersonal sex—also make sense conceptually.

In sum, the Confluence Model replication analyses yielded confirmation of several key conceptual relations among individual difference variables and both sexual and nonsexual aggression toward women. Furthermore, these results suggest that the aggressive stance taken by men who are hostile toward women generalizes beyond sexual aggression.

GAM Factor Analyses

GAM suggests additional individual factors that might be important in predicting aggression in general and thereby might predict male-on-female aggression. For this reason we included the scales listed in Table I that were not used in the replication composites. Specifically, we included measures of general physical and verbal aggressiveness, attitudes toward violence, and disinhibition. Inclusion of these scales is important to testing the specificity and generality hypotheses that are the focus of this article. To find out whether men who are hostile toward women specifically target women, one must control for more general hostile and aggressive tendencies. Otherwise, a reasonable alternative explanation exists: Perhaps men who are hostile toward women are hostile toward everyone and behave aggressively toward everyone. To more clearly test the specificity and generality hypotheses, we conducted a series of exploratory factor analyses on these 24 individual difference measures, and then used the results to conduct path analyses designed to test the specificity and generality hypotheses.

Exploratory factor analyses. Principal components factor analyses with oblique rotations (Harris–Kaiser) were conducted. Oblique rotations were chosen because theoretically the underlying factors are expected to be intercorrelated to some extent. Factors with eigenvalues greater than one were kept. Scree plots were also examined, and generally led to the same conclusions concerning number of underlying factors. One of the scales, emotional susceptibility, did not load highly on any factor in any of the analyses, and was therefore dropped. Two of the remaining 23 scales (affect intensity, impulsiveness) had multiple modest-sized loadings on at least two factors, and were therefore dropped.[2]

The final solution contained five factors. Table II presents these results, listing the largest loadings for each factor. As can be seen in Table II, the resulting five factors make good theoretical sense. Several are quite similar to the theoretically derived composites used in the Confluence Model replication analyses: hostility toward women is a broader version of hostile masculinity; masculine role stress is identical; and impersonal and dominant sex is a broader version of impersonal sex. The other two factors are both important in testing our primary hypotheses about specificity and generality of aggression against women. The general attitudes toward violence factor had no corresponding concept in the Confluence Model replication variables. The general hostility and aggression factor is similar to proneness to general hostility, but is much broader in that it includes measures of general aggressive verbal and aggressive physical behavior.

The correlations among these five factors were interesting as well. Table III displays these results. As can been seen in Table III, the factor scores for each of these five factors were all at least modestly and positively correlated with each other. The two largest correlations both involved the impersonal and dominant sex factor, which correlated strongly with hostility toward women and the general hostility/aggression factor. The two weakest correlations both involved the masculine role stress factor. Factor scores were computed based on this oblique five-factor solution, and were used as the predictor variables in the subsequent path analyses.

Path analyses. Path analyses were conducted to test the specificity hypothesis (that hostility toward women would independently predict aggression against women even when more general aggressive tendencies are statistically controlled) and the generality hypothesis (that hostility toward women would predict both sexual and nonsexual aggression against women). All potentially interesting paths were included in the initial model, as shown in Panel A of Figure 3. We again used the

[2]Keeping these scales does not change the results in any appreciable way.

TABLE II. Largest Factor Loadings for 21 Scales, 5-Factor Oblique Solution, Study 1

Scale	Hostility toward women	Masculine role stress	General attitudes to violence	Impersonal and dominant sex	General hostility and aggression
Rape myth acceptance	.746				
Violence attitudes: intimates	.713				
Acceptance of interpersonal violence to women	.784				
Adversarial sexual beliefs	.675				
Hostility toward women	.597				
MGRS: inferiority		.891			
MGRS: inexpressiveness		.877			
MGRS: subordination		.857			
MGRS: inadequacy		.729			
MGRS: performance failure		.491			
Violence attitudes: war			.853		
Violence attitudes: penal code			.819		
Violence attitudes: children			.575		
Disinhibition				.856	
Impersonal sex				.757	
Sexual dominance				.685	
Friendliness[a]					.828
General anger					.827
General physical aggression					.756
General verbal aggression					.741
Irritability					.676

MGRS, masculine gender role stress.
[a]Reversed.

