

Social Motives and Cognitive Power–Sex Associations: Predictors of Aggressive Sexual Behavior

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The present study investigated whether implicit social motives and cognitive power–sex associations would predict self-reports of aggressive sexual behavior. Participants wrote stories in response to Thematic Apperception Test pictures, which were scored for power and affiliation–intimacy motives. They also completed a lexical-decision priming task that provided an index of the strength of the cognitive association between the concepts of “power” and “sexuality.” For men, high levels of power motivation and strong power–sex associations predicted more frequent aggression. There was also an interaction: Power motivation was unrelated to aggression for men with the weakest power–sex associations. For women, high levels of affiliation–intimacy motivation were associated with more frequent aggression. Strong power–sex associations were also predictive for women but only when affiliation–intimacy motivation was high.

Sexual aggression is a widespread problem with devastating consequences for both victims and society at large. In a recent review, Koss (1993) stated that estimates of the prevalence of rape in adult women range from 14% to 25% in most studies; 1997 statistics from the National Center for Health Statistics (Abma, Chandra, Mosher, Peterson, & Piccinino, 1997) fall within that range, with 20% of women reporting ever having been forced to have intercourse. The personal consequences to the victim of an assault are often severe (for reviews, see Koss, 1993; Koss, Heise, & Russo, 1994; and Resick, 1993). These consequences include depression (Wyatt, 1992), posttraumatic stress disorder (Solomon & Davidson, 1997), general ill health (Golding, Cooper, & George, 1997), and increased risk for suicide (Davidson, Hughes, George, & Blazer, 1996). Other forms of coercive sexuality, such as sexual

harassment and sexual abuse also have serious societal, personal, and economic consequences (Finkelhor, 1979; Herman, 1992; O’Donohue, 1997). Finding ways to prevent sexual aggression is therefore an important goal and requires an understanding of the correlates and causes of these behaviors.

Predicting Sexual Aggression

Sexual Aggression in Men

There is a substantial body of work on the etiology of rape and other forms of sexual aggression in men (Drieschner & Lange, 1999; Hall, Hirschman, Graham, & Zaragoza, 1993). Although some studies have focused on correlates relating to family and peer environments (Ageton, 1983) or cultural socialization (Hall & Barongan, 1997), most researchers have studied variables related to the individual, often examining only one or a small number of factors at a time.

Recently, however, several scholars have proposed integrated theories to explain and predict sexual aggression in men. One commonality among these theories is the proposition that a confluence of variables needs to be in place before sexual aggression will occur. For example, Hall and Hirschman (1991) proposed a model that considered four separate motivations for rape: a physiological arousal to violent or forceful sexual acts, cognitive justifications for sexual aggression, negative affective states or affective disinhibition, and antisocial personality characteristics. Hall and Hirschman argued that all four motivations are typically present but that each may be of primary importance for a particular subtype of rapist. Barbaree and Marshall (1991) also hypothesized that different models may be appropriate for different kinds of aggression or different types of rapists. They discussed a set of models describing potential relationships between sexual arousal and sexual aggression, paying particular attention to the role played by disinhibition.

The model that currently has the most empirical support is one developed by Malamuth (1998). This evolutionary-based theory

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proposes that there are three distinct paths that lead to sexual aggression in men: a preference for short-term rather than long-term mating strategies (also referred to as sexual promiscuity or impersonal sex), a collection of attitudes and emotions that indicate hostility toward women, and a personality in which dominance orientation is stronger than nurturance orientation. Malamuth detailed several developmental antecedents of each of these constellations of variables and argued that sexual aggression is most likely when all three constellations are present. He and his colleagues have supported the model in a number of empirical studies (Dean & Malamuth, 1997), including a recent 10-year longitudinal study (Malamuth, Linz, Heavey, Barnes, & Acker, 1995).

Sexual Aggression in Women

In contrast to the well-developed body of empirical and theoretical work on male sexual aggression, relatively little is known about sexually coercive women. The work to date has been mostly limited to examination of prevalence or incidence rates, with some attention paid to understanding the sequelae or correlates of victimization by a female aggressor (Muehlenhard & Cook, 1988; Struckman-Johnson, 1988).

Byers and O'Sullivan (1998) reviewed 13 studies that provided information for both men and women on the prevalence of sexual victimization or perpetration. Consistently across these studies, men report engaging in sexually coercive behaviors more often than do women and women report being the victims of sexual coercion more often than do men. However, prevalence rates of female aggression are often nonnegligible and range from 0% to 1% when women report their own serious and forceful actions (e.g., rape, inflicting serious sexual abuse, or threatening with a weapon) to 40% to 50% when men report their own victimization and the behaviors are verbal rather than physical (e.g., being pressured with arguments). Struckman-Johnson and Struckman-Johnson (1998) also reported that between 1% and 50% of men or boys (age range = 16–40 years) report some sexual coercion from women, with the wide variation in rates reflecting differences in the type of aggression studied and the wording and context of the questions asked.

Only a handful of studies have attempted to assess the causes or correlates of women's sexual aggression; these few studies have been limited in scope. Burke, Stets, and Pirog-Good (1988) found that cognitive justifications for aggression and greater involvement in the intimate partnership (e.g., frequent contact or relationship of long duration) were predictive of women's aggression. P. B. Anderson (1998) found that women's scores on Burt's (1980) Adversarial Sexual Beliefs Scale were correlated with their self-reported aggressive or coercive behavior; childhood sexual abuse was also predictive of aggressive sexual behavior. A similar finding was reported by Christopher, Madura, and Weaver (1998)—women with hostile attitudes toward men reported more sexual aggression. In addition, past aggression and greater amounts of relationship conflict were (not surprisingly) also predictive of aggression. These findings are consistent with results from studies of men, suggesting that at least some of the processes that lead to sexual aggression may be similar across gender. Of course, with so little data, no firm conclusions about the etiology of sexual aggression in women can yet be drawn.

Implicit Measures of Personality

Studies of sexual aggression that focus on intrapersonal constructs have relied mainly on explicit self-report measures (as, indeed, have most studies of personality). These measures have many strengths—they are easy to administer and score and in general are highly reliable and have demonstrated validity and utility in predicting a host of behaviors (including sexual aggression). At the same time, however, these measures have a number of shortcomings. For example, there is evidence that research participants may not be able to give accurate reports about their cognitive processing (Nisbett & Wilson, 1977). In addition, features of a questionnaire, such as wording or format, can have strong effects on participant responses (Schwarz, 1999).

Implicit measures provide an alternative to self-report questionnaires. Although measures of this type have a long history (e.g., Bartlett, 1932; C. D. Morgan & Murray, 1935), their use as research measures of individual differences has not been widespread. In a recent theoretical review, however, Greenwald and Banaji (1995) called for the use and development of individual-difference measures of implicit social cognition. In the present study, I heed that call, using two sets of implicit measures to predict sexual aggression—one with a long research history (social motives), the other relatively new and innovative (cognitive power–sex associations).

Implicit Social Motives

The idea that there are psychological forces or processes (whether conscious or unconscious) that cause goal-directed behavior, although not universal, has appeared in the work of many influential psychologists (Cattell, 1957; Erikson, 1963; Freud, 1937/1964; Maslow, 1954; Rogers, 1951). One list of these more or less universal "needs" or motives was developed by Murray (1938); it includes motives for order, play, nurturance, power, affiliation, sex, and understanding. Every person can be assumed to be driven to at least some extent by every motive; however, there are also reliable individual differences in the strength of each motive. The relative importance or strength of motives may change from domain to domain (within an individual), and relative importance may also vary depending on stage of life. Again, however, there is enough consistency across situation and time to consider a *motive disposition* to be a stable characteristic of personality.

A more explicit working definition of an implicit social motive is "a disposition to have a particular affectively-toned, goal-centered associative network aroused or activated" (Winter & Stewart, 1978, p. 396). Thus, motives have something in common with chronic accessibility of an idea or concept (Higgins & King, 1981); however, motives have an emotional component as well. The definition also highlights the goal-directed nature of a motive: Motives drive or induce behavior.

A clear conceptual and empirical distinction can be made between implicit and explicit (or self-attributed) motives (McClelland, Koestner, & Weinberger, 1989). Implicit motives are typically measured using a research version of the Thematic Apperception Test (TAT; C. D. Morgan & Murray, 1935), in which participants tell stories about picture or sentence cues; these stories are then coded for themes or images related to the motives of

interest. Self-attributed motives, on the other hand, are measured by means of self-report questionnaires—a direct rather than indirect method. The two measures of motives generally do not correlate. McClelland (1980) concluded that whereas implicit motives are better at predicting long-term, unstructured or “operant” behaviors, self-attributed motives are better at predicting immediate actions taken in response to structured situations. In addition, McClelland et al. argued that implicit motives may be more primitive and affectively based, and self-attributed motives may represent cognitive elaborations (e.g., beliefs about the self).

Two motives are assessed in the present study: power motivation (a concern with having impact) and affiliation–intimacy motivation (a concern for friendship and warm, intimate contact with others). Power and affiliation–intimacy (or agency and communion; Bakan, 1966) are often considered to be central to an understanding of human experience and psychology; these two motives are therefore likely to be important in predicting most behaviors. In addition, however, affiliation–intimacy is likely to be especially relevant to sexual behavior, and power is likely to be especially relevant to aggressive behavior. These motives are described further, and relevant literature are reviewed, below.

The Power Motive

The *power motive* is defined as a concern with having impact on other people or on the world at large. Investigation of the behavioral correlates of power motivation in adults has led to the hypothesis that this motive can be channeled in either a prosocial or an antisocial direction. Especially among men, power motivation has been correlated with physical and verbal aggression (McClelland, 1975; Winter, 1973); an exploitive negotiating style (Terhune, 1968); and measures of profligate sexuality, such as greater number of sexual partners (Kratzsch, 1971, as cited in Winter, 1973), earlier age of first intercourse (Winter, 1973, p. 177), and reading pornographic magazines (Winter, 1973, p. 139). On the other hand, power motivation has also been shown to correlate with more socially acceptable actions. For example, it correlates with membership in voluntary organizations (Watson, 1974; Zurbriggen & Franz, 1994); inspirational leadership (McClelland & Burnham, 1976); success as a manager (Winter, 1991b); and in political leaders, both performance and subjective ratings of greatness (Spangler & House, 1991; Winter, 1987).

There is evidence that a high level of power motivation is detrimental to intimate, romantic relationships, at least for men. In a study of college-age dating couples, Stewart and Rubin (1976) found that for both men and women, power motivation was correlated with anticipation of future problems; in addition, men’s power motivation was negatively related to satisfaction with the relationship. Men high in power motivation were also more likely than men low in power motivation to have broken up with their partner 2 years later; this relationship was not found for women, however. Schwabish (1990) found that power motivation was negatively related to relationship satisfaction for both heterosexual and homosexual cohabiting men. Finally, two studies have reported a relationship between power motivation and physical or psychological abuse in intimate relationships. Dutton and Strachan (1987) found that men’s level of power motivation was significantly correlated with self-reported physical abuse in intimate relationships (there were no female participants in their study).

Mason and Blankenship (1987) conducted an analogous study using male and female undergraduates as participants. Again, power motivation in men was positively related to physical abuse, but there was no such association for women.

The Affiliation–Intimacy Motive

The *affiliation–intimacy motive* is defined as a concern for friendship or warm, intimate relationships with others.¹ It can be seen very early in life as young children reach out for physical and emotional contact with caregivers. Later in life, affiliation–intimacy motivation correlates with behaviors relating to friendship and interpersonal relationships, such as writing letters, making telephone calls, and spending time talking with others (Boyatzis, 1972; Constantian, 1981; Lansing & Heyns, 1959). People high in the need for affiliation–intimacy also seem concerned with protecting the feelings of others they are close to, even at some cost to themselves. Affiliation-motivated participants choose incompetent friends rather than competent strangers as their partner for performing a task (French, 1956), are willing to reduce their own performance at a competitive task to make a friend’s performance look better (Walker & Heyns, 1962), and engage in more affiliative and fewer antisocial acts in small-group interaction (Fishman, 1966).

Warmth and reciprocity characterize the interpersonal relationships of people high in intimacy motivation. These individuals describe their friendships as involving openness, listening to the other person, and concern for the other (McAdams, Healy, & Krause, 1984); in addition, they are described by peers as warm, sincere, appreciative, and loving (McAdams, 1980). In interpersonal role-playing scenarios, they laugh more, stand closer to other participants, say “we” more, and give fewer commands (McAdams & Powers, 1981).

