Journal of Personality and Social Psychology
1994, Vol. 67, No. 6, 1079-1100

0022-3514/94/$3.00

Women's Sexual Self-Schema

Barbara L. Andersen and Jill M. Cyranowski

Sexual self-schemas are cognitive generalizations about sexual aspects of oneself that are derived from past experience, manifest in current experience, influential in the processing of sexually relevant social information, and guide sexual behavior. In Part I, a measure of a cognitive self-view of women's sexuality was developed. The construct includes 2 positive aspects, an inclination to experience passionate–romantic emotions and a behavioral openness to sexual experience, and a negative aspect, embarrassment or conservativism, which may be a deterrent to sexual–romantic affects and behaviors. In Part II, the role of sexual schema in intrapersonal and interpersonal aspects of sexuality was examined. In Part III, a bivariate model was explored and 4 self-views—positive, co-schematic, aschematic, and negative—were proposed and compared.

Research on the self suggests that one's self-view is not only a product of current behavior but that it interprets and organizes self-relevant actions and experiences, has motivational consequences, and adjusts in response to interpersonal processes (Markus & Wurf, 1987). This dynamic and broadened view has led to a productive research tradition and has highlighted the notion that self-concept is broader than prior research conceptualizations, most notably, self-esteem. If the self is multifaceted, as many have suggested (e.g., Carver & Scheier, 1981; Epstein, 1980), there may be some aspects that are central. We describe in this article one such facet for women, *sexual self-schema*, and illustrate its role not only for an explicitly sexual intrapersonal domain but also for interpersonal relationships.

Historically, individual differences in sexuality might be grouped into three research traditions (Byrne & Schulte, 1990). First, differences in affective or evaluative (attitudinal) reactions to sexual cues are typified by the notion of erotophobia–erotophilia, a tendency to respond to sexual cues along a negative to positive dimension of affect and evaluation (Byrne, 1983; Fisher, White, Byrne, & Kelley, 1988). Another example would be Mosher's (1966) concept of sex guilt. A second strategy has been to examine patterns of sexual behavior. This view is often atheoretical, and resulting measures can capitalize on the fact that efficient predictors of future behaviors are often the same (or conceptually relevant) measures of past behaviors (e.g., Bentler, 1968; Derogatis & Melisaratos, 1979). Simpson and Gangestad (1991a, 1991b) focus on individual differences in sociosexual orientation, or the willingness to engage in uncommitted sexual relations. A third strategy has examined individual differences in physiological aspects of sexuality, most notably sexual arousal. Psychophysiological measures have provided a more reliable documentation of sexual responding in men than in women (Kelley & Byrne, 1983), but self-report measures of women's arousability, such as the Sexual Arousability Index (SAI; Hoon, Hoon, & Wincze, 1976), have been useful proxy variables.

Surprisingly, there has been little attention given to cognitive representations of sexuality (Simon & Gagnon, 1987; Whalen & Roth, 1987). Social cognition research suggests that such a view would have the potential to tap a variety of sexually relevant domains, including the attitudes, behaviors, and responses described above, as well as cognitive representations of the sexual self. Sexual self-schema, then, might be construed in much the same manner as Markus's (1977) original notions. We view them as cognitive generalizations about sexual aspects of oneself. They are derived from past experience, manifest in current experience, influential in the processing of sexually relevant social information, and they guide sexual behavior.

Perhaps because sexuality can have very private and personal aspects, a cognitive view may be particularly informative. We hypothesized that women with schematic representations of their sexuality have made inferences about their sexuality from observing their sexual behavior, experiencing sexual emotions (such as sexual arousal), and discovering their sexual attitudes and beliefs. Because many other sexual events are interpersonal ones, women will also make inferences about their sexuality on the basis of their intimate sexual relationships with others. For a woman with a clear schematic representation of her sexuality, it should not only serve as a quick representation of one's sexual history but also function as a point of origin for information—judgments, decisions, inferences, predictions, and behaviors—about the current and future sexual self.

We hypothesized that women with schematic representations but whose schemas differ in valence—positive versus negative self-views—would differ in a number of aspects of their sexuality. A straightforward discovery would be an analysis of past behavior, as individuals clearly differ in their sexual histories. A

Barbara L. Andersen and Jill M. Cyranowski, Department of Psychology, Ohio State University.

We would like to thank the women who participated in this research. Part II is based on a master's thesis conducted by Jill M. Cyranowski and supervised by Barbara L. Andersen. Several individuals provided helpful comments on the various studies: Nancy Betz, Brian Gladue, Janice Kiecolt-Glaser, Herbert Mirels, and David Smith. Deborah Yurek and Xichel Woods assisted with data collection. A special thanks to John T. Cacioppo for his continuing assistance.