TABLE III. Interfactor Correlations, Study 1

	Masculine role stress	General attitudes to violence	Impersonal and dominant sex	General hostility and aggression
Hostility toward women	.243	.320	.402	.367
Masculine role stress		.310	.349	.196
General attitudes to violence			.318	.267
Impersonal and dominant sex				.452

SAS Proc Calis procedure, set to the maximum likelihood option, to assess model fit and path weights. Not surprisingly, there were a number of nonsignificant paths. We used the modification indexes to adjust the model until only significant paths remained.

The final model, in Panel B of Figure 3, fit the data quite well and yielded several very important findings, some expected and some unexpected. Perhaps the biggest surprise, given Malamuth et al.'s [1995] results and our own replication (Fig. 2), was that masculine role stress did not significantly predict either sexual or nonsexual aggression against women, either directly or indirectly through hostility toward women. Indeed, dropping masculine role stress from the model significantly improved the overall fit.

Of greater importance are the findings relevant to the specificity and generality hypotheses. Hostility toward women was positively linked to both sexual and nonsexual aggression against women even with controls for general violence attitudes, general levels of hostility, and general levels of aggression. Furthermore, hostility toward women had a direct effect on sexual aggression that was independent of nonsexual aggression against women. Overall, these results suggest that men who are hostile toward women in terms of their attitudes, beliefs, and feelings about women do indeed specifically target women in terms of aggressive behavior, and that this specific targeting of women is more general than just sexual aggression. It includes nonsexual aggression against women as well. These findings broaden the scope of earlier work on the Confluence

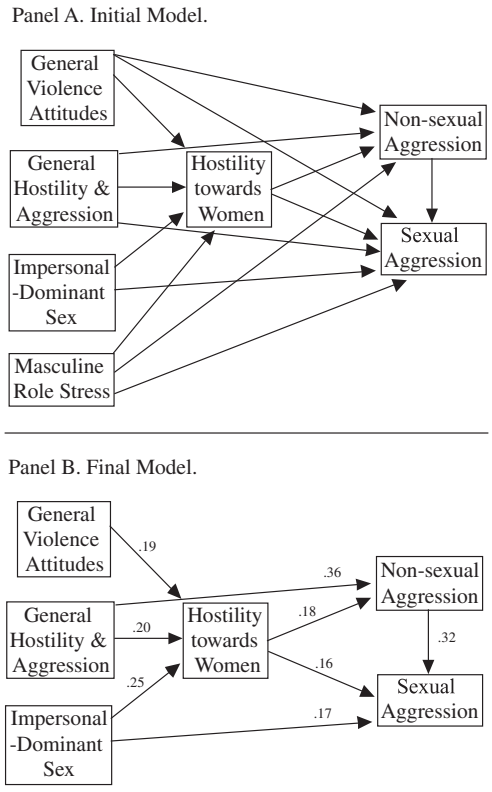

Fig. 3. Path analytic model of male hostility toward women on aggression against women. Panel A. Initial model. Panel B. Final model. *Notes*: For the final model, GFI = .997, AGFI = .986, RMR = .014, $\chi^2(4) = 1.58$, $P > .80$. Path weights are standardized, and all are significant at $P < .05$. GFI, goodness of fit index; AGFI, adjusted GFI; RMR, root mean square residual.

Model of sexual aggression against women. Study 2 provides additional tests of these specificity and generality hypotheses in a more controlled laboratory environment.

STUDY 2

Method

Participants. The same participants returned to the lab within 3 weeks of completing the questionnaires used in Study 1. Participants were randomly assigned to one of the four experimental conditions of a 2 (provocation: high vs. low) × 2 (sex of opponent: male vs. female) factorial design.

Procedures. Upon arrival at the laboratory, the participant was introduced to a male or a female confederate. Both were told that this part of the study tested how different people perform on a reaction time task. They were told that they would compete with each other in the reaction time task on separate computers. Questions were solicited and then the participant and the confederate were escorted to separate experimental rooms. Supposedly, a second experimenter explained the task to the confederate, whereas the first experimenter explained the reaction time task to the participant. The revised competitive reaction time (RCRT) task used in this study was based on revisions of Taylor's [1967] CRT task, revised by Lindsay and Anderson [2000] and Anderson et al. [2000]. The participant and the confederate ostensibly compete with each other on a series of trials to see who can respond quickest to an auditory tone by clicking a mouse button. In the RCRT this competition consists of two phases, with 25 trials in each. In Phase 1, the participant is told that he would receive white noise punishment through headphones after a trial if he responded slower than his opponent on that trial (i.e., "loses"). Furthermore, he is told that the noise levels would be set by his opponent before each trial. The participant is also told that when he "wins" a trial, no noise would be heard regardless of what his opponent had set. The participant also is informed on the computer screen of the opponent's settings after each trial, regardless of whether it was a "win" or a "lose" trial. Finally, he is told that in Phase 2 the roles would be reversed, such that the participant would set the noise levels that his opponent would hear whenever the opponent lost a trial. The participant's noise punishment settings for his opponent in Phase 2 constitute the measure of aggressive behavior.