People high in affiliation–intimacy motivation report more satisfaction with their intimate relationships (McAdams & Vaillant, 1982; Schwabish, 1990). However, under some circumstances, affiliation–intimacy motivation may be damaging to an intimate relationship. When predicting physical aggression by women, Mason and Blankenship (1987) found a triple interaction between stress, affiliation motivation, and activity inhibition (a measure of self-control or behavioral inhibition). Those women self-reporting high stress who were also high in affiliation motivation and low in activity inhibition inflicted the most physical and psychological abuse on their partners. This finding is somewhat paradoxical but not completely without precedent. Although affiliation–intimacy motivation is generally linked with warm, friendly actions, there is also a small but consistent set of findings linking affiliation motivation with defensiveness and “prickliness” in the face of threat (Byrne, 1961; Terhune, 1968).

¹ A scoring system for intimacy motivation was developed by McAdams (1980) to improve on the affiliation-motivation scoring systems developed by Veroff and others (Atkinson, Heyns, & Veroff, 1954; Shipley & Veroff, 1952). Although there are both theoretical and empirical differences between intimacy and affiliation motives, the scoring system used for the present study incorporates elements of both systems (and hence is referred to as affiliation–intimacy). It is, therefore, appropriate to review results from studies on both affiliation and intimacy motives.

Psychological Connections Between Power and Sex

A number of scholars have described or developed theories about connections between power and sexuality. Feminist theorists such as Dworkin (1981, 1987) and MacKinnon (1987, 1989) focused on the confluence of violence and sexual arousal, arguing that sexuality and sexual arousal are inextricably linked with power, dominance, and hierarchy. Force and sex do not simply co-occur but are also in some sense equivalent, at least for sexual aggressors and perhaps, to a lesser extent, for other men as well.

This attention to the merging of sex and power echoes a much earlier analysis by Otto Rank, a disciple of Freud. Rank (1914) described the ways in which power and sexuality have been used as metaphors for each other. For example, the conquest of a city is often compared to the conquest of a woman. The reverse is also true, with language related to war used to describe men's sexual encounters with women. Rank's metaphorical analysis is supported by empirical work in cultural anthropology. In a societal-level study, Sanday (1981) compared relatively "rape-free" with "rape-prone" societies. She found a positive relationship between rape and variables related to violence, for example, war as frequent or endemic, the practice of raiding other groups for wives, and the presence of an ideology of male toughness.

One theme that arises in both empirical and theoretical work, then, is the assertion that sexual aggression comprises a confluence or fusion of power and sex. If this assertion is correct, it suggests that there will be a mental or psychological link between power and sex in the minds of people who are likely to sexually aggress. Psychologists are well equipped to develop suitable techniques for investigating whether such links exist and, if so, whether they are more common in people who engage in sexually aggressive behavior. Although substantial progress in outlining the correlates of sexually aggressive behavior has been made, only a small fraction of this work has focused specifically on intrapsychic connections between sex and power.

One way to categorize links of this nature is to contrast connections that are purely cognitive with those that also have an arousal or emotional component. A cognitive association would be a connection between the idea or concept of "power" and the idea or concept of "sex"—when one thinks about power, one thinks about sex. In contrast, an affective connection would include emotional or sexual arousal—when one thinks about power, one becomes sexually aroused. This latter type of connection has been more extensively researched; however, there are a small number of studies that have considered the purely cognitive connection.

Affective Power–Sex Associations: Attraction to Sexual Aggression

The majority of empirical work examining individual differences in connections between power and sex has looked for "hot" connections—the occurrence of sexual arousal when depictions of aggressive sex are presented. In a typical study (e.g., Ceniti & Malamuth, 1984), the researcher measures (generally, male) participants' self-reported and physiological (e.g., penile tumescence) arousal to depictions of rape and to mutually consensual sex. On the basis of these data, participants are categorized as either force-oriented (i.e., power and sex are linked for them), non-force-oriented, or unclassifiable, and behavioral or attitudinal correlates

are measured. Force orientation has been found to correlate with acceptance of rape myths, belief that male dominance is justified, acceptance of domestic violence, and belief in stereotyped roles for women in relationships (Malamuth, Check, & Briere, 1986); hostility toward women, dominance as a personal motive for engaging in sex, and aggressive behavior in sexual situations (Malamuth, 1986); self-reported likelihood of sexual assault (Murphy, Coleman, & Haynes, 1986); and greater amounts of punishment administered to a female confederate (Malamuth, 1988). Very little is known about women who are sexually aroused by violent sex, but they (like men) may be more tolerant of sexual aggression; in addition, they may suffer from low self-esteem (Mayerson & Taylor, 1987).

Cognitive Power–Sex Associations

In contrast to the studies described above, which are specifically concerned with arousal to power or dominance, several recent studies (Bargh, Raymond, Pryor, & Strack, 1995; Pryor & Stoller, 1994) have used paradigms that ignore the affective or arousal component of linking power and sexuality and have focused instead on the cognitive connections between these two concepts. In the study by Bargh et al. (1995), for example, male participants were subliminally primed with power, sex, or neutral words; their task was to pronounce a power, sex, or neutral target word. Men high in the likelihood to sexually harass (as measured by a self-report instrument) were faster at pronouncing sexuality-related words when primed with power words than they were at pronouncing these same words when primed by neutral words. They also were faster at pronouncing sexuality-primed power words than neutral-primed power words, suggesting that the cognitive association between power and sexuality was bidirectional. There was no priming effect for the men who scored low on likelihood to sexually harass. Using a different measure related to coercive sexuality, a modified version of Malamuth's (1989) Attraction to Sexual Aggression Scale (ASA), Bargh et al. found evidence of a unidirectional power–sex connection in men scoring high on this scale. That is, for these men, sexuality words were pronounced faster when primed by power words, but power words were pronounced no faster when primed by sexuality words than when primed by neutral words. Again, no differences in pronunciation speed were seen in men with low scores on the ASA. Note that neither Bargh et al. nor Pryor and Stoller (1994) included female participants in their studies. Therefore, it is an open question whether cognitive associations between power and sex exist in women and, if they are present, whether they are correlated with sexually coercive behavior.

The Present Study

In the present study, implicit measures of personality were used to predict self-reported sexual aggression or coercion in both men and women. The predictors were implicit social motives (power and affiliation–intimacy) and the strength of the cognitive associations between power and sexuality and between sexuality and power. Because strong impression management concerns are likely to arise when answering questions related to aggression or sex, a measure of social desirability was also included.

Relationship Between Cognitive Power-Sex Associations and Social Motives

Cognitive power-sex associations have only been investigated in a handful of studies (and only in men); they have never been measured in concert with social motives. One goal of the present study, then, was to determine the relationships between these distinct aspects of personality—power-sex connections, affiliation-intimacy motivation, and power motivation.

Making predictions about these relationships is difficult both because the power-sex measure is so new and because a detailed account of the cognitive architecture that comprises a motive such as power motivation has never been written. However, the conceptualization of motives as “associative networks” suggests that individuals scoring high in power motivation may have links between power and many other nodes in memory. If so, there would be a higher probability (than in people low in power motivation) of a link between power and all other concepts, including sex. By this logic, one would predict a positive correlation between power motivation and power-sex associations, although perhaps small in size. Similarly, affiliation-intimacy motivation may be correlated with power-sex associations but probably only in individuals in whom the concepts “affiliation” and “sex” are very closely linked. Thus, averaged over the entire sample, there may be no correlation between power-sex associations and affiliation-intimacy motivation.

Predicting Aggressive Sexual Behavior

The main goal of the present study was to understand the relationship between the predictor variables and coercive sexuality in both men and women. Previous research suggests that, for men, power motivation will be correlated with aggression. Making predictions for women is more difficult because fewer data are available; however, if an effect of power is present, one would expect it to be positive. Affiliation-intimacy motivation is generally associated with positive relationship outcomes; this would suggest that a negative correlation between affiliation-intimacy motivation and aggressive sexual behavior will be seen. However, because affiliation-intimacy motive sometimes correlates with aggressive behavior (typically under conditions of threat), a null or negative correlation is also possible.

Strong cognitive power-sex associations are expected to predict sexual aggression in men. There are no previous data for women, so predictions are necessarily tentative. However, findings from the very few studies investigating the personality correlates of sexual aggression in women have not been strikingly different from those with only male participants. Therefore, there is no *a priori* empirical reason to hypothesize gender differences in the relationship between power-sex associations and sexual aggression. Following Bargh et al. (1995), one may find results to be different for power→sex and sex→power associations.

Summary

The study design was thus intended to fulfill a number of goals. First, it contributes to well-developed theories on the etiology of male sexual aggression by using implicit rather than self-report measures of relevant aspects of personality and by testing an

interactive model. Second, it adds to the very small body of work investigating sexual aggression by women. Finally, it makes a contribution to the literature on implicit social motives and intimate relationships, especially because many previous studies have not included women. One additional advantage of the study is that participants were recruited from a more diverse population than is typical for research on sexual aggression.

Method

Participants

Participants were 79 men and 79 women between the ages of 21 and 45, recruited from the Ann Arbor, Michigan, community. Participants were recruited through notices advertising pay for participation in a study on romantic relationships. All the participants indicated that their sexual orientation was primarily heterosexual. These individuals were a subset of a larger pool of 102 men and 92 women, of whom 2 (1%) did not indicate their sexual orientation and 22 (11%) identified themselves as primarily bisexual or homosexual. Data from these individuals are not included in the present article because the number of gay, lesbian, and bisexual participants was not large enough to permit quantitative analysis of the sexual orientation variable and because both theory and preliminary analyses suggested that sexual orientation might be a significant moderator. Eleven participants were excluded from the study because they performed a pilot version of the computer task used to assess power-sex associations; their scores on this variable would not be comparable with the scores of other participants. One participant was excluded because he did not answer the aggressive sexual behavior questions.

All the participants indicated that they were right-handed, native English speakers (or had learned English before the age of 5), with normal, near-normal, or corrected-to-normal vision. Individuals were excluded from the study if they reported dyslexia, untreated attention deficit-hyperactivity disorder, or recent (previous 2 years) in-patient psychiatric or substance abuse care.

Participants provided demographic information about their age, occupation, education, and ethnic background. The mean age for men ($M = 29.2$, $SD = 7.0$, $Mdn = 27.0$) did not differ significantly from the mean age for women ($M = 29.9$, $SD = 8.0$, $Mdn = 27.0$), $t(156) = -0.63$, $p = .53$. Approximately three fourths of the participants were White. The frequencies for men were as follows: 60 (76%) White, 2 (3%) African American, 6 (8%) Asian, 2 (3%) Latino, 4 (5%) of biracial/mixed heritage, and 5 (6%) of other ethnic/racial background or uncodable. For women, the frequencies were as follows: 56 (71%) White, 4 (5%) African American, 3 (4%) Asian, 5 (6%) Latina, 6 (8%) of biracial/mixed heritage, and 5 (6%) of other ethnic/racial background or uncodable.

The sample was highly educated; all the participants had at least a high school education, and 117 (74%) had at least a bachelor's degree. About one third of the participants were full-time students—33 (42%) of the men and 27 (34%) of the women. Seventeen of the men (22%) and 19 of the women (24%) were currently married.

Measures and Instruments

Motives

A research version of the TAT (C. D. Morgan & Murray, 1935) was used to measure implicit social motives. Participants wrote imaginative, fictional stories about picture cues. Five pictures (used in numerous previous studies) were presented in the following order: ship's captain, two women in chemistry laboratory, man at desk, couple by bridge, and trapeze artists. Pictures are reproduced in the book edited by C. P. Smith (1992, pp. 633–637).