Correspondence concerning this article should be addressed to Barbara L. Andersen, Department of Psychology, 1885 Neil Avenue, The Ohio State University, Columbus, Ohio 43210.

variety of sexual behaviors covary, such as number of previous sexual activities, number of lifetime partners, or age at first intercourse. Women with a positive sexual schema might be expected, for example, to enter sexual relationships more willingly, to exhibit an extensive behavioral repertoire, and to evidence more positive emotions when in sexual relationships. In contrast, women with a negative view of the sexual self may be less sexually experienced, have weaker positive affects, perhaps additional negative affects about sexual matters, and be less likely to have intimate relationships or be less skilled or comfortable in them when they occur.

Research in sexuality has been criticized (e.g., Abramson, 1992) on two important dimensions: the absence of concepts and theories that can explain and predict sexual phenomena and problems of measurement. The previously cited examples notwithstanding, theorizing and model testing are sparse and, instead, an empirically driven documentation is commonplace. Two examples of the latter tradition are historical and highly cited research groups, Kinsey and colleagues (e.g., Kinsey, Pomeroy, Martin, & Gebhard, 1953) and Masters and Johnson (1966, 1970). Although the contributions of both groups are considerable, their empirical work did not result in theoretical elaboration. Considering the issue of measurement, data collection of sexual information is typically reactive, and research has been plagued by difficulties in developing valid and reliable measures. Methodological problems such as measurement error (e.g., item refusal, underreporting, social desirability, or, conversely, sexual bragging) and participation bias (e.g., differences in demographic characteristics, personality factors, sexual attitudes, or sexual behaviors of participants and nonparticipants; Catania, Gibson, Chitwood, & Coates, 1990) have weakened many sexuality studies. These measurement difficulties may be due, in part, to the common strategy of using explicit items to mark sexuality (e.g., "How many different partners have you had sex with in your lifetime?" from the Sociosexual Orientation Inventory [SOI; Simpson & Gangestad, 1991a]; arousal ratings for "when you masturbate" or "when you stimulate your partner's genitals with your mouth and tongue," on the SAI [Hoon et al., 1976]). Although such measures are direct and unabashedly face valid, it was hypothesized that, all else being equal, a discrete and unobtrusive measure would have powerful methodologic advantages. Furthermore, one that tapped a cognitive self might contribute an added dimension to the understanding and prediction of other aspects of sexuality, such as behaviors, responses, and attitudes.

Accordingly, there were two goals of the present research: to define the sexual self-schema construct and to develop a valid and reliable operationalization, and then, in turn, to elaborate the construct by examining the role of sexual schema in the processing of intrapersonal and interpersonal information about the self. In approaching the first goal, we needed to generate an item pool that reflected a range of potential cognitive representations of sexual self-schema for women. For this, we pursued Galton's (1884) *lexical hypothesis*, or the assumption that the most important individual differences in human transactions will come to be encoded as single terms in one's language. The use of trait adjectives as markers of important personality dispositions has a long and successful history in the field of personality psychology (e.g., Goldberg, 1993). Hence, we used this classic yet contemporary approach to identify a semantic representation of a "sexual woman." This representation was subsequently refined using both intuitive and empirical steps. Thus, Part I, which summarizes six studies, defines the construct and describes the development and validation of the Sexual Self-Schema Scale. Data on the second goal is provided in Parts II and III by studying individual differences in schematic representations. In Part II, we explore the origins and elaborate on a bipolar representation of sexual self-schema (i.e., positive and negative self-views). This is the traditional research strategy, although scholars have noted that there has been relatively little attention to the negativity of self-concepts (Markus & Wurf, 1987). This analysis clarifies the different intrapersonal and interpersonal processes governing the self-views of women with negative as well as positive sexual schemas. Whereas bipolar representations has been an accepted research strategy in the schema research literature, other models have conceptual and methodologic advantages. Specifically, consideration of a *bivariate* model along with a dimension of coactivation may be important, as has been found in other literatures (see Cacioppo & Berntson, 1994, for a discussion regarding attitude research). This latter analysis clarifies the different intrapersonal and interpersonal processes governing four self-views: positive schematic, negative schematic, aschematic, and co-schematic (both strong negative and positive sexual self-views).

PART I: DEFINITION AND DEVELOPMENT

Method and Results

Participants

The majority of the psychometric data were gathered from female undergraduates at The Ohio State University (OSU) enrolled in introductory psychology and receiving course credit for experiment participation. Data from seven different samples of participants (with the *N*s ranging from 20 to 221) were gathered over six consecutive academic quarters. The mean age of the undergraduate women was 20 years, with a mean education of college sophomore (13.7 years).