In actuality, the computer controlled the outcomes and noise settings of the Phase 1 trials. Participants lost 50% of the trials (except that 1/2 won and 1/2 lost the first trial). Provocation was manipulated by the level of noise blasts received by the participant (and supposedly set by his opponent) in Phase 1. On scales from 0 to 10, the intensity and duration settings were 3 (70 dB, 0.75 sec) after the first trial for both provocation conditions. In the low-provocation condition the average noise intensity for the remaining 24 trials was 2.0 (65 dB), and ranged from 1 to 3 (60–70 dB). The average duration of the noise was 0.50 sec, and ranged from 0.25 to 0.75 sec. In the high-provocation condition the average noise intensity on the remaining 24 trials was 6.5 (87.5 dB), and ranged from 2 to 10 (65–105 dB). The average duration of the noise was 1.28 sec, and ranged from 0.50 to 1.75 sec. Throughout the RCRT task the experimenter was in a different room. The signal to begin the task was given by intercom.

Following the RCRT task, participants completed the State Hostility Scale [Anderson et al., 1995] and

three additional questions assessed feelings of anger toward the opponent, dislike of the opponent, and desire to harm the opponent during the RCRT. Both the anger and the harm items yielded highly skewed distributions; therefore, a log transformation was applied. The experimenter then conducted a structured interview designed to detect suspicion about the hypotheses and the deception, and to debrief the participant about the true purposes of the experiment. Degree of suspicion was rated by the experimenter on a 4-point scale. One participant was highly suspicious, but deleting his data had no appreciable impact on the results; therefore, they were kept. Oral and written debriefings followed the interview.

RESULTS

Overview

The main goal of this experiment was to examine two sets of questions. First, does hostility toward women uniquely predict aggression against women in this nonsexual aggression paradigm? More specifically, is the slope linking hostility toward women with RCRT aggression larger (more positive) when the target is female than male? Does this effect occur primarily under high provocation? Second, if there is evidence that men who are prone to sexual aggression (i.e., high on hostility toward women) are specifically more nonsexually aggressive toward women than other men, does this effect remain when other more general aggression-related individual difference variables are controlled?

However, we first present analyses designed to test the validity of the RCRT in this context, and to assess the effects of the experimental manipulations on the affect-related outcome variables. Theory and earlier work with our current version of the RCRT suggest that noise intensity (punishment) is a more sensitive measure of aggressive behavior than duration. The relative provocation effect sizes on intensity and duration settings were used to see whether this superiority of noise intensity effect was replicated in the current study.

Preliminary Data Analyses

Affect measures. The basic design was a 2 (target: male vs. female) × 2 (provocation: high vs. low) between subjects design. Recall that after completing both the provocation and the retaliation phases of the RCRT task, participants completed measures of state hostility, anger at their opponent, dislike of their opponent, and desire to harm their opponent. Means are displayed in Table IV. For state hostility, only the provocation main effect was significant, $F(1, 190) = 15.16$, $P < .001$, $d = 0.57$. High-provocation participants reported higher levels of state hostility ($M = 2.08$) than low-provocation participants ($M = 1.85$). Neither the confederate main effect nor the provocation × confederate interaction approached significance, Ps > .50.

Anger toward the opponent yielded significant main effects of confederate, provocation, and the provocation × confederate interaction, $F(1, 189) =$ 4.13, 9.18, and 4.44; Ps < .05, .01, and .05; ds = 0.30, 0.44, and 0.31, respectively. The means in Table IV reveal that sex of the opponent had no impact on anger ratings in the low-provocation condition, but that in the high-provocation conditions the participants reported higher levels of anger toward male than female opponents.