Every sentence written in the stories was scored for affiliation–intimacy and power motivation using Winter’s (1994) running text system. This scoring system is based on the systems developed by McAdams (1980) for intimacy motivation; by Heyns, Veroff, and Atkinson (1958) for affiliation motivation; and by Winter (1973) for power motivation. A detailed description of the development of the running text scoring system can be found in the chapter by Winter (1991a). Briefly, power motivation is scored whenever there is an indication of impact, control, or influence. There are six scoring categories: (a) strong, forceful actions that inherently have impact on other people or the world at large; (b) control or regulation; (c) attempts to influence, persuade, convince, make or prove a point, or argue; (d) giving help, advice, or support that is not explicitly solicited; (e) impressing others or the world at large, or mention of fame, prestige, or reputation; and (f) any strong (positive or negative) emotional reaction in one person or group to the action of another person or group. Affiliation–intimacy motivation is scored whenever there is indication of establishing, maintaining, or restoring friendship or friendly relations. Specifically, the following four types of images are scored: (a) expression of positive, friendly, or intimate feelings toward others; (b) sadness or other negative feeling about separation or disruption of a friendly relationship, or wanting to restore it; (c) affiliative companionate activities, such as parties or friendly small talk; and (d) friendly nurturant acts, such as consoling or sympathetic concern.

Stories for the first TAT picture were scored first, followed by stories for the second TAT picture, and so forth. For each story, scoring began with a different, randomly chosen participant and continued in numerical order until all protocols were scored. Stories were labeled with a code number; the coder was blind to any other information about the participants.

I completed all the scoring. Previously, I had demonstrated expertise at using the running text scoring system; percentage category agreement with practice materials provided by Winter (1994) was .90 for both motives. As a further assurance of coding reliability, stories from 20 randomly selected participants were coded by a second independent scorer, who was not provided with any other information about the participants. Interrater reliability was $r = .90$ ($p < .005$) for both power and affiliation–intimacy motives.

To correct for differences in motive scores that might be due to differences in verbal fluency, the total number of motive images (summed across all five stories) were divided by the total number of words written (summed across all five stories). These scores were then multiplied by 1,000 to produce the following: number of power images appearing per 1,000 words written and number of affiliation–intimacy images appearing per 1,000 words written. This method of correcting for verbal fluency is described by Winter (1994).

Cognitive Power–Sex Associations

A computerized priming task was used to measure the strength of the associative link between the concept “power” and the concept “sexuality.” Shorter reaction times (RTs) to respond to power–sex pairings are assumed to be evidence for a stronger association between the two concepts. The details of this priming task are described below.

Self-Reported Aggressive Sexual Behavior

Mosher and Anderson (1986; Mosher, 1988) developed the Aggressive Sexual Behavior Inventory (ASBI) as a self-report instrument to measure sexual aggression by men against women. Items from the short (10-item) version were used in this study. The scale was modified in two ways, however, to make it more appropriate for women. First, all the items were rewritten to be gender neutral. Second, the scope of the measure was expanded to include a broader range of aggressive and coercive behaviors, ones that women might be likely to endorse. I included 2 such items from a longer (20-item) version of the scale and wrote 10 additional items. Items

and their sources are listed in Table 1. Participants were given these instructions: “The following items describe behavior that sometimes occurs in dating interactions. Some of the behaviors are acceptable to some people and others are not. Please use the scale below to rate how frequently you have engaged in these behaviors in the past.” Participants scored their responses on a 7-point scale (1 = *never*, 3 = *occasionally*, 5 = *fairly often*, 7 = *extremely frequently*).

The original intent was to use the Mosher and Anderson (1986; Mosher, 1988) items as one scale (Mosher) and the additional items (or some subset) as a second scale (Seduce). However, the content validity of the Mosher scale for women was problematic and some of the items had virtually no variability. In addition, factor and item analyses indicated that some of the new items (e.g., belittling someone’s manhood or womanhood) clearly belonged with the more forceful Mosher items rather than with the other new items. A new scale (Coerce) was therefore created by adding several new items to the Mosher scale and dropping those items that had no (or virtually no) variance (see Table 1).² This scale is preferred to the Mosher scale because it excludes poor items, displays greater variance, and has greater content validity for women.³

The Coerce scale includes 10 items that refer to forceful, coercive, and manipulative actions. Scores on this scale correlated highly with scores computed using the 10-item short form of the original Mosher ASBI ($r = .89$ for men; $r = .88$ for women). In addition, coefficient alphas were acceptably high ($\alpha = .85$ for men; $\alpha = .79$ for women).

The Seduce scale includes seven behaviors of a more seductive nature, all of which could be performed in a manipulative fashion, but most of which could also be performed in a warm and affectionate manner. Coefficient alphas were .77 for men and .78 for women. Information about the composition of the scales is presented in Table 1 along with estimates from confirmatory factor analyses.

Social Desirability

Eighteen items from the 20-item Impression Management subscale of the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) were used as a measure of social desirability. One item (“I have done things that I don’t tell other people about”) was excluded because it did not correlate with the rest of the scale. A second item (“I never read sexy books or magazines”) was dropped because the content overlapped with the central questions of the study.

Procedure

After an initial phone screening, questionnaire packets were mailed to participants. Two separate questionnaires in two separate, sealed envelopes were included in these packets. The first questionnaire was the five-picture TAT; the second included all other paper-and-pencil measures (including scales and open-ended questions not reported in the present article). Participants were instructed to complete the TAT before looking at the second questionnaire.

On completion of both questionnaires, participants were scheduled for an individual laboratory session to complete the priming task. Instructions for this task were given verbally. There were 3 blocks of practice trials, followed by 15 blocks of test trials. Most participants took about 50 min to complete the 15 test blocks. They received a base payment of \$10, plus a bonus based on their performance.

² One additional item was excluded because its wording was especially ambiguous.

³ Substantive findings using the short form of the Mosher ASBI do not differ from those that are reported using the Coerce scale. Results of these analyses are available from Eileen L. Zurbruggen on request.

Table 1
Aggressive Sexual Behavior: Scale Composition, Source of Items, and Factor Loadings

Item	Prevalence (%) ^a		Factor loading ^b	
	Men (n = 79)	Women (n = 79)	Coerce scale	Seduce scale
Coerce scale				
I have gotten a little drunk and forced the person that I'm with to have sex with me. ^c	11.4	6.3	.83	
I have called someone an angry name and pushed them away when they would not surrender to my need for sex. ^c	5.1	11.4	.80	
I have given someone the "silent treatment" when they wouldn't have sex with me. ^d	40.5	16.5***	.72	
I have gripped someone tightly and given them an angry look when they were not giving me the sexual response I wanted. ^c	5.1	5.1	.72	
I have belittled someone's manhood or womanhood in order to get them to sleep with me. ^d	3.8	6.3	.60	
I have threatened to leave or to end a relationship if my partner wouldn't have sex with me. ^c	22.8	15.2	.58	
I have told someone I was making out with that they couldn't stop and leave me frustrated. ^c	38.0	40.5	.46	
I have told someone that their refusal to have sex with me was changing the way I felt about them. ^c	25.3	11.4*	.44	
I have gotten someone drunk or high so they would be less able to resist my advances. ^c	31.6	17.7*	.42	
I have dated someone younger than me because I thought it would be easier to get them to give me what I wanted sexually. ^d	26.6	8.9**	.34	
Seduce scale				
When I want to have sex with someone, I tell them what a wonderful lover they are. ^d	64.6	69.6	.75	
I have taken someone to a romantic spot in hopes that they would sleep with me. ^d	72.2	62.0	.71	
I have bought someone expensive gifts, hoping that would make them more sexually receptive to me. ^d	40.5	12.7***	.54	
When I want to get someone in the mood I whisper "sweet nothings" to them. ^d	88.6	84.8	.53	
I have flirted with other people in order to get my partner to have sex with me. ^d	30.4	39.2	.52	
I have worn especially sexy clothes or lingerie to entice someone to have sex with me. ^d	57.0	92.4***	.51	
I have played hard to get in order to get someone interested in me sexually. ^d	62.0	88.6***	.38	
Items not included in either scale				
I have told someone that I wanted to come into their apartment so I could get them where I wanted. ^c	32.9	27.8		
I have turned someone on to some expensive drugs so that they would feel obligated to do me a sexual favor. ^c	3.8	1.3		
I have calmed someone down with a good slap or two when they got hysterical over my advances. ^c	1.3	0.0		
I have warned someone that they could get hurt if they resisted me, so they should relax and enjoy it. ^c	0.0	0.0		
I have promised someone that I wouldn't harm them if they did everything that I told them to. ^c	0.0	0.0		

Note. Aggressive Sexual Behavior Inventory (ASBI) items are adapted from "Macho Personality, Sexual Aggression, and Reactions to Guided Imagery of Realistic Rape," by D. L. Mosher and R. D. Anderson, in *Journal of Research in Personality*, 20: 84, copyright 1986 by Academic Press, reproduced by permission of the publisher.

^a Prevalence rates refer to the percentage of participants whose response to the question "Rate how frequently you have engaged in these behaviors" was anything other than "never." Significance tests refer to gender differences in prevalence rates. ^b Loadings are from two separate one-factor maximum likelihood factor analyses, with men and women combined. ^c ASBI, long form. ^d Written for the present study. ^e ASBI, long form.

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

Description of the Priming Task

Overview

The priming task was a lexical-decision task modeled after the one developed by Meyer and Schvaneveldt (1971). In each trial, two groups of letters were presented simultaneously to participants; their task was to determine if both groups of letters were words. Participant responses and response latencies were recorded. Stimuli included pairs of words in which one word was related to sexuality (e.g., *breast*) and one was related to power or dominance (e.g., *tyrant*). Shorter RTs for such pairs as compared with control pairs are interpreted as evidence that an associative link between the concepts of power and sexuality is present for that particular participant.

Apparatus

Stimuli were presented on a Macintosh LC computer, and responses were made using an Apple Extended keyboard. The priming task was programmed using Psycscope 1.1 (Cohen, MacWhinney, Flatt, & Provost, 1993).

Instructions, Performance Incentives, and Feedback

Participants were instructed to press one key if both letter groups were words and another if one or both were not words. They earned points on the basis of the speed and accuracy of each response; this was to help ensure that they would engage fully in the task. At the end of the session, they received a bonus of \$1 for every 5,000 points earned. After each block (both practice and test), feedback about performance was displayed.

Design

Trials. There were 15 different trial types—3 types of trials where the correct response was “nonword,” and 12 types of trials where the correct response was “word.” The 1st type of nonword trial was word–nonword (W–NW; e.g., *garden/anem*), the 2nd type was nonword–word (NW–W; e.g., *labil/bless*), and the 3rd was nonword–nonword (NW–NW; e.g., *thrile/parrow*). These trials were included only to ensure that participants would cognitively process the trials of interest (the word–word [W–W] trials); therefore, data from these trials are not of substantive interest.

There were 12 types of W–W trials (see Table 2). The trials of greatest interest are those pairing a power (P) word and a sex (S) word (PS_a, PS_b, SP_a, SP_b); other trial types included one or two neutral (N) words (NS, NP, PN, SN, UR [N–N, unrelated], SEM [N–N, semantically related]) and were used as controls. PS_a and PS_b trials are logically equivalent to each other, as are SP_a and SP_b trials. PS_b and SP_b trials were added to ensure that every word was presented exactly three times over the course of the entire session.

Sequence of a trial. A centered fixation cross was presented for 400 ms followed by a blank screen for 150 ms. The prime and target were then presented simultaneously, with the prime slightly above where the fixation cross had been and the target slightly below. The stimuli remained on the screen until the participant responded or until 5,000 ms had passed, whichever came first. The intertrial interval was a minimum of 1,000 ms.

Practice trials. Three blocks of practice trials preceded the test trial blocks. They were constructed to be as similar to the test blocks as possible; however, there was no overlap between the words or nonwords used. The final practice block included three power words and three sexuality words; thus, any initial surprise or reaction at seeing words related to sexuality occurred during practice rather than during the test blocks.