Two samples of older women were also obtained. They included nonfaculty OSU employees, acquaintances of the experimenters, and older students returning to complete their degree. The first sample ($N = 14$) was recruited to examine generational differences in the initial item pool and test for generalizability at the item level (see Part I, Study 1, below). These women ranged in age from 38 to 74, with a mean age of 49 years. The sample was similar to the undergraduates in education level in that *some college* (in between *high school graduate* and *college graduate*) was the descriptive mean.

The second sample ($N = 31$) was recruited for validity analyses (see Part I, Study 4, below). These women ranged in age from 25 to 46, with a mean age of 34 years. Again, the sample was similar to the undergraduates in education level in that *some college* was the descriptive mean. Marital status data indicated that 39% of the sample was single–never married, 52% were married or living in a marital like relationship, 6% were separated or divorced, and 3% were widowed.

Item Generation

An initial pool of 300 trait adjectives was generated from two sources. Two hundred items were selected from Anderson's (1968) list of 555

personality-trait words. These words were selected by the investigators as representing 100 positive (e.g., experienced, romantic) and 100 negative (e.g., cold, self-conscious) aspects of women's sexuality. Items of each type represented the full range of likableness values, as provided by Anderson (1968). An additional 100 adjectives were generated by the investigators as potentially reflecting other aspects of sexual self-concept (e.g., loving, passionate) not yet represented.

Item Selection

Initial: Study 1

The list of 300 trait adjectives was first rated on their relevance to the conceptualization of a sexual woman. Undergraduate women ($N = 69$) were provided with the following instructions:

> This study is the first part of a research program to develop a measure of sexual self-concept. As a beginning, we need to understand your personal opinion of a "sexual woman." As you think of the concept of a "sexual woman" we are interested in what kinds of attributes and qualities come to your mind.

Participants rated each of the 300 trait adjectives on a 7-point scale, ranging from 0 = *not at all descriptive of a sexual woman* to 6 = *very much descriptive of a sexual woman.*

On the basis of these data, approximately half of the items were eliminated. Adjectives selected for further consideration were the 100 items with the highest mean ratings (i.e., those rated as most descriptive of a sexual woman) and a stratified random sample of 70 of the remainder. The resulting second list of 170 items was given to the older female sample with the same instructions for rating their relevance in describing a sexual woman.

A second undergraduate sample ($N = 65$) was given the second list of 170 items for self-ratings. Women were to rate each item on a scale ranging from 0 = *not at all descriptive of me* to 6 = *very much descriptive of me,* with the measure entitled "Trait Adjective Ratings." Because we were interested in reducing response-set biases and construct overlap at the item level, these participants were also administered additional measures: (a) the Positive and Negative Affectivity Scale (PANAS; Watson, Clark, & Tellegen, 1988); (b) the Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1960); and (c) the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

The second phase of item elimination included two sets of data: comparison of the college and older samples in their ratings of the trait adjectives as descriptive of a sexual woman and Pearson product–moment correlations from the second undergraduate sample providing the self-ratings of the 170 trait adjectives and the discriminant measure data. In general, items were eliminated that (a) had a mean difference between the college and older samples of more than 1 rating point in direct ratings of a sexual woman; (b) elicited response biases of negativity or social desirability (i.e., correlated above .2 with negative affect [PANAS; Watson et al., 1988], social desirability [Crowne & Marlowe, 1960], or both); or (c) showed moderate to high correlations (i.e., above .3) with positive affect (PANAS; Watson et al., 1988) or self-esteem (Rosenberg, 1965). These criteria resulted in a third list of 50 trait adjectives for further consideration.

Final: Study 2

We administered the 50-item list (with an additional 10 filler items, all entitled "Trait Adjective Ratings") to another sample of undergraduate women ($N = 221$). As previously, discriminant measures included those of affectivity and social desirability. In addition, a sample of criterion measures was included. In the latter case, we hypothesized that scores tapping one's sexual self-concept should be related to, though not overlapping with, sexual behavior and selected attitudinal measures. Hence, participants rated the 50 trait adjectives on a 7-point rating scale ranging from 0 = *not at all descriptive of me* to 6 = *very much descriptive of me,* and then completed the following measures: (a) positive and negative affect—PANAS (Watson et al., 1988); (b) sexual behavior—Current Sexual Experience Scale (SES) from the Derogatis Sexual Functioning Inventory (DSFI; Andersen & Broffitt, 1988; Derogatis & Melisaratos, 1979), individual items regarding current and future sexual partners, and individual items regarding sexual history (e.g., number of lifetime sexual partners); (c) sexual attitudes—Attitudes Toward Sex Without Commitment and Casual Sex Indexes (Snyder, Simpson, & Gangestad, 1986); (d) sexual arousal—SAI (Hoon et al., 1976); (e) love and romantic involvement—Hatfield Passionate Love Scale (Hatfield & Sprecher, 1986) and individual items (e.g., number of times fallen in love); and (f) social desirability—Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