Dislike of the opponent yielded two significant main effects. High-provocation participants disliked their opponent more than did low-provocation opponents, Ms = 2.45 and 1.99, respectively, $F(1, 189) = 14.51$, $P < .001$, $d = 0.55$. Male confederates elicited more dislike than female confederates, Ms = 2.39 and 2.05, respectively, $F(1, 189) = 7.77$, $P < .01$, $d = 0.41$.

Desire to harm the opponent yielded only a marginally significant interaction, $F(1, 189) = 3.75$, $P < .06$, $d = 0.28$. The pattern for this interaction is

TABLE IV. State Hostility, Dislike of Opponent, Anger Toward Opponent, and Desire to Harm Opponent Means as a Function of Provocation and Confederate Sex

Confederate sex	Provocation	State hostility	Anger at opponent	Dislike of opponent	Desire to harm opponent
Female	High	2.06	.207	2.19	.072
Female	Low	1.83	.152	1.92	.089
Male	High	2.10	.457	2.71	.186
Male	Low	1.87	.147	2.07	.039

Anger and harm ratings were log transformed to reduce skewness.

TABLE V. Correlations Among Retaliation Competitive Reaction Time Intensity Scores and State Hostility, Dislike of Opponent, Anger Toward Opponent, and Desire to Harm Opponent

	Block 1 intensity	Block 2 intensity	Block 3 intensity	State hostility	Dislike	Anger	Harm
Trial 1 Intensity	.61***	.59***	.59***	0.20**	0.18*	.22**	.29***
Block 1 intensity		.85***	.84***	0.38***	0.26***	.29***	.21**
Block 2 intensity			.86***	0.28***	0.23**	.31***	.28***
Block 3 intensity				0.27***	0.29***	.30***	.22**
State hostility					0.28***	.48***	.20**
Dislike						.33***	.11
Anger							.51***

ns range from 192 to 200.
*$p < .05$; **$p < .01$; ***$p < .001$.

essentially the same as for the anger measure. There was little effect of opponent sex in the low-provocation conditions, but male opponents elicited greater harm ratings than female opponents in the high-provocation condition.

Aggressive behavior. Participants set punishment levels for their opponent on each of the 25 retaliation trials of the RCRT. Consistent with earlier research, four aggressive behavior measures were created for intensity settings: Trial 1 intensity (the participant's first opportunity to retaliate) and the average intensity for each of the three subsequent blocks of eight trials. Parallel measures were examined for the duration settings.

The postexperimental interviews revealed that many participants did not understand or remember to set the noise duration that their opponent would hear on "lose" trials. This was confirmed empirically by the fact that the provocation effect on Trial 1 intensity settings was more than triple the provocation effect size for Trial 1 duration settings (ds = 0.83 and 0.24). For the remaining 24 trials, the provocation effect on intensity setting was more than 5 times the effect on duration (ds = 1.62 and 0.31). Therefore, duration data were dropped from further analysis.

Earlier research with the RCRT has found that most (sometimes all) of the interesting effects emerge on Trial 1 scores [e.g., Anderson et al., 2000; Lindsay and Anderson, 2000]. This may be because Trial 1 is the first opportunity the participant has to retaliate against an opponent who had set their punishments during Phase 1 (provocation phase). In any case, this was true in the present data; therefore, Trial 1 is the focus of the analyses reported in this article.

Table V presents the correlations among the 4 measures of laboratory aggression—intensity settings on Trial 1, and the average intensity on Trials 2–9 (Block 1), Trials 10–17 (Block 2), and Trials 18–25 (Block 3)—and the 4 affect-related self-report variables assessed at the completion of the RCRT task. All of the correlations were significant except the harm/dislike correlation. For example, the state hostility correlations with the four aggression measures ranged from .20 to .38. Recall that the affect measures were collected after the RCRT task (to avoid suspicion problems).

Main Analyses: Effects of Hostility Toward Women on Nonsexual Aggression

Trial 1 aggression, no covariates. Trial 1 of Phase 2 was the first opportunity that participants had to retaliate against their opponent, who supposedly had delivered aversive noise blasts to them during Phase 1. For this reason, and based on earlier work with the RCRT paradigm, we expected most of the interesting individual differences to emerge on this first trial.