Blocking of test trials. There were 15 test blocks, each containing 48 trials. Each block consisted of 24 W–W trials (two trials of each of the 12 trial types; see Table 2) and 24 trials with at least 1 nonword (12 W–NW, 6

Table 2
Sample Conceptual Block for Priming Task

Trial type	Prime	Target
P→S		
PS _a	master	cuddle
	supreme	body
PS _b	master	body
	supreme	cuddle
NS	cup	cuddle
	rain	body
PN	master	saucer
	supreme	snow
SEM ₁	cup	saucer
	rain	snow
UR ₁	cup	snow
	rain	saucer
S→P		
SP _a	intercourse	attack
	undress	abuse
SP _b	intercourse	abuse
	undress	attack
NP	part	attack
	live	abuse
SN	intercourse	whole
	undress	die
SEM ₂	part	whole
	live	die
UR ₂	part	die
	live	whole

Note. Actual blocks were constructed so that all words (primes and targets) and nonwords were presented only three times, once in block n , once in block $n + 5$, and once in block $n + 10$. Primes and targets were presented simultaneously, with the prime above the target. PS_a and PS_b trials are logically equivalent to each other, as are SP_a and SP_b trials. SEM₁ and UR₁ trials are used in the computation of P→S priming scores; SEM₂ and UR₂ trials are used in the computation of S→P priming scores. S = sex; P = power; PS = power prime–sex target; NS = neutral prime–sex target; PN = power prime–neutral target; SEM = neutral prime–neutral target (semantically related); UR = neutral prime–neutral target (unrelated); SP = sex prime–power target; NP = neutral prime–power target; SN = sex prime–neutral target.

NW–W, and 6 NW–NW). Each word and nonword was repeated exactly three times in the session—either three times as a prime or three times as a target. Each of these three pairings was unique; that is, a prime (word or nonword) never appeared with the same target more than once. Each word and nonword appeared only once in a block, and the next presentation was in as distant a block as possible. In other words, because there were 15 blocks total, and each word appeared three times, there were always 4 intervening blocks between each presentation of a word. This blocking system meant that each block consisted of trials drawn from 3 separate “conceptual” blocks (Table 2 is an example of a conceptual block). For example, the 1st test block consisted of the PS_a, SP_a, SEM₁, and SEM₂ trials (8 pairs altogether) from Conceptual Block 1; the PS_b, SP_b, UR₁, and UR₂ trials from Conceptual Block 2; and the NS, NP, PN, and SN trials from Conceptual Block 3.

Test blocks were identical for all the participants; however, the order of trials within each block was randomized separately for each person. Blocks were presented to participants in one of five different orders; counterbalancing was performed separately for men and women. Block order was not significantly related to any of the predictor or outcome variables for either men or women (in one-way analyses of variance [ANOVAs], all $ps > .15$).

Stimuli

Pretesting was conducted to select the words used in the study. First, base lists of candidate power and sexuality words were generated; potential neutral words were taken from the list of semantically related pairs (e.g., *young/old*) used by Meyer, Schvaneveldt, and Ruddy (1975). These master lists of words were pretested by having undergraduate students rate "how closely related" each word is to "power" and to "sexuality." All power words used in W-W trials (60 words total) received a mean power rating greater than or equal to 5.0 (on a 1- to 7-point scale) and a mean sexuality rating less than or equal to 3.5. Similarly, all sexuality words used in W-W trials (60 words total) received ratings greater than or equal to 5.0 on sexuality and less than or equal to 3.5 on power. All the pairs of semantically related neutral words with average power and sexuality ratings (for both words of the pair) less than 3.4 were chosen to be test stimuli for the study; there were 60 such pairs (i.e., 120 words total).

Reduction of RT Data

For each participant, two variables were computed from his or her RT data: amount of power→sex (P→S) priming and amount of sex→power (S→P) priming. Priming scores represent the amount of facilitation; that is, numbers greater than zero represent the speedup (in ms) in processing due to the paired presentation. Thus, larger numbers represent stronger power-sex associations.

Only correct responses to W-W trials were used in calculating priming scores. The logic behind the computation of P→S priming is as follows. The amount of time needed (RT) to process and respond to a pair of words (e.g., *master/body*) can be partitioned into three sources: time due to the prime (*master*), time due to the target (*body*), and time due to the presentation of the two words together.⁴ This last source of variance is what is of interest. For related words, a facilitation of processing (i.e., a decrease in RT) is predicted.

The key measurement is the time increase or decrease due to presenting power and sexuality words together (rather than the main effect of power or the main effect of sexuality). To compute this change in RT, it is necessary to subtract the effects due to presenting power words and the effects due to presenting sexuality words. By subtracting PS from NS (e.g., RT for *master/body* from RT for *rain/body*), the effect due to presenting sexuality words is removed.⁵ However, this figure is still a combination of the effect of power words and the effect of power-sex combinations; the effect of presenting (these) power words must still be removed. The size of this effect can be estimated by subtracting PN from UR (e.g., RT for *master/saucer* from RT for *rain/saucer*). The final computation, then, is $P \rightarrow S \text{ priming} = NS - (PS_a + PS_b)/2 - UR_1 + PN$. For more details about these computations, and the assumptions involved (including assumptions about the absence of other types of interaction effects), see the Appendix. S→P computations are exactly parallel and are performed using the variables listed on the right-hand side of Table 2; the final equation is $S \rightarrow P \text{ priming} = NP - (SP_a + SP_b)/2 - UR_2 + SN$.⁶

Results

Descriptive Statistics

Social Desirability

Means and standard deviations for all the variables are presented in Table 3. Social desirability scores for both men and women were comparable with those from a sample of college students (reported in Paulhus, 1991): The mean for men was 4.30, and the mean for women was 5.16. This difference was not significant, $t(156) = -1.52, p = .13$.

Motives

There was no gender difference in power motivation, $t(156) = 1.53, p = .13$. For affiliation-intimacy motivation, women scored significantly higher than men, $t(156) = -2.47, p = .014$. Because it is sometimes more fruitful to examine relative rather than absolute scores on motives, paired *t* tests were conducted to test for intraindividual differences between power motivation and affiliation-intimacy motivation. For men, there was not a significant difference between the levels of these two motives, $t(78) = 1.40, p = .17$. For women, however, level of affiliation-intimacy motivation was significantly greater than level of power motivation, $t(78) = 5.35, p < .0005$. In a repeated measures ANOVA, this interaction between gender and motive type was significant, $F(1, 156) = 7.11, p = .008$.

Cognitive Power-Sex Associations

Mean levels of P→S and S→P priming were significantly greater than zero both for men, $t(78) = 5.36, p < .0005$, and $t(78) = 3.03, p = .003$, respectively, and for women, $t(78) = 5.51, p < .0005$, and $t(78) = 2.13, p = .036$, respectively. Amount of P→S priming ranged from a minimum of -110 ms (110 ms of interference) to a maximum of 209 ms (209 ms of facilitation); for S→P priming the scores ranged from -139 ms to 215 ms.

There were no gender differences in either P→S or S→P priming, $t(156) = -0.36, p = .72$, and $t(156) = 0.61, p = .54$, respectively. For both men and women in the sample, the mean amount of P→S priming was greater than the mean amount of S→P priming, although the difference reached the standard level of statistical significance only for the women: for men, $t(78) = 1.55, p = .12$; for women, $t(78) = 2.44, p = .017$; pooled, $t(157) = 2.85, p = .005$.

Self-Reported Aggressive Sexual Behavior

Mean scores on the Coerce scale were low for both men and women (for men, $M = 14.0$; for women, $M = 12.7$; possible range = 10-70). The difference between men's and women's scores did not reach the standard level of significance,

⁴ This is equivalent to thinking about a main effect of power, a main effect of sex, and an interaction between the two.

⁵ Actually, because the sexuality words in PS are identical to the sexuality words in NS, any variance due to idiosyncrasies of those particular words is also removed.

⁶ Other researchers using similar methodologies (e.g., Bargh et al., 1995) generally perform simpler computations to reduce their reaction time data. For the present data, they would compute P→S priming by subtracting PS from NS. However, as argued above, this method confounds effects due to seeing power words as primes (as opposed to seeing neutral primes) with effects due to the pairing of power and sex words. Although it could be argued that analyses concerning the main effect of power primes are interesting in their own right, it is the latter effect that is of greater interest here. The data reduction method described above provides a more adequate measure of the strength of the associative link between power and sexuality words. Note, however, that the need to control for the main effect of primes is more pressing when primes are presented supraliminally (as in the present study) than when they are presented subliminally (as in Bargh et al., 1995).

Table 3
Descriptive Statistics: Social Desirability, Motives, Power–Sex Associations, and Aggressive Sexual Behavior

Variable	Men (<i>n</i> = 79)		Women (<i>n</i> = 79)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
BIDR	4.30	3.39	5.16	3.72
Power motivation (images/1,000 words)	8.01	4.95	6.90	4.19
Affiliation–intimacy motivation (images/1,000 words)	9.30	5.54	11.56	5.96
P→S priming (ms)	32.82	54.44	36.04	58.11
S→P priming (ms)	20.01	58.61	14.24	59.31
Coerce scale ^a	14.01	5.80	12.67	4.72
Seduce scale ^b	17.57	6.88	18.06	6.71

Note. BIDR = Balanced Inventory of Desirable Responding; P→S = power→sex priming; S→P = sex→power priming. Scores on the BIDR could range from 0 to 18; higher scores represent greater concern with giving a socially desirable response. Ranges for the two sexual behavior measures are from 10 to 70 (Coerce scale) and from 7 to 49 (Seduce scale); higher scores represent more frequent aggressive behavior. Priming scores represent milliseconds of facilitation; thus, higher scores imply stronger cognitive associations. Scores for power motivation and affiliation–intimacy motivation were computed by coding Thematic Apperception Test protocols. These scores represent the number of power or affiliation–intimacy images appearing per 1,000 words written; thus, higher scores are indicative of higher levels of motivation.

^a Score on 10-item Coerce scale (a modified version of Mosher & Anderson's, 1986, Aggressive Sexual Behavior Inventory). ^b Score on 7-item Seduce scale (written for the present study).

$t(156) = 1.60, p = .11$. There was no gender difference in scores on the Seduce scale (for men, $M = 17.6$; for women, $M = 18.1$), $t(156) = -0.46, p = .65$.

Prevalence rates for individual items are presented in Table 1. For each behavior, the percentage of participants making any response other than "never" is reported. More men than women reported the following behaviors: giving someone the "silent treatment," getting someone drunk or high, saying that feelings are changing, dating someone younger, and buying expensive gifts. More women than men reported the following behaviors: wearing sexy clothes and playing hard to get.

Intercorrelations of Variables

Intercorrelations of all the predictor and outcome variables are presented in Table 4. The four measures of personality (two motives and both types of power–sex association) appear to be orthogonal,

with no correlations reliably different from zero at the .05 level. However, there were two marginally significant correlations for the men. Power and affiliation–intimacy motives were negatively correlated ($r = -.21, p = .057$). The direction of this correlation for the women was also negative; when data were pooled, the correlation reached standard levels of significance ($r = -.20, p = .013$).

The other marginally significant correlation in men was between power motivation and S→P priming ($r = .19, p = .091$). Small correlations between power motivation and power–sex associations were predicted (because of the network of cognitive associations that is assumed to underlie power motivation); however, this relationship was not seen in women (both $ps > .70$). It is also noteworthy that for both men and women, P→S and S→P priming were not correlated. This suggests that priming between these two concepts can be unidirectional and that P→S and S→P associations are distinct aspects of personality.

Table 4
Intercorrelations of Variables: Social Desirability, Motives, Power–Sex Associations, and Aggressive Sexual Behavior

Variable	1	2	3	4	5	6	7
1. BIDR	—	-.12	.14	.08	.00	-.23*	-.23*
2. Power motivation	.11	—	-.21†	-.10	.19†	.29*	.22*
3. Affiliation–intimacy motivation	-.21†	-.14	—	.14	-.04	-.04	-.01
4. P→S priming	-.06	.00	.02	—	.16	.22†	.03
5. S→P priming	-.03	.04	-.03	.09	—	.25*	.01
6. Coerce scale ^a	-.31**	-.22*	.37***	.03	.12	—	.55***
7. Seduce scale ^b	-.32**	-.13	.37***	-.09	.09	.54***	—

Note. For both men and women, $n = 79$. Correlations for men are above the diagonal; correlations for women are below. BIDR = Balanced Inventory of Desirable Responding; P→S priming = power→sex priming; S→P priming = sex→power priming.

^a Score on 10-item Coerce scale (a modified version of Mosher & Anderson's, 1986, Aggressive Sexual Behavior Inventory). ^b Score on 7-item Seduce scale (written for the present study).

† $p < .10$ (marginally significant). * $p < .05$. ** $p < .01$. *** $p < .001$.

The two aggressive sexual behavior scales were correlated ($r = .55, p < .0005$, for men; $r = .54, p < .0005$, for women). The size of the correlation suggests that although there is considerable overlap between the two scales, there is also room for discrimination between the two. Thus, different relationships with the predictors are possible.