Pearson product–moment correlations were obtained for self-ratings of the 50 trait adjectives with each of the discriminant and convergent measures. On the basis of this information, we again considered the strengths and weaknesses of each item, checking also for replication of effects with the prior samples. Twenty-four items correlating with affectivity or social desirability rather than criterion measures were eliminated, resulting in the final 26-item scale.

Validity

Content

As noted previously, our intent was to develop a valid but unobtrusive measure of sexual self-concept. Inspection of Table 1 indicates that the 26 Sexual Self-Schema Scale items are dispersed across a continuum of participants' rating of the words as descriptive of a sexual woman. Using a 7-point scale, higher ratings indicate greater descriptive relevance, with the lowest, a rating of zero, being not at all descriptive. As we describe below (see Construct), the adjectives tend to cluster by factor. That is, items at the upper end of the scale tend to have high loadings on the first factor, items in the mid to high range largely represent the second factor, and items with the lowest values and a negative valence represent the third factor. Importantly, comparison of the two samples indicates minimal, if any, generational differences in the item ratings. This suggests that relevance of the individual words for women's notions of a sexual woman do not vary substantially across the age range (18 to 74 years) sampled.

Construct

In their classic articles, Cronbach, Meehl, and others (Campbell & Fiske, 1959; Cronbach & Meehl, 1955) recommended that construct validity analysis includes factor analysis and study of internal structure, demonstration of convergent and discriminant validity, analysis of process, documentation of group differences, and change over occasions. To this end, studies were conducted in each area.

Study 3

To analyze the *internal structure* of the 26-item scale, responses of 387 female undergraduates to the Trait Adjective Ratings measure were submitted to a principal-axis factor analysis with an oblique Harris-Kaiser rotation. On the basis of an eigenvalue scree plot and factor interpretability, three factors were extracted. The rotated factor pattern with loadings for each of the 26 items is provided in Table 2. The first and largest factor was labeled the *Passionate–Romantic* factor and included 10 items. The second factor, labeled *Open,* included 9 adjectives.

Table 1
Ratings of Sexual Self-Schema Items by Undergraduate Women (N = 69) and Older Women (N = 14)

	Score						
Women	0	1	2	3	4	5	6
Undergraduate (*M* age = 20)	unromantic (0.6)	timid (1.5) inexperienced (1.5) conservative (1.6) prudent (1.7)	self-conscious (2.3) cautious (2.6)	sympathetic (3.1) frank (3.8) outspoken (3.8) casual (3.8) uninhibited (3.9)	straightforward (4.0) direct (4.2) feeling (4.2) open-minded (4.2) broad-minded (4.2) warm (4.4) experienced (4.4) loving (4.6) revealing (4.6) romantic (4.7)	arousable (5.1) stimulating (5.3) passionate (5.7)	
Older (*M* age = 49)	unromantic (0.9)	timid (1.0) inexperienced (1.6) self-conscious (1.7)	conservative (2.2) cautious (2.4) prudent (2.5)	frank (3.3) straightforward (3.5) sympathetic (3.6) direct (3.6) outspoken (3.7) casual (3.8)	experienced (4.1) revealing (4.2) broad-minded (4.4) uninhibited (4.6) open-minded (4.6) arousable (4.9) romantic (4.9)	stimulating (5.1) feeling (5.2) warm (5.3) passionate (5.4) loving (5.8)	

Note. Each item was rated on a scale ranging from 0 = *not at all descriptive* to 6 = *very much descriptive* of a "sexual woman." Also, rating data were not collected for "embarrassed" with these samples. Data from other samples (N = 387) indicate an item score of 2.81.