If men who are hostile toward women specifically target women, then we should find that hostility toward women interacts with opponent gender in predicting aggression in the RCRT. If such an effect occurs only under conditions of high provocation, then this would appear as a three-way interaction.

Conceptually our first analysis was a 2 (provocation: high vs. low) × 2 (opponent: male vs. female) × 2 (hostility toward women: high vs. low) analysis of variance (ANOVA). In actuality, we treated the hostility toward women factor as a continuous variable in a regression approach to maximize statistical power. Three significant effects emerged from this analysis. First, highly provoked participants were more aggressive ($M = 4.44$) than participants in the low-provocation condition ($M = 2.91$), $F(1, 185) = 31.80$, $P < .001$, $d = 0.83$. Second, the hostility toward women × opponent

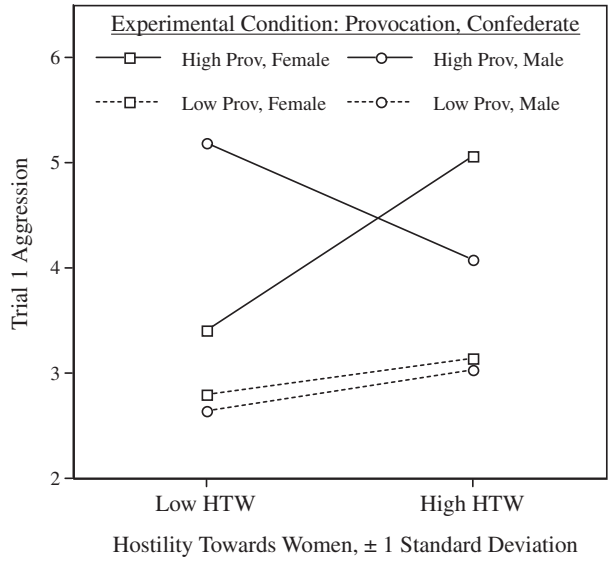

Fig. 4. Trial 1 aggression (noise intensity) as a function of provocation, confederate sex, and hostility toward women.

sex interaction was significant, $F(1, 185) = 5.48$, $P < .05$, $d = 0.34$. More importantly, the three-way hostility toward women × confederate × provocation interaction was significant, $F(1, 185) = 5.87$, $P < .05$, $d = 0.36$.

Figure 4 displays these results in the form of individual regression lines relating hostility toward women with Trial 1 intensity settings for each of the four experimental conditions. The three-way interaction is the result of the fact that the slopes linking hostility and aggression varied as a function of both provocation and confederate sex. Specifically, the slopes in the low-provocation conditions were essentially zero (Ps > .35), whereas the slopes in the high-provocation conditions were quite different for female vs. male confederates. The positive slope for the high-provocation/female condition ($b = .82$, $P < .005$, $r = .47$) indicates that as hostility toward women increased, aggression against a provoking female also increased. Conversely, the slope for the high-provocation/male condition was negative, but was not significantly different from zero ($b = -.56$, $P > .20$, $r = -.17$).

Thus, it appears that college men whose attitudes and beliefs about women fit the profile of being sexually aggressive males are not generally more aggressive, but in fact specifically target women for nonsexual physical aggression when provoked. Indeed, there was a slight tendency for such men to display less aggression toward other men.

Trial 1 aggression, with covariates. We next added all of the other four individual difference factors (masculine role stress, general attitudes to violence, impersonal and dominant sex, general hostility and aggression) to the model to test the robustness of the hostility toward women × opponent sex × provocation interaction displayed in Figure 4. The results were essentially the same. The main effect of provocation ($P < .001$), the opponent sex × hostility toward women two-way interaction ($P < .05$), and the three-way interaction ($P < .005$) remained significant.

We also tested the robustness of the hostility toward women results when the four affective measures (state hostility, anger, dislike, desire to harm) were in the statistical model. Again, the main effect of provocation ($P < .001$), the opponent sex × hostility toward women two-way interaction ($P < .05$), and the three-way interaction ($P < .05$) remained significant.

Overall, these results reveal that men who score high on hostility toward women specifically target women, even for nonsexual physical aggression, as measured by our laboratory-based RCRT task, even when a host of correlated factors that are related to sexual and nonsexual aggression are statistically controlled. In other words, these results provide further support to both the specificity and the generality hypotheses: women are specifically targeted for general forms of aggression even when that aggression is clearly nonsexual.