In general, the predictor variables were not correlated with social desirability (all $ps > .05$). The correlation with affiliation-intimacy motivation was, however, marginally significant for the women ($r = -.21, p = .066$). In other words, women with higher levels of affiliation-intimacy motivation showed less concern with giving socially desirable responses, a somewhat surprising result. As expected, social desirability was negatively correlated with self-reports of aggression for both men and women. Correlations between predictors and outcome variables are discussed below.

Predicting Sexual Aggression: Zero-Order Correlations

Zero-order correlations between predictor variables and the two aggression scales are presented in Table 4. For men, power motivation was positively correlated with scores on both the Coerce and Seduce scales; however, the direction of the correlations for women was negative. That is, higher levels of power motivation were associated with reports of less frequent aggressive behavior (although only for the Coerce scale was the association statistically significant). The pattern of results for affiliation-intimacy motivation was also different for men as opposed to women. For men, affiliation-intimacy motivation did not correlate with either of the scales. For women, however, there were positive correlations with scores on both the Coerce ($r = .37, p = .001$) and Seduce ($r = .37, p = .001$) scales. Thus, the pattern of results for motives appeared to be fairly consistent across the two scales but differed by gender.

For the priming variables, the pattern of results showed less consistency across the two scales. For men, both P→S and S→P priming were positively correlated with the Coerce scale scores; neither type of priming covaried with scores on the Seduce scale. For women, none of the zero-order correlations between priming and aggressive behavior were significant (all $ps > .30$).

Predicting Sexual Aggression: Multiple Regression Analyses

To control for the small correlations between predictor variables, and to test for interaction effects, four separate simultaneous regressions were performed. In each analysis, one of the two outcome variables (scores on the Coerce or Seduce scale) was regressed on all the predictors (including interaction terms). Analyses were conducted separately for men and women.

Because social desirability had significant negative zero-order correlations with both measures of aggressive sexuality, it was included as a predictor in every regression. Each variable (both predictor and criterion) was standardized (separately for men and women) before regression analyses were performed. To create interaction terms, the product of two standardized predictor terms was computed. Because all the predictors are either standardized variables or the product of two standardized variables, the raw regression coefficients have the interpretation of standardized scores (Jaccard, Turrissi, & Wan, 1990, p. 34; see also Aiken & West, 1991). Four interaction terms were created and tested:

Power Motivation × P→S, Power Motivation × S→P, Affiliation-Intimacy Motivation × P→S, and Affiliation-Intimacy Motivation × S→P. Results of the multiple regression analyses are reported in Table 5.

Aggressive Sexual Behavior: Men

Motives. Zero-order correlations between power motivation and both types of aggressive behavior were significant at $p < .05$. In the multiple regression analyses, both of these relationships were marginally significant ($p = .067$ for Coerce scores; $p = .089$ for Seduce scores). These results must be interpreted in the context of the significant interaction between power motivation and P→S priming, which is discussed below. Affiliation-intimacy motivation was unrelated to scores on either scale.

Power-sex associations. For the Seduce scale, the results from the multiple regression were consistent with the zero-order correlations: There was no significant relationship between seductive behavior and either type of priming. For the Coerce scale, however, results from the multiple regression analyses give a slightly different picture. For this scale, the effect of P→S priming (when all other main effects and all four interactions were controlled for) was stronger than the zero-order correlation, but the effect of S→P priming was weaker (and nonsignificant). Thus, some portion of the total relationship between S→P priming and coercive behavior may have been mediated through power motivation and/or through P→S priming (S→P priming had nonsignificant but positive correlations with both of these variables).

Interactions. The 4 two-way interactions (with score on the Coerce scale as the outcome variable) are plotted in the left half of Figure 1 (interactions with power motivation) and the left half of Figure 2 (interactions with affiliation-intimacy motivation). The interaction between power motivation and P→S priming was significant ($B = 0.31, p = .006$). When power motivation was low, there was no effect of P→S priming, with average amounts of coercive behavior seen for all men. When power motivation was high, however, there was an effect of P→S priming, with those men who had strong P→S associations reporting more frequent coercive behavior.

An analysis of simple slopes was conducted to determine which differed significantly from zero (Aiken & West, 1991). The slope for men with weak P→S priming (1 *SD* below the mean) did not differ significantly from zero ($B = -0.09, p = .58$). The test of the slope for men with average P→S priming was marginally significant ($B = 0.23, p = .067$); the slope for the men with strong P→S priming was reliably different from zero ($B = 0.54, p = .002$). Thus, higher levels of power motivation were related to aggressive behavior but only in the presence of an average or strong P→S association.

The other three interaction terms were not statistically significant (all $ps > .15$); however, it is interesting to note that the patterns are similar. That is, there is no (or a reduced) effect of P→S or S→P priming when affiliation-intimacy motivation or power motivation is low. For men high on either motive, however, more frequent reports of aggressive behavior were given by those men with strong P→S or S→P associations.

For the Seduce scale, there was a marginally significant interaction between power motivation and P→S priming ($p = .10$); this interaction had the same form as that seen in predicting the

Table 5
Simultaneous Regressions Predicting Aggressive Sexual Behavior

Regression term	Coerce scale ^a		Seduce scale ^b	
	<i>B</i>	<i>SE</i> of <i>B</i>	<i>B</i>	<i>SE</i> of <i>B</i>
Men (<i>n</i> = 79) ^c				
BIDR	-0.25*	0.10	-0.21†	0.12
Power motivation	0.23†	0.12	0.23†	0.14
Affiliation-intimacy motivation	-0.02	0.11	0.04	0.13
P→S priming	0.33**	0.11	0.12	0.12
S→P priming	0.18	0.11	-0.01	0.12
Power Motivation × P→S	0.31**	0.11	0.20†	0.12
Power Motivation × S→P	0.06	0.11	0.00	0.12
Affiliation-Intimacy Motivation × P→S	0.17	0.13	0.06	0.14
Affiliation-Intimacy Motivation × S→P	0.10	0.17	0.11	0.19
Women (<i>n</i> = 79) ^d				
BIDR	-0.26**	0.09	-0.27*	0.11
Power motivation	-0.06	0.09	-0.01	0.11
Affiliation-intimacy motivation	0.34***	0.09	0.31**	0.11
P→S priming	0.07	0.10	-0.07	0.11
S→P priming	0.06	0.09	0.07	0.10
Power Motivation × P→S	-0.16	0.11	-0.10	0.13
Power Motivation × S→P	0.18†	0.10	0.23†	0.12
Affiliation-Intimacy Motivation × P→S	0.32***	0.09	0.09	0.10
Affiliation-Intimacy Motivation × S→P	0.17	0.11	-0.03	0.13

Note. Results from four separate simultaneous regressions are reported in this table. Because predictor and criterion variables were standardized, raw coefficients have the interpretation of a standardized solution. BIDR = Balanced Inventory of Desirable Responding; P→S priming = power→sex priming; S→P priming = sex→power priming.

^a Score on 10-item Coerce scale (a modified version of Mosher & Anderson's, 1986, Aggressive Sexual Behavior Inventory). ^b Score on 7-item Seduce scale (written for the present study). ^c Overall $R^2 = .311^{**}$ for the Coerce scale and .137 for the Seduce scale. ^d Overall $R^2 = .467^{***}$ for the Coerce scale and .280** for the Seduce scale.

† $p < .10$ (marginally significant). * $p < .05$. ** $p < .01$. *** $p < .001$.

Coerce scale data. The other three interactions were not statistically significant (all $ps > .50$).

Summary. High levels of power motivation were associated with higher scores on both the Coerce and Seduce scales. P→S priming was a reliable predictor of scores on the Coerce scale; there was also a significant interaction between power motivation and P→S priming. Affiliation-intimacy motivation was not related to scores on either the Coerce or the Seduce scale.

Aggressive Sexual Behavior: Women

Motives. The zero-order correlation between power motivation and scores on the Coerce scale was negative, implying that high levels of power motivation were associated with less frequent aggression (a result counter to what was predicted and to what was seen in the men's data). In the multiple regression analysis, however, this association was nearly zero. Power motivation thus seems to be either not related to aggressive behavior (once other variables are held constant) or only weakly related negatively.

Affiliation-intimacy motivation predicted aggressive sexuality, but the direction of the relationship was opposite to that hypothesized. Women higher in affiliation-intimacy motivation reported more coercive and seductive behaviors. The size of this relationship was comparable across the two scales and was seen both in

the zero-order correlations and in the multiple regression coefficients.

Power-sex associations. There was no overall relationship between priming scores and aggressive behavior in either the zero-order correlations or the regression analyses (no correlation or regression coefficient differed reliably from zero). These results must be interpreted in the context of significant interactions, however, which suggest that power-sex connections are associated with greater aggression in some women.

Interactions. The 4 two-way interactions (with score on the Coerce scale as the outcome variable) are plotted in the right half of Figure 1 (interactions with power motivation) and the right half of Figure 2 (interactions with affiliation-intimacy motivation). The interaction between P→S priming and affiliation-intimacy motivation was significant ($B = 0.32$, $p = .0005$). Women with low levels of affiliation-intimacy motivation reported average to slightly below-average levels of coercive behavior. When affiliation-intimacy motivation was high, however, aggressive behavior was reported but only by women who had strong P→S associations. The interaction between affiliation-intimacy motivation and S→P priming was not statistically significant but was in the same direction as the interaction with P→S priming.

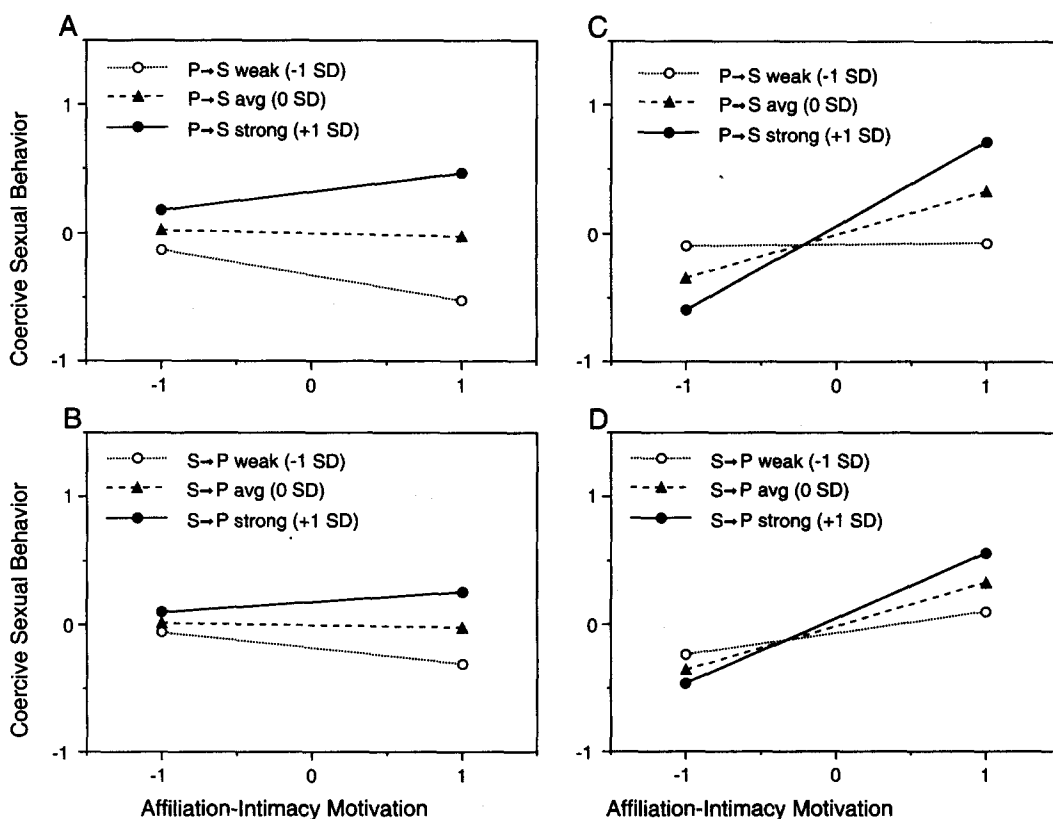


Figure 1. Interaction between power motivation and cognitive power-sex associations (both P→S and S→P) in predicting aggressive sexual behavior (Coerce scale) for male (A and B) and female (C and D) participants. All variables have been standardized; thus, all axes are scaled as z scores. Lines represent the reduction to two dimensions of the estimated regression equations from the left side of Table 5, with all other variables set to zero (the average value). P→S = power→sex priming; S→P = sex→power priming; avg = average.