Table 2
Factor Loadings of Sexual Self-Schema Scale Items

Item	Factor		
	1: Passionate–Romantic	2: Open–Direct	3: Embarrassed–Conservative
Romantic	**.72**	−.09	−.11
Passionate	**.71**	.12	−.05
Unromantic	**−.67**	.14	.16
Warm	**.65**	−.01	.13
Loving	**.63**	.07	.10
Feeling	**.56**	.07	.16
Sympathetic	**.53**	−.03	.21
Arousable	**.44**	.14	−.07
Stimulating	**.41**	.22	−.20
Revealing	**.29**	.14	−.09
Direct	.01	**.83**	−.02
Straightforward	−.03	**.82**	−.01
Frank	−.04	**.70**	−.02
Outspoken	.06	**.52**	−.23
Broad-minded	.21	**.39**	−.06
Experienced	.24	**.30**	−.15
Casual	.15	**.30**	.05
Open-minded	.28	**.27**	.03
Uninhibited	.15	**.26**	−.03
Embarrassed	−.02	−.13	**.55**
Conservative	.02	−.01	**.55**
Cautious	.12	.11	**.51**
Self-conscious	−.01	−.01	**.50**
Timid	−.06	−.15	**.48**
Inexperienced	−.22	−.22	**.37**
Prudent	−.10	.07	**.21**

Note. The boldface type indicates factor assignment for each item.

Finally, the third factor included 7 items, all with a negative valence and representing an *Embarrassed–Conservative* dimension.

Table 3 presents the means and standard deviations for the factors and the factor intercorrelations. Factor and sexual self-schema scores were obtained using individual item scores. Sexual self-schema scores were calculated by adding the items for Factor 1 and Factor 2 and subtracting the values for the Factor 3 items. The intercorrelation data indicate the strong relationship of each factor to the overall score, with factor/total correlations ranging from .65 to .80. The factor intercorrelation data indicate that the factors are related but not redundant. The pattern is an expected one, with the strongest relationship between Factors 1 and 2 (.37) and an expected negative relationship between Factors 1 and 3 (−.16) and between Factors 2 and 3 (−.31).

Study 4

Before discussing the convergent and discriminant studies, we review the analyses of measurement error. Some of the most common methodology problems with sexuality measures (e.g., participation bias, refusal of items, over- and under-reporting; Catania et al., 1990) were avoided by using the trait adjective format. Therefore, this analysis focused on social desirability and affectively biased responding. Along with the con-

Table 3
Means and Standard Deviations of Sexual Self-Schema Scores and Factor and Total Score Intercorrelations

Scale	*M*	*SD*	Factor 1	Factor 2	Factor 3
Factor 1					
Passionate–Romantic	47.44	6.45	—		
Factor 2					
Open–Direct	36.26	7.15	.37**	—	
Factor 3					
Embarrassed–Conservative	23.22	5.91	−.16	−.31*	—
Total score	60.47	14.15	.71**	.80**	−.65**

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

Table 4
Pearson Product–Moment Correlations of Factor and Sexual Self-Schema Scores With Sexuality and Relationship Criterion Measures for Undergraduate Women (N = 220)

Dimension measure	Sexual Self-Schema Score			
	Factor 1 Passionate–Romantic	Factor 2 Open–Direct	Factor 3 Embarrassed–Conservative	Total
Sexuality: affective–evaluative				
Attitude toward casual sex	.01	.15*	−.20**	.17*
Attitude toward sex without commitment	.07	.24***	−.24***	.26***
Sex guilt	−.06	−.08	.21**	−.16*
Sexuality: behavior				
Sexual activities: lifetime	.14*	.24***	−.26***	.30***
Sexual partners	.14*	.33***	−.30***	.36***
One-night stands	.00	.21**	−.21**	.20**
Sexuality: arousal				
Sexual Arousability Index	.20**	.06	−.26***	.25***
Romantic relationships				
Hatfield Passionate Love	.31***	.00	.07	.14*
Love relationships	.19**	.26***	−.23***	.32***

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

vergent and discriminant measures described below, 221 women completed the Marlowe–Crowne and the PANAS to assess social desirability and positivity or negativity, respectively. Correlations with the sexual schema scale were nonsignificant and of low magnitude: .11 with the Marlowe–Crowne, −.13 with negative affect, and .26 with positive affect. The somewhat higher, though nonoverlapping, relationship with positive affect is consistent with our view of sexual self-schema as a positive aspect of the self. Taken together, these data add support to the internal validity of the sexual schema scale.

For the analysis of *convergent validity*, data were obtained from two samples, undergraduate and older women (see below). For the larger undergraduate sample ($N = 221$), we were interested in the correlation of the sexual schema total score with a broad band of sexually related measures. However, a more rigorous test would be to confirm different patterns of correlations across the factors, as the three factors represent unique, though related, aspects of sexual schema. Sexuality measures were selected so as to sample from previous individual difference measures assessing affective–evaluative, behavior (past and current), and sexual arousal dimensions (Byrne & Schulte, 1990). Also, measures of romantic involvement were included to assess interpersonal aspects of sexual schema. With this series of measures we anticipated that positive sexual schema would be convergent (positively correlated) with positive sexual attitudes (e.g., women with positive sexual schemas would report, in general, more positive attitudes about sexuality and sexual behaviors), a more extensive sexual behavior repertoire, and higher levels of sexual responding (such as sexual arousal). Because of the hypothesized importance of sexual schema to the formation of intimate relationships, we also expected convergent relationships with measures of love and romantic involvement. Conversely, we expected positive sexual schema to be inversely related to negative views or emotions about sexuality, such as sexual guilt.