Supplementary Analysis of Blocks 1–3

As noted before, earlier research has found that most of the interesting effects in studies using the RCRT paradigm emerge in the early trials, especially Trial 1. For that reason our analyses have, to this point, focused exclusively on Trial 1 intensity settings. In this section we examine the effects of the experimental manipulations and hostility toward women on intensity settings in Trials 2–25, broken down into 3 blocks of 8 trials each. We conducted a 2 (provocation: high vs. low) × 2 (opponent: male vs. female) × 2 (hostility toward women: high vs. low) × 3 (Blocks: 1–3) ANOVA, with the blocks factor treated as a repeated measures factor and the hostility toward women factor as a continuous variable. Interestingly, (and not surprisingly) none of the hostility toward women × opponent interactions (two-way, three-way, or four-way) were significant, all Ps > .30. Apparently, the aggression-enhancing potential of the combination of high hostility and provocation by a woman was spent on the first opportunity to retaliate. Most likely, this reflects a type of social justice or initial outburst

effect seen in other aggression studies that have used the RCRT paradigm [e.g., Anderson et al., 2000, 2004].

DISCUSSION

Key Findings

Both studies focus on two main questions concerning the specificity and the generality of male-on-female aggression. First, are there individual difference variables that specifically predict or predispose certain males to specifically target women? Earlier research has identified a cluster of such variables that predict male-on-female aggression, but has not tested the alternative hypothesis that men who are especially hostile and aggressive toward women might be more aggressive against everyone, male and female. The GAM suggests that such a distinction is important to a complete understanding of aggression against women. Both of the present studies, using very different measures of aggression, found strong evidence that a cluster of hostility toward women variables known to predict sexual aggression do in fact specifically predict nonsexual aggression toward women even after controls for more general aggressive attitudes and behaviors are in place. The predictive cluster identified in the present studies is extremely similar to the cluster identified by Malamuth and colleagues in their Confluence Model of sexual aggression, and conceptually may well be the same. In other words, men who score highly on this cluster specifically target women. Indeed, there is some evidence from the Trial 1 aggression scores in Study 2 that these same men are slightly less aggressive against other males than are men who have low scores on this hostility toward women factor. In a sense, it is as if these men are very intolerant of provocations by women.

The second main question was whether men who have this cluster of hostile attitudes and beliefs tend to aggress against women primarily (or exclusively) in sexual contexts, or whether their aggressive tendencies against women are more general to other nonsexual contexts as well. Once again, earlier research has been largely focusing on predicting and understanding sexual aggression, but the GAM suggests that a broader view would be informative. In addition, once again, both of the present studies yielded evidence that the aggressive tendencies are general across types of aggression. Study 1 found that hostility toward women predicted nonsexual aggression even after controls for general aggressiveness were in place. Study 2 found a similar generality of aggression targeted at women on a nonsexual physical aggression laboratory measure, even after controlling for general aggressive attitudes and behaviors.

Integrating the GAM and the Confluence Model

The GAM and the Confluence Model complement each other quite nicely, and are fairly easily integrated. Basically, the Confluence Model is very domain specific, focusing on male sexual aggression against women. The constellation of variables identified by the Confluence Model as predictors (both concurrently and longitudinally in some studies) fits nicely into GAM's predictions as what general types of individual difference variables likely play a role in various forms of human aggression. Figure 5 displays one such integration, focusing on episodic process of GAM included in Figure 1. The Confluence Model adds more specific individual difference variables as inputs that influence the person's *present internal state*, variables that are specific to male-on-female aggression. Furthermore, it highlights the importance of the combination of these person variables with three critically important situational variables in understanding the likelihood and the form of male-on-female aggression, specifically provocation, sex of target, and aggression opportunity. The combined model notes that the