Analyses of simple slopes were conducted for these two interactions. In both cases, the simple slope for women with weak cognitive associations did not differ reliably from zero (for P→S, $B = 0.02$, $p = .90$; for S→P, $B = 0.16$, $p = .25$). However, the other four simple slopes were reliably different from zero (for average P→S, $B = 0.34$, $p = .0007$; for strong P→S, $B = 0.65$, $p < .0005$; for average S→P, $B = 0.34$, $p = .0007$; for strong S→P, $B = 0.51$, $p = .0017$). In other words, the women who reported engaging in the most aggressive behavior were those high on affiliation-intimacy motivation and with average or strong levels of either P→S or S→P associations.

The relationship between power motivation and power-sex associations was less clear, in that the direction of the interaction of power motivation with P→S priming was different than that between power motivation and S→P priming. In addition, neither interaction was significant at the .05 level (however, the p value for the interaction between power motivation and S→P was .08). A conservative interpretation of these results is that power motivation is not related to aggressive behavior in women.

For the Seduce scale, the interactions between cognitive associations and power motivation were in the same direction as for the Coerce scale: positive and marginally significant for the interaction between power motivation and S→P priming, negative and not statistically significant for the interaction between power mo-

tivation and P→S priming. Interactions between affiliation-intimacy motivation and both P→S and S→P priming were not statistically significant.

Summary. There were no main effects of P→S or S→P priming or of power motivation for either the Coerce or the Seduce scale. However, in contrast to the men's data, there was a positive association between affiliation-intimacy motivation and both measures of aggressive behavior. There was also a significant interaction between affiliation-intimacy motivation and P→S (for the Coerce scale) and a marginally significant interaction between power motivation and S→P (for both scales).

Covariance Structure Analyses

From the regression analyses, it appeared that the size of some of the coefficients was different for men than for women. Covariance structure analyses were performed to quantify the statistical reliability of these apparent gender differences.⁷

⁷ These analyses should be interpreted with caution for two reasons: All the variables were standardized before analyses were conducted, and interaction terms (for which violations of the assumption of multivariate normality are inherent) were included in the model. Thus, p values should be considered only as approximate.

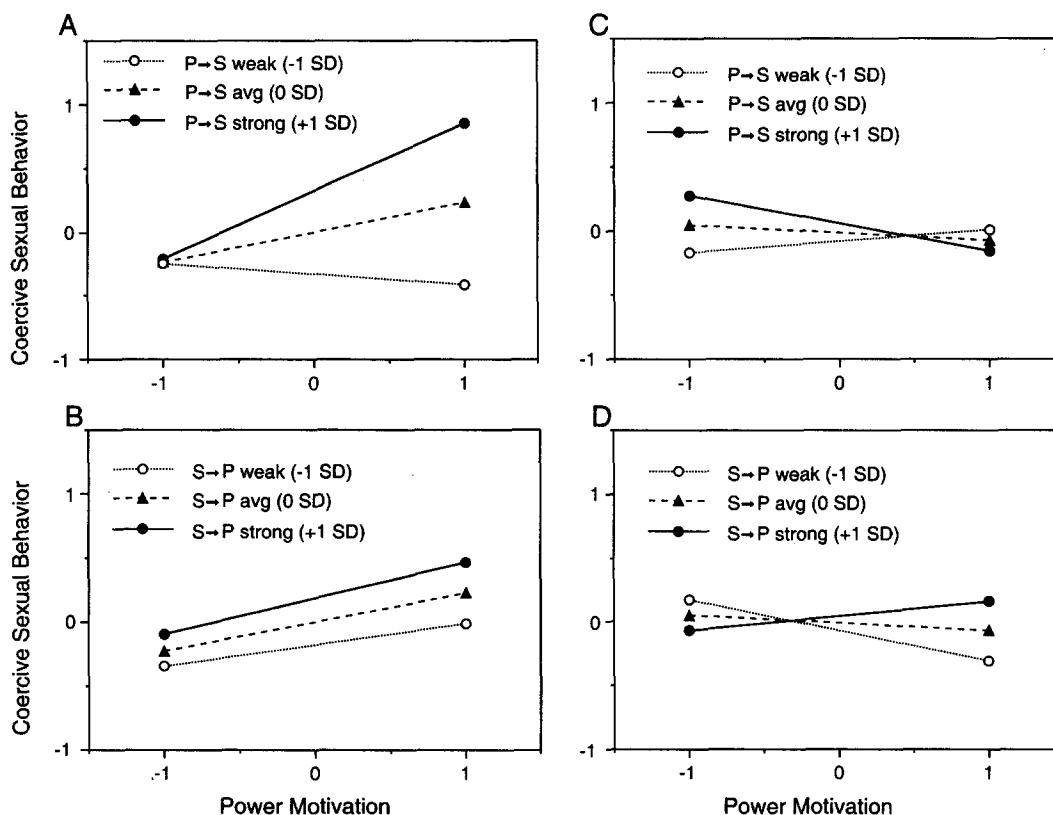


Figure 2. Interaction between affiliation-intimacy motivation and cognitive power-sex associations (both P→S and S→P) in predicting aggressive sexual behavior (Coerce scale) for male (A and B) and female (C and D) participants. All variables have been standardized; thus, all axes are scaled as *z* scores. Lines represent the reduction to two dimensions of estimated regression equations from the right side of Table 5, with all other variables set to zero (the average value). P→S = power→sex priming; S→P = sex→power priming; avg = average.

A series of two-group analyses were performed, with paths from each of the nine predictors (BIDR, power motivation, affiliation-intimacy motivation, P→S, S→P, and four interaction terms) to the outcome variable (score on either the Coerce or the Seduce scale). All the variables were observed (rather than latent) variables, and all predictors were allowed to correlate. Thus, a model in which no paths were constrained to be the same across gender was a fully saturated model and therefore fit perfectly and recovered the coefficient estimates from the multiple regression analyses reported above. Analyses for the Coerce and Seduce scales were conducted separately.

Coerce Scale

Because the coefficients for the social desirability variable (BIDR) were very similar in magnitude across gender, a model that constrained that path to be equal was tested first. Fit was excellent, overall $\chi^2(1, N = 158) = 0.01$, comparative fit index (CFI) = 1.00, incremental fit index (IFI) = 1.00, root-mean-square error of approximation (RMSEA) < .0005. This model was therefore used as the baseline model.

The first test for gender differences was an omnibus test—do any of the coefficients for the remaining eight predictors differ by

gender? When compared with the baseline model, a model that constrained all remaining paths (four main effects, four interactions) to be equal across gender did not fit well, overall $\chi^2(9, N = 158) = 32.57$, $\Delta\chi^2(8, N = 158) = 32.56$, $p < .0001$. Thus, the fit was significantly worse when all coefficients were constrained to equality across gender, indicating that at least some of the coefficients were different in men than in women.

To determine if all equality constraints contributed equally to the poorer fit, additional analyses were conducted. First, a model in which only the power-sex coefficients were constrained to equality was tested. The change from the baseline model was marginally significant, overall $\chi^2(3, N = 158) = 4.78$, $\Delta\chi^2(2, N = 158) = 4.77$, $p < .10$. Because *p* values are only approximate, this marginally significant finding was explored further to assess whether the effect of both types of power-sex association differed by gender. A model in which S→P priming was constrained to equality did not have a significantly worse fit than the baseline model, $\chi^2(2, N = 158) = 0.85$, $\Delta\chi^2(1, N = 158) = 0.84$, $p > .30$. However, fit did worsen when the coefficient for P→S priming was constrained to equality, $\chi^2(2, N = 158) = 3.47$, $\Delta\chi^2(1, N = 158) = 3.46$, $p < .10$. Therefore, there is evidence that the effect of P→S (but not S→P) priming was stronger in men than in women.

Next, a model in which only the motive coefficients were constrained to equality was tested. These two equality constraints did result in significantly worse fit when compared with that of the baseline model, overall $\chi^2(3, N = 158) = 11.74$, $\Delta\chi^2(2, N = 158) = 11.73$, $p < .005$. To explore whether there were gender differences in both motives, two additional analyses were conducted. In the first, a model that constrained the coefficients for affiliation-intimacy motivation to be equal across gender, $\chi^2(2, N = 158) = 6.56$, was compared with the baseline model. Constraining affiliation-intimacy motivation resulted in a significantly worse fit, $\Delta\chi^2(1, N = 158) = 6.55$, $p < .025$. Constraining power motivation also resulted in a significantly worse fit when compared with the baseline model, $\chi^2(2, N = 158) = 3.99$, $\Delta\chi^2(1, N = 158) = 3.98$, $p < .05$. Thus, it appears that the effects of both power motivation and affiliation-intimacy motivation were moderated by gender.

One final analysis was conducted to determine whether a model in which all the interaction terms were constrained to equality across gender was tenable. A baseline model with BIDR and S→P priming constrained to equality, $\chi^2(2, N = 158) = 0.85$, CFI = 1.00, IFI = 1.00, RMSEA < .0005, was compared with a model in which all four interaction term coefficients were also constrained to be equal across gender, $\chi^2(6, N = 158) = 13.35$. Fit for this model was significantly worse than for the baseline model, $\Delta\chi^2(4, N = 158) = 12.50$, $p < .025$. Thus, there is evidence that at least one of the interactions operates differently for men than for women. Additional analyses to determine if all four interaction constraints contributed equally to the decrease in fit indicated that they did not. Constraining the Power Motivation \times P→S interaction to equality led to a significantly worse fit, overall $\chi^2(3, N = 158) = 10.54$, $\Delta\chi^2(1, N = 158) = 9.69$, $p < .005$. Equality constraints for each of the other three interaction terms did not significantly worsen the model fit when compared with the baseline model (all $ps > .25$).

Seduce Scale

As with the Coerce scale, a model constraining the BIDR coefficient to be equal for men and women fit the data very well, $\chi^2(1, N = 158) = 0.15$, CFI = 1.00, IFI = 1.00, RMSEA < .0005, and was therefore used as a baseline model. The results of the omnibus test for gender differences indicated that the data did not provide enough evidence to conclude that any of the coefficients were different in men than in women, overall $\chi^2(9, N = 158) = 13.49$, $\Delta\chi^2(8, N = 158) = 13.34$, $p > .10$. Therefore, no further tests were conducted on the coefficients for the Seduce scale.

Discussion

Results for men generally supported the hypotheses being tested. High levels of power motivation, especially when coupled with a cognitive connection between power and sexuality, were related to high levels of self-reported aggressive sexual behavior. For women, however, affiliation-intimacy was the important motive; high levels of this motive, especially when coupled with stronger associations between power and sex, were related to more frequent aggression. The effect of P→S associations was more important for men than for women; however, for both genders, the

direction of the effect was the same, with stronger cognitive connections correlated with more initiation of sexual aggression.

Power Motivation and Aggressive Sexual Behavior

Power motivation was an important predictor of sexual coercion and seduction in men but not in women. This result was not completely unexpected; findings for men concerning the relationship between power motivation and variables related to intimate relationships have not always been replicated in female samples. It is, nevertheless, useful to speculate about why this (and several previous) studies failed to find a correlation between power motivation and aggression in women.

One explanation hinges on the fact that power-motivated individuals are typically concerned with preserving and enhancing their reputation; this concern is predicted by theory, found empirically (Winter, 1973), and codified in the scoring system. For women more than for men, aggressive (or even assertive) behavior is likely to bring censure and reprobation rather than respect and admiration. In the context of intimate heterosexual relationships, the discrepancy between what is acceptable for a man and what is acceptable for a woman is likely to be even greater. Even seductive behaviors are likely to result in more criticism for a woman than for a man. Thus, power-motivated women (but not power-motivated men) may choose to suppress their aggressive urges so as not to damage their reputation. If they do act coercively or seductively, they may be less likely to report that they have done so. According to this argument, then, we might expect to see no relationship between power motivation and sexual aggression in women because their concern for their reputation would lead them to channel their power impulses in other directions or into other domains.