Data are presented in Table 4. These correlations confirm predictions about the total score, and close inspection of the data reaffirms the three facets of sexual schema. As suggested by the factor label Passionate–Romantic, Factor 1 evidences the strongest relationships with self-ratings of sexual arousal felt during sexual activities and feelings of love toward the last romantic partner and the number of times the women reported that they had fallen in love. These data are in contrast to the zero to low correlations with the measures of attitudes toward sex in uncommitted relationships, negative sexual feelings (such as sex guilt), and the women's reports of their previous sexual behaviors. The pattern of results for Factor 2 (Openness) demonstrates the strongest relationships with all the measures of sexual behavior and positive attitudes toward sex without commitment. This confirms that Factor 2 taps a readiness for sexual activity or engagement. Unlike the pattern for Factor 1, there is no relationship between Factor 2 and either the measures tapping sexual arousal or that for love. The exception to the latter is the correlation with number of love relationships (.26), suggesting that some degree of openness may be important to the experience of (or report of) falling in love. Finally, high scores on Factor 3 (Embarrassed) are inversely related to measures of sexual behavior as well as reports of sexual arousal and romantic involvement, suggesting that Factor 3 has a general inhibitory effect on behavior as well as positive sexual affect. In summary, these data document an expected convergence of the sexual schema total score with other individual difference approaches. Also, although a differential pattern of relationships across the factor scores is revealed, in the majority of the comparisons the total score correlations are the highest, suggesting that the combination of factors results in the strongest relationships.

Convergent validity data from a sample of 31 older women were also obtained. In contrast to the broad-band approach taken with the undergraduate sample, here we were interested in a detailed analysis of sexuality and sexual responsiveness. For this we used a self-report measure (Andersen, Anderson, & deProsse, 1989) of responding during the four phases of the sexual response cycle (i.e., desire, excitement, orgasm, and resolution). For each phase, women answered four to eight questions tapping their satisfaction with their responding for the phase (e.g., "How often are you dissatisfied with your capacity to have orgasm [climax]?") and their awareness of bodily signs or symptoms of the phase (e.g., no interest in initiating sexual activity, refusal of intercourse, avoidance of intercourse for desire; awareness of vaginal lubrication, feeling vagina is "too tight" for penetration for excitement). Four general questions assessed overall satisfaction, enjoyment, and feelings of being a sexual woman. Finally, the Current SES from the DSFI (Andersen & Broffitt, 1988; Derogatis & Melisaratos, 1979) and the SAI (Hoon et al., 1976) were also included for comparison with the undergraduate sample.

Data are presented in Table 5 for the currently sexually active women (i.e., women who had intercourse at least once in the previous 3 months,

Table 5
Pearson Product–Moment Correlations of Factor and Sexual Self-Schema Scores With Sexual Response Cycle Measures for Older Women (N = 21)

Measure	Sexual Self-Schema Score			
	Factor 1 Passionate–Romantic	Factor 2 Open–Direct	Factor 3 Embarrassed–Conservative	Total
Sexual desire	.46*	.46*	.04	.47*
Sexual excitement	.39	.70***	−.29	.66***
Orgasm	.15	.36	−.62**	.46*
Resolution	.59**	.34	−.28	.59**
General evaluation	.69***	.46*	−.05	.63**

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

$n = 21$). These data suggest strong convergence between women's evaluation of their sexual self-concept and their reports of satisfaction with, and their current sexual responsiveness during, sex. As hypothesized, Factors 1 and 2 were positively correlated with greater satisfaction and higher levels of functional responding, whereas Factor 3 was unrelated or correlated in the negative direction. Some of the relationships are particularly telling, such as the high negative correlation (−.62, $p < .01$) between Factor 3 and reports of orgasmic responsiveness (e.g., how often they were able to reach orgasm [climax], awareness of vaginal contractions, dissatisfaction with capacity to have orgasm). Finally, using the entire sample, correlations of the total sexual schema score and level of current sexual activity was .13 (nonsignificant), whereas the correlation with the SAI was .41 ($p < .05$).