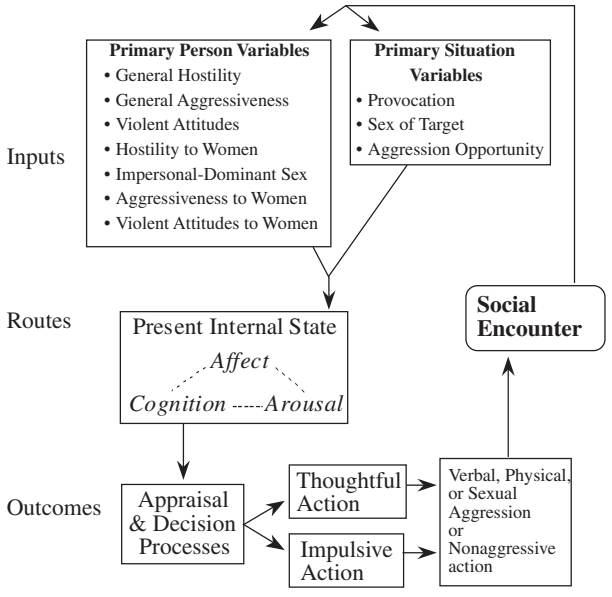

Fig. 5. An integration of the General Aggression and Confluence Models: episodic processes.

action taken may consist of verbal, physical, or sexual aggression, or nonaggression.

Finally, this integrated model also is consistent with recent genetic research. Johansson et al. [2008] examined genetic and nonshared environmental effects on male sexual coercion, psychopathy, and alcohol use. They found evidence of a common latent factor underlying all three of these behavioral patterns; this factor had a very large genetic component. This agrees with our data and the integrated model in terms of the generality effects across type of aggression and the general hostility effects on aggression against women. However, only a small portion of sexual coercion was attributable to this latent factor, and there was considerable evidence of additional environmental and genetic effects specific to sexual coercion. This also fits our data and integrated model that some men are specifically aggressive against women. In addition, of course, the GAM includes genetic factors as one source of individual differences in aggressive tendencies.

Limitations and Future Directions

Obviously, a thorough understanding of male-on-female aggression cannot be obtained from any small set of studies. Though the present studies add several critically important pieces to the puzzle of male-on-female aggression, that puzzle remains incomplete. One limitation of this study is that Study 1 is a cross-sectional correlation study, making causal claims somewhat risky. Of course, causal theoretical models are testable by correlational data in the sense that such data could disconfirm the model. Thus, the fact that the Study 1 results correspond nicely to earlier theoretical and empirical predictions (some based on longitudinal data) lends further support to the emerging theoretical picture. A second limitation concerns the participant population used in the present studies. Many of the men in this college student population have not yet been in long-term relationships, and therefore some of the types of male-on-female aggression that routinely appear in domestic relationships (and in criminal courts) are certainly underrepresented. Of course, this limitation can also be seen as a strength, in that the emerging theoretical model appears to fit this group of relatively young participants whose relationship patterns with women are, in some cases, still developing. In other words, the considerable overlap at a conceptual level between our findings and those of earlier studies with older populations indicates that the underlying processes in male-on-female aggression are operational at a fairly young age and also indicates considerable generalizability.

Much additional work remains, including longitudinal study of male-on-female aggression with particular attention to the specificity and generality questions addressed in the present two studies. Another direction for future research concerns some of the findings from Study 2. Specifically, the finding that hostility toward women predicted nonsexual physically aggressive behavior toward women under conditions of high provocation is important for future research. Although laboratory studies such as this one have been shown to have high external validity [e.g., Anderson and Bushman, 1997], there are many contextual factors in real-world settings that could conceivably exaggerate or mitigate the interactive patterns observed in this specific laboratory setting. For example, is the interactive role of provocation the same with acquaintances and intimate partners as it is with strangers? Is provocation an even more important factor in those contexts? A third direction for future research concerns the genesis of the various individual difference factors that constitute the hostile masculinity or hostility toward women factors. What are the developmental factors at work? For example, how are modeling and social-learning processes involved? What are the genetic components, and how do they interact with environmental components such as modeling and social-learning experiences? Here is another place in which the GAM proves useful, with its emphasis on the development of personality structures [Anderson et al., 2007]. Such a discussion is beyond the scope of this study, but clearly would be useful in future work.

CONCLUSIONS

In total, three important conclusions emerged from the present investigation, clarifying previous research and specifying relevant variables to be used in future research. First, hostility toward women is a separate construct from general hostility in its ability to predict increases in male aggression against women and decreases in male aggression against men. In other words, hostility toward women specifically predicts heightened aggression against women. This is the first set of studies to clearly test this hypothesis. Second, this constellation of individual differences predicts aggression against women in general, not just sexual aggression. Third, the integration of the Confluence Model and the

GAM increases the utility of each, and can serve as a guide to other domain-specific research that might benefit from similar integrative efforts.

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