Another explanation relies on the finding that responsibility (as an aspect of one's personality) is an important moderator of power motivation (Winter, 1988; Winter & Barenbaum, 1985). Men and women who are high in power and responsibility tend to use their power in prosocial ways, such as becoming members of voluntary organizations or running for office. For individuals low in responsibility, on the other hand, there is a positive correlation between power motivation and antisocial acts (such as aggressive behavior). If the women in a given sample are more responsible than the men, an interaction between gender and power motivation (similar to that found in the present study) would likely be seen. Although responsibility scores for participants were not available, women in this sample were more likely than men to report raising or helping to raise children (a correlate and probable cause of responsibility). Thus, the gender differences in the effect of power motivation may be due at least in part to gender differences in level of responsibility.

Affiliation-Intimacy Motivation and Aggressive Sexual Behavior

For the men, no relationship between affiliation-intimacy motivation and sexual aggression was seen. Although contrary to prediction, this lack of correlation is perhaps not surprising, given that the ability to separate sex from intimacy is more heavily socialized in men than women. The instructions for the aggressive sexual behavior inventory referred to "dating interactions," and

were therefore ambiguous. It would not be surprising if men tended to interpret these as questions about casual sexual encounters, ones without a strong component of intimacy. If so, one would expect to see no correlation between affiliation–intimacy motivation and responses because affiliation–intimacy motivation is much less relevant in sexual situations that are not based on intimacy.

More puzzling, however, is the positive relationship between affiliation–intimacy motivation and aggressive sexual behavior in women. Because engaging in coercive behaviors seems likely to lead to less rather than more intimacy, it is difficult to understand why someone who wants a warm, friendly relationship would act aggressively.

It can be argued that this paradox is not as great for women as it would be for men. The meaning of the various aggressive behaviors is likely to differ depending on whether they are performed by a man (and/or by someone with physical or other types of power) or by a woman. Common sense suggests that behaviors such as “gripping someone tightly” or “pushing them away” might have quite different meanings depending on the relative size and physical power of the parties involved (Stock, 1998; Saunders, 1986, made a similar point about domestic violence). Thus, the seeming counterproductiveness of attempting to increase warmth and closeness by uttering threats or being manipulative is somewhat lessened for women. It is not, however, completely eliminated. Although uttering a threat may not be as severely disruptive to intimacy for a woman as it would be for a man, it is still not an action that is likely to increase intimacy. It seems a poor strategy, then, for affiliation-motivated women to choose.

A tentative explanation for why women might choose this strategy hinges on the finding that people high in affiliation–intimacy motivation have a tendency to get defensive and hostile if they feel threatened. Thus, in Mason and Blankenship’s (1987) study, women who were high in affiliation–intimacy motivation, low in the ability to inhibit behavior, and under stress reported engaging in more acts of physical aggression against their intimate partner. In the present study, no measures of stress or perceived threat were collected; however, it is possible that the wording of the items suggested a relationship under threat and that this threat was perceived by women more than by men. Most of the items in both the Coerce and the Seduce scales refer to situations in which one’s partner does not want to engage in sexual activity. Because the socialization of masculinity in this culture encourages the internalization of the belief “A man always wants and is always ready to have sex” (Zilbergeld, 1978), heterosexual women are likely to have relatively little experience with a partner who declines sexual activity. If men almost always say “yes” to sex, women may interpret refusal as an indication that something is seriously wrong with the relationship. Men, on the other hand, may be less likely to make this interpretation. If one interprets the items as questions about a relationship that is in danger of failing, then the combination of threat, affiliation–intimacy motivation, and a strong power–sex association may be causing aggressive behavior.

Another way to think about the positive relationship between affiliation–intimacy motivation and aggression is to consider it in the context of the interaction with P→S associations. For women with weak power–sex associations, there was no relationship between affiliation–intimacy motivation and aggression. Only in women with average or strong power–sex associations did the

level of affiliation–intimacy motivation matter. Perhaps a fusion of power and sex is indicative of a particular set of sexual scripts or beliefs, for example, the belief that sex is one’s only avenue for gaining or wielding power in a relationship. (Gender stereotypes suggest that this might be a more common belief for women than for men.) In the presence of such a belief, it is easy to imagine that a thwarted need for affiliation might lead one to become more and more aggressive in initiating sexual activity as one becomes more and more desperate and fearful about losing one’s partner. The gendered nature of this explanation is consistent with previously reported data—Struckman-Johnson and Struckman-Johnson (1998) reported that aggressive or coercive women were motivated more by intimacy than were men.

Cognitive Power–Sex Associations and Aggressive Sexual Behavior

The covariance structure analyses provided evidence that the relationship between P→S associations and coercive behavior was stronger for men than for women. Although this conclusion should be considered tentative, it is nevertheless interesting to speculate about possible origins of this gender difference. To do so, it is helpful to think about the two constructs involved. In particular, “power” is not a monolithic construct. If power means something different to men than it does to women, then gender differences in the correlates of power–sex associations would not be surprising. There are several possible ways to subdivide the construct of power; I consider several below.

Domination Versus Submission

Cultural constructions of (hetero)sexuality are gendered; cultural juxtapositions of power and sexuality are gendered, as well. Men are taught to eroticize their own dominance over women; women are taught to eroticize submission to men (MacKinnon, 1989; E. E. Morgan, 1975). Thus, women’s P→S or S→P links may represent an eroticization of submission rather than domination. In addition, women are more often the victims of sexual abuse and assault than are men (Byers & O’Sullivan, 1998; Elliott, 1997). For victimized women, then, cognitive links between power and sex or sex and power may represent an association between sexuality and memories of being assaulted. In both these cases, we might be more likely to see a correlation with being the recipient of aggressive behavior than with being the initiator of aggression.

Offensive Versus Defensive Power

A related but distinct way to deconstruct power is to focus on the difference between dominating or conquering others and resisting other people’s attempts at control. This distinction is often critical in our moral judgments about aggression. For example, invading another country is judged to be immoral, but defending one’s country from invasion is noble. Similarly, murder is both illegal and immoral, but killing in self-defense is justified.

Women are more likely to be the victims of sexual aggression than are men (Byers & O’Sullivan, 1998). For women who used a defensive strategy that included physical resistance, cognitive or affective connections between power and sex might have been created. We would not necessarily expect these connections to

predict later initiation of sexual aggression, however, because of the defensive nature of the original power stimulus.

Even when considering nonassaultive sexual behavior, the distinction between initiation and resistance may be important. Many (heterosexual) men and women still follow traditional sexual scripts that are highly gendered, with men expected to be the initiators and women (at least initially) to resist these advances (Byers, 1996). Power is thus an integral part of the sexual encounter, but it plays a different role for the two genders—men advance, and women defend. Although both men and women might develop power-sex associations by enacting these scripts, men's (but not women's) associations would be based on an "offensive" type of power. Because of this, a correlation between power-sex associations and aggression would be predicted for men but not for women, a prediction that was at least partially supported by the data.

"Power Over" Versus "Power To"

Feminist scholars have discussed the difference between dominating or having power over another and having power over one's own life or destiny. This latter type of power could also be described as agency without domination and has been variously referred to as "power for oneself" (J. B. Miller, 1976), "personal authority" (Rampage, 1991), "power within" (A. J. Smith & Douglas, 1990), and "power to" (Yoder & Kahn, 1992). "Power to" may be valued more by women than is "power over" another (C. L. Miller & Cummins, 1992). If "power to" is eroticized, it may result in sexual arousal being linked to an appreciation of the strength and agency of oneself and/or one's partner. As long as arousal was not also linked to domination or control, one would not expect to see a correlation with sexually aggressive behavior.

"Power Over" Versus "Power With" or "Empowerment"

One last distinction derives both from feminist (A. J. Smith & Douglas, 1990) and other (Freire, 1970, 1989) theorists. It focuses on the difference between controlling or dominating and influencing, teaching, or inspiring. For example, Mahatma Gandhi was held in such esteem by the people of India that one could argue that he had a kind of power over them. But this was quite different from the power held by the British Crown, power enforced through physical force and domination. It seems more accurate to say that Gandhi had power "with" his people. Similarly, A. J. Smith and Douglas pointed out the difference between a therapist who tries to control the course of therapy and one who believes that the power resides with the client. The actions of the therapist may contribute to profound change in the client's life or psyche, but the client, rather than the therapist, controls the process.

To the extent that it is "power with" rather than "power over" that is linked to sexuality, an association with aggression would not be expected. In fact, the experience of "giving" one's partner an intense sexual experience may describe the fusion of sexuality with exactly this kind of power—one's actions have a strong effect on another, and hence one feels powerful. But as long as there is no attempt to control the other, and as long as a respect and concern for his or her agency is present, this sexual action would not be aggressive. More than men, women's understandings and articulations of power may fall into this "power with" category. If

so, this would help to explain why power-sex associations related more weakly to aggression in women than in men.

Conceptualizing the Difference Between $P \rightarrow S$ and $S \rightarrow P$ Associations

Bargh et al. (1995) presented evidence for unidirectional priming between the concepts of "sex" and "power," with $P \rightarrow S$ priming appearing somewhat stronger than $S \rightarrow P$ priming. Although the exact patterns of unidirectionality found by Bargh et al. were not replicated in the present study, there are a number of ways in which the present data support both the existence of unidirectionality between the concepts of "sex" and "power" and the conclusion that a $P \rightarrow S$ association is not exactly the same thing as an $S \rightarrow P$ association. First, $P \rightarrow S$ and $S \rightarrow P$ priming were uncorrelated for both men and women. Second, the average strength of a $P \rightarrow S$ association was greater than the average strength of an $S \rightarrow P$ association for both men and women. Finally, $P \rightarrow S$ priming was more strongly related to aggression than was $S \rightarrow P$ priming.

Understanding how bidirectionality differs from unidirectionality is made more difficult by the fact that a theoretical account of unidirectional links has not been written. The influential theory of spreading activation as put forth, for example, by Collins and Loftus (1975) refers only in passing to unidimensional priming; bidirectionality is, for all practical purposes, assumed. Other theoretical accounts of priming also make explicit or implicit assumptions of bidirectionality.

On the other hand, it is clear that unidirectional links between concepts do exist. Free-association data provide examples of such directional connections: *butterfly* will frequently invoke *insect*, for example, but *insect* will only rarely result in a response of *butterfly* (Collins & Loftus, 1975). The plausibility of unidirectionality is also apparent when one recalls that the nervous system is inherently unidirectional—electrical energy travels only in one direction along the length of a neuron.

Unidirectional links can be easily implemented in computer simulation models of semantic memory. Connectionist or neural net models are, in fact, composed of "units" that are connected via one-way links into larger networks. Although directionality has not typically been a part of the more traditional node-link models of spreading activation, such directionality can easily be added. Rather than having only one link between two concepts (e.g., *salt* and *pepper*), two links would be used, each of which would have a distinct value for strength of association. In cases such as *salt* and *pepper*, the two strength values would be equal (or close) because the association is as strong in one direction as the other. In other cases, however (e.g., *butterfly* and *insect* or *shrimp* and *seafood*), the strength in one direction would be greater than the strength in the other direction.

A unidirectional structure is also apparent in the if-then propositional logic models developed by cognitive psychologists and computer scientists (e.g., J. R. Anderson, 1996) and, more recently, used by several social psychologists (Baldwin & Sinclair, 1996; Mischel & Shoda, 1995). Using a logic framework of this type, one might represent a $P \rightarrow S$ connection with rules similar to the following: if exerting power (dominating someone or something), then feel aroused (or think about sex or engage in some sexual behavior). An example of an $S \rightarrow P$ rule would be the

following: if engaging in sex, then feel powerful (or think about power or act in a dominating fashion).

This discussion leads naturally to the question, What is the phenomenological meaning of a $P \rightarrow S$ as opposed to an $S \rightarrow P$ connection?⁸ If rules such as those mentioned above are, indeed, part of what constitutes a power–sex association, we would expect certain outcomes. For example, if a person has a strong $P \rightarrow S$ link and performs a power action (e.g., giving an order to a subordinate), we would predict that some amount of sexual affect or arousal would result, albeit perhaps mild and mostly unconscious. It is easy to see how this might lead to aggression. Every time a dominating action is performed, it is reinforced by the pleasant (even if unconscious) sensation of sexual arousal. If a power action is specifically sexual in nature, it could well lead to stronger sensations of sexual arousal. So it seems eminently plausible that $P \rightarrow S$ associations would be correlated with aggression.