Discriminant measures assessed potentially relevant, nonsexual, personality domains: extraversion and self-esteem. These two were chosen because they are often related to sexuality indicators; for example, these two variables are common sources of volunteer bias in sexual behavior and attitude research (e.g., relative to nonvolunteers, volunteers have dated more, have varied sexual repertoires, more experience with erotica, read more sex books [Catania, McDermott, & Pollack, 1986], and have higher self-esteem [Maslow & Sakoda, 1952]; see Catania et al., 1990, for a review). We were interested in how much of the variance in sexual attitudes and behaviors could be explained by sexual schema beyond that explained by extraversion or self-esteem. For these tests, the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and Factor I (Surgency–Extraversion) from Goldberg's (1992) Big Five Measure were administered to 172 undergraduate women. Three illustrative and central sexual variables were chosen as the to-be-predicted dependent variables. A series of hierarchical regression analyses were constructed to account for the variance in predicting range of lifetime sexual activities (Previous SES from the DSFI; Derogatis & Melisaratos, 1979), a woman's global rating of herself as a sexual woman, and reports of sexual arousability (SAI; Hoon, Hoon, & Wincze, 1976). In each of the analyses, either the measure of extraversion or self-esteem was entered as the first independent variable, followed by sexual self-schema scores. With extraversion, results indicated that sexual self-schema accounted for significant increments in explained variance in prediction of all three variables: reports of lifetime sexual activities, incremental variance = 4.49%, $p < .01$; global rating of self as a sexual woman, incremental variance = 7.43%, $p < .001$; and sexual arousability, incremental variance = 11.88%, $p < .001$. Similarly with self-esteem, results indicated that sexual self-schema accounted for significant increments in explained variance in prediction of all three variables: reports of lifetime sexual activities, incremental variance = 10.15%, $p < .0001$; global rating of self as a sexual woman, incremental variance = 12.56%, $p < .0001$; and sexual arousability, incremental variance = 16.73%, $p < .0001$.[1] Taken together, the analyses of response biases, convergent validity, and discriminant validity add additional support to the internal validity of the sexual schema scale.

Study 5

Inspection of scale items and numerous informal posttest inquiries of participants suggested an unobtrusive quality of the scale, a conjecture that received empirical support with a study of process. Specifically, a sample of 59 women completed the 26-item (with 24 filler items) scale. Four (teasing, gentle, afraid, and unreliable) of the 24 filler items were replaced (helpful, wise, stingy, and bossy), and, as previously, all items were randomly ordered. Next, participants were asked to generate five 1- or 2-word titles that could be used to describe the scale. Of the 285 titles generated ($M = 4.83$, $SD = 0.56$), not one included any reference to sex or sexuality, which suggests that women are unaware that a sexuality construct is being assessed. Instead, women indicated that the measure assesses a general attribute or quality; the most frequent or relevant titles included suggestions of "personality traits" or "characteristics" (general traits, 26%; specific traits, e.g., extraversion, honesty, 15%); "self-descriptions," "perceptions," or "image" (25%); and "self-esteem" or "confidence" (7%).

Study 6

The final construct validity analyses used the self-schema measure to select and contrast groups of women with individual differences in sexual self-schemas for the initial test of the operationalization of the con-

[1] These analyses were performed using a contrast group data set with $N = 172$ (see Part II for a description). Because of the nature of data from extreme groups with some restriction in the standard deviation estimate ($N = 172$, $SD = 18.93$) from that of the larger screening sample ($N = 400$, $SD = 13.95$), reported correlation coefficients may represent an inflated estimate of the relationships between the variables. Using Cohen and Cohen's (1983) correction for restriction of range, the following r^2s were calculated as estimates of the variance shared between sexual self-schema scores and the following variables in the population: the SES, 8.72%; the SOI, 6.59%; the SOS, 6.47%; and the SAI, 10.78%. All of these estimates are also significant at the .01 level. There is, however, no evidence to support the use of such correction procedures with multiple linear regression analyses, and so the hierarchical regression data are presented in the uncorrected format.

struct. We focused on women with positive versus negative sexual schemas. The design also included a repeated measures factor to assess change over occasions, so that we might confirm the stability of schema-relevant phenomena across time; an important element of individual difference measures is their cross-situational consistency. During the first week of an academic quarter, 121 undergraduate women were screened with the measure. For the entire sample, the mean schema score was 58.82 with a standard deviation of 14.61, replicating the data in Table 3 above. Women scoring in the top and bottom thirds on sexual schema were then contacted for participation in a two-part study for course credit. Of these, 17 positive schema (M = 73.94, SD = 9.04) and 25 negative schema (M = 40.76, SD = 8.80) scorers agreed to participate. As would be expected, the groups differed significantly in sexual self-schema score, $F(1, 40) = 140.78$, $p < .01$. Women were tested in groups of approximately 20 individuals for a study entitled, "Designing a Measure of Self-Concept," which included a variety of measures assessing sexuality and sexual and love relationships. A similar battery was completed by the women approximately 6 weeks later.