This may especially be the case if there are few strong links from other concepts or affects (such as tenderness) to sexuality because then one might feel sexual only in situations in which one dominates. This understanding of the meaning of a $P \rightarrow S$ link suggests that a possible intervention for aggressive men would be to help them develop links from other ways of being or acting and sexuality. For example, initiating or receiving kind words or kind actions from a partner could also be linked with feelings or thoughts about sex. Such a link, if strong, might help downplay the fact that dominating someone makes you feel sexual.

A person with a strong $S \rightarrow P$ link would have different underlying if–then rules. For these people, acting sexually would lead to feeling powerful. Feeling agentic and in control is also potentially reinforcing (Ellis, 1989), although this affective state is probably not as reinforcing as feeling sexually aroused (this is one possible explanation for why $P \rightarrow S$ priming is stronger for both men and women than $S \rightarrow P$ priming). But the causal path from the development and exercise of $S \rightarrow P$ links to aggression seems murkier, mainly because no dominating or aggressive actions were performed anywhere in the sequence. Rather, sexual acts were performed; these then led to feelings of power. So, if $P \rightarrow S$ and $S \rightarrow P$ links are based (even if only in part) on these sorts of rules, we would expect $P \rightarrow S$ priming to have a stronger relationship with aggression than would $S \rightarrow P$ priming. In both this study and Bargh et al.'s (1995), $P \rightarrow S$ priming had more of a relationship with aggression than did $S \rightarrow P$ priming, indicating that an if–then model of power–sex associations is plausible.

Development of Power–Sex Associations

Some theorists have argued that there is a fundamental, biological link between power and sex (Ellis, 1989; Stoller, 1988), suggesting that power–sex associations would be present in everyone. The data reported here, however, indicate that power–sex connections are not universal. Biological or genetic accounts of a power–sex link need not be simplistic, of course. An account that included mechanisms whereby an innate link could be overridden, or specifics of how environmental or cultural factors cause nascent connections to either develop or be suppressed, could account for the present data (e.g., see Ellis, 1989, for a genetic account of sexual aggression that relies on prenatal exposure to androgens). In addition to genetic or biological mechanisms, however, there are a number of sociological, psychological, or situational mechanisms

that might operate to produce power–sex associations. Some of these possibilities were alluded to previously but are elaborated more fully below.

Media Depictions of Sexuality

The mass media present many power- and sex-related stimuli, often juxtaposing or intertwining the two concepts. Themes of dominance or exploitation are common in pornography (Cowan, Lee, Levy, & Snyder, 1988), and some pornography is extremely violent (Dworkin, 1981; Palys, 1986) and/or racist (Cowan & Campbell, 1994; Mayall & Russell, 1993). Other media portrayals of sexuality also seem likely to lead to the development of power–sex associations. Romance novels frequently link dominance and submission with the erotic (Modleski, 1982; Snitow, 1979). Portrayals of sexuality in more “mainstream” film and literature have been discussed and critiqued by Millet (1970), Zilbergeld (1978), and others. The typical conclusion of these critiques is that themes of dominance and submission are prevalent. Eroticized dominance is also frequently featured as part of the sexual interactions portrayed in television soap operas (Lowry, Love, & Kirby, 1981). Viewing or reading any of these media presentations might lead to the development of links between power and sex.

Social Constructions of Masculinity and Femininity

For many people, the sense of oneself as a sexual being is intimately tied to conceptions of masculinity and femininity. It may, therefore, be difficult for many men to feel sexy or sexual if they do not feel masculine or for many women to feel sexy or sexual if they do not feel feminine. Stereotypical constructions of masculinity and femininity are deeply intertwined with conceptions of power (E. E. Morgan, 1975). For example, a masculine man is tall and muscular; he has both physical and economic power. A feminine woman, on the other hand, is one who is petite and relatively weak. It would be unfeminine for her to be more competent or more intelligent than her male partner or to have more money or be taller than him. Connections between power and sex may derive in large part from the many ways in which masculinity and femininity are tied to dominance and submission, to strength and weakness.

Sexual Abuse and Sexual Assault

Approximately 1 in 4 women in the United States report having experienced forced sexual intercourse as an adult (Koss, 1993). A similar number of adults report childhood sexual abuse (Elliott, 1997), with women reporting higher levels than men (Russell, 1986). Especially in the cases in which sexual abuse continues over a long period, it seems quite probable that psychological connections between power and sexuality would be formed. As discussed earlier, if power–sex links develop as a result of being the victim of sexual abuse or assault, it may be especially important to understand more specifically what aspects of power are paramount. A fusion of sexuality with power-as-defense, or with

⁸ For this discussion, I focus on one construction of power (having power over someone or something else) and one construction of sexuality (a feeling of sexual arousal).

submission, would be less likely (one would assume) to lead to later perpetration of aggression than would the pairing of sexuality with domination.

Each act of sexual abuse or assault involves an assailant as well as a victim. It seems likely that strong power-sex connections would develop in individuals who repeatedly commit sexually aggressive actions. The behavior and the cognitive structures may be dialectically related. In other words, the presence of a cognitive power-sex association may make it more likely that an aggressive sexual action will be committed; every such action would then serve to further strengthen the power-sex association.

Limitations of the Study

Measurement Issues

Men and women completed identical versions of the questionnaire used to measure sexual aggression. This does not guarantee that the meaning of the construct of sexual aggressiveness was the same for the two genders, however, because there may have been differences in interpretation. For example, consider the item "I have told someone I was making out with that they couldn't stop and leave me frustrated." At one extreme, a person might endorse this statement because they sometimes tease their partner about having to stop in the middle of sexual play (perhaps because of an interruption like a phone call). At the other extreme, this statement could represent a situation in which violence is threatened if the partner does not complete a particular sex act. If women tend to interpret this statement as referring to warm teasing and men as referring to threats of violence, then the fact that women and men endorsed this item with equal frequency would be misleading. Similarly, in cases in which gender differences were seen (either in prevalence rates or in correlations with the predictor variables), these differences may be due, at least in part, to the fact that the ASBI was originally designed for male respondents.

The Coerce scale included behaviors that ranged from very serious ("forced someone to have sex" qualifies as rape) to relatively mild (threatening to end the relationship or dating someone younger).⁹ If more items had been included, two distinct constructs might have emerged—one with items related to physical force and other more severe actions and one relating to verbal and other relatively mild coercive behaviors. Even without additional items, separate constructs might have emerged if the scale had been administered to a different population, one in which at least some participants endorsed the more severe items from the Mosher scale.

Behaviors such as those described in the Seduce scale have not typically been of interest to researchers studying sexual aggression (all seven of these items were written for the present study). Although it is clear that these types of manipulative sexual behaviors are conceptually and empirically distinct from the more forceful and coercive behaviors described in the Coerce scale, there nevertheless was a moderately strong correlation between the two scales. In addition, some of the findings (i.e., those for motives) were similar across the two scales. Thus, even if one is interested mostly in very serious forms of aggression, such as rape, it is probably useful to gather data about a wider range of potentially manipulative sexual behaviors or strategies.

On the other hand, one problem with the Seduce scale is that most of the behaviors could be performed either in a manipulative

or in a warm and loving fashion. Thus, in further research that examines a wide range of behavior, it would be useful to find a way to disentangle these two possibilities. It may be necessary to ask participants to respond to open-ended questions to ascertain how each item was interpreted, a method used with some success by Muehlenhard and Rodgers (1998).

Participants

Most participants in previous studies on sexual aggression have been either students in introductory psychology courses (typically White, middle-class, and 18 to 20 years old) or convicted sexual offenders. One of the strengths of the present study is that participants were recruited from the community and ranged in age from 21 to 45. The greater diversity of participants suggests that results might be more generalizable than those found in previous studies. On the other hand, the method of recruitment (advertising a study on "romantic relationships") might have resulted in a study population that was unique in some ways, suggesting that generalizability might be limited.

A second limitation of the study population is that only data from heterosexual participants were analyzed. Considerations of sample size dictated this decision; however, studies on sexual aggression that specifically recruit lesbians, gay men, and bisexuals are clearly needed.

Conclusion

The present study has demonstrated that measures of social motives and cognitive power-sex associations are able to predict part of the variance in self-reported aggressive sexual behavior; this was true for both men and women. One of the reasons why these results are intriguing is that both of the personality measurement techniques used were implicit rather than self-report techniques and thus were less subject to demand characteristics. Results from the priming task, in particular, cannot reasonably be argued to be under the conscious control of participants.

Although priming techniques have been successfully used by social psychologists for years, they have generally been used to assess mean differences, across individuals, due to exposure to various conditions rather than as measures of individual differences. The present study shows that techniques such as priming can be used to obtain measures of implicit individual differences and that such use, although labor intensive, may lead to new and interesting ways to understand personality as both a construct and a process.

The use of priming techniques to study individual differences may also help to uncover subtleties of the processes involved in priming, a topic of interest to cognitive psychologists. In particular, the finding that P→S and S→P priming are not redundant measures has implications for spreading activation or compound cue theories (Ratcliff & McKoon, 1994) that seek to understand the processes underlying the phenomenon of priming.

⁹ Of course, context is important. If the age difference is extreme (e.g., a 30-year-old having sexual intercourse with a 12-year-old), then "dating" someone younger would be a serious sex offense. Similarly, threats to leave a relationship are more serious if they would result in the partner's being destitute or being unable to be with his or her children.

One of the findings of this study was that gender was an important moderator variable; power motivation was more important in predicting sexual aggression in men, and affiliation-intimacy motivation was more important for women. These results suggest that attention to gender is critically important and that theory developed to explain male behavior may not work well when applied to women. Much more theoretical and empirical work relating to connections between power and sexuality in women is clearly needed.

Intimate relationships, especially those that have a sexual component, occupy a central place in the lives of many people. A fuller understanding of how aspects of power are woven into these relationships may help to make them more successful, satisfying, and long lasting. The present study has made a contribution to such an understanding. It offers empirical support for the hypothesis advanced by feminist theorists that a fusion of power and sexuality can have negative consequences. The fusion of power and sexuality interacted with other variables, however, in ways both expected and unexpected. Further research will be needed to help untangle these complexities.

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Appendix

Computation of P→S and S→P Priming Scores

Computations are for P→S priming; parallel reasoning can be used to produce the equation for S→P priming.

Step 1: Comparing PS Trials With NS Trials

Because the same target words are used, any differences in RTs for these two types of trials can come from only two sources: the primes (a main effect of priming words) or the combinations of the primes and targets (an interaction between the two; could also be labeled *priming, facilitation, or interference*). This can be represented mathematically as follows:

$$NS - \text{AVG}[PS_a, PS_b] = \Delta_{\text{Pow}} + \Delta_{\text{P/S}} + \Delta_{\text{N/S}}, \quad (1)$$

where Δ_{Pow} is the change in RT attributable to the power (as opposed to neutral) primes, $\Delta_{\text{P/S}}$ is the change in RT attributable to a P→S association, and $\Delta_{\text{N/S}}$ is the change in RT attributable to an N→S association. $\Delta_{\text{N/S}}$ is assumed to equal zero.

Step 2: Comparing PN Trials With UR Trials

Again, the same target words are used. Differences in RTs could be due to either the primes or the interaction (priming) between primes and targets. The primes are identical to those in Step 1 above. Mathematically,

$$UR_1 - PN = \Delta_{\text{Pow}} + \Delta_{\text{P/N}} + \Delta_{\text{N/N}}, \quad (2)$$

where $\Delta_{\text{P/N}}$ is the change in RT attributable to a P→N association and $\Delta_{\text{N/N}}$ is the change in RT attributable to an N→N association. Both of the above are assumed to equal zero.

Step 3: Computing $\Delta_{\text{P/S}}$

Subtract Equation 2 from Equation 1:

$$\begin{aligned} NS - \text{AVG}[PS_a, PS_b] - [UR_1 - PN] \\ = \Delta_{\text{Pow}} + \Delta_{\text{P/S}} + \Delta_{\text{N/S}} - [\Delta_{\text{Pow}} + \Delta_{\text{P/N}} + \Delta_{\text{N/N}}]. \end{aligned}$$

Because of the assumptions made above,

$$NS - \text{AVG}[PS_a, PS_b] - UR_1 + PN = \Delta_{\text{P/S}}.$$

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