We tested four hypotheses. First, we expected the schema groups to differ in their cognitive generalizations about sexual aspects of the self. We chose the SAI (short form) for this question, as it has strong psychometric properties (Andersen, Broffitt, Karlsson, & Turnquist, 1989). The items reflect women's judgments of their capacity to become sexually aroused across a variety of sexual experiences and circumstances, including sexual responding to erotica, masturbation, and body caressing; oral–genital contact; and intercourse with a partner. As predicted, the groups significantly differed in SAI scores, $F(1, 40) = 7.79$, $p < .01$, with means for the positive and negative groups of 47 and 38, respectively.

For the second hypothesis, we expected that one's self-view is, in part, derived from past experience. Thus, there should be differences between the groups in the sexual behavior repertoire, such that women with a positive schema would, for example, report having experienced a wider range of sexual activities, have had more sexual partners, and have had more brief (one-night only) sexual encounters. These variables were chosen to document sexual history and were assessed using a short form of the Previous SES (Andersen & Broffitt, 1988; Derogatis & Melisaratos, 1979) and individual questions for number of partners and one-occasion encounters. A multivariate analysis of variance (MANOVA) with these variables was significant, $F(3, 37) = 4.98$, $p < .01$, and follow-up analyses of variance (ANOVAs) for each measure were significant. Women with a positive sexual schema, in contrast to those with a negative view of the sexual self, reported having experienced a broader range of sexual activities (10.37 vs. 7.9, with a possible range of 0–13), more sexual partners in their lifetime (7–9 vs. 2 partners), and more brief, sexual encounters in their lifetime (3.6 vs. 0.92 occasions).

Although sexual schema should have obvious relevance to sexual relationships, our expectation was that a positive view of one's sexuality, which included feelings of love as well as sexual arousal, might facilitate romantic involvement. A straightforward test would be to examine women's romantic histories as well as their current attachments. Consistent with our view, at the initial assessment 100% of the positive schema women reported that they had previously fallen in love, whereas 24% of the low schema women reported that they had never been in love. A related analysis of the number of times they had fallen in love was also significant, $F(1, 40) = 8.62$, $p < .01$, with the high schema group reporting 2.53 romantic (love) relationships and the low schema group reporting 1.28 relationships. These data confirm the two-fold press of positive sexual schema; women with a positive self-view are not only open to sexual relationships but they are, by their own report, able to form affectively intimate, love relationships.

For the third hypothesis, we anticipated that self-schema would be manifest in current experiences. To assess current sexual activity, women completed the Current SES, endorsing each of 13 sexual activities (e.g., masturbation, oral–genital contact) that occurred within the last 30 days (Andersen & Broffitt, 1988; Derogatis & Melisaratos, 1979). These data were gathered at both assessments. A 2 (group: positive vs. negative sexual schema) × 2 (time: Week 1 vs. Week 6) repeated measures ANOVA model was conducted. Analyses indicated a significant effect for group, $F(1, 40) = 7.3$, $p < .05$, with no significant effects for time or the interaction. These analyses confirmed that the schema score was related to stable behavioral differences in the samples. To examine the relationship between sexual schema and current romantic involvement, we asked women if they were currently involved with a partner. At both assessments, we found group differences in the expected direction, with the gap widening with the passage of time. At both assessments, 40% of the negative schema group reported that they were not romantically involved. In the positive schema group, 18% reported no romantic partner at the first assessment, but the estimate dropped to 12% by the second assessment. Taken together, these analyses suggest that the sexual schema construct is not simply a product of the past but that it covaries with current sexual and romantic relationships.

The final analyses tested the hypothesis that sexual self-schemas guide the processing of domain-relevant social information. For this aspect, we expected that women with a positive sexual self-schema would make predictions about their selves that would be consistent with their positive self-representation. Such a self-view might be reflected, for example, in projections about their sexual behavior or their sexual relationships, indicating that they would anticipate being involved with a partner or maybe having a certain, higher level of sexual activity. Women with a negative self-view, in contrast, were expected to be more conservative in their predictions about their sexual futures. At the initial assessment we asked women to estimate the number of sexual partners they anticipated having in the next 6 weeks. As expected, ANOVA analyses indicated that the groups significantly differed, $F(1, 40) = 8.92$, $p < .01$, with positive schema women estimating a mean of 1.06 partners and negative schema women estimating 0.52 partners.

Reliability

Internal Consistency

The Cronbach's alpha values for the Sexual Self-Schema Scale and each factor are as follows: full scale, .82; Factor 1, .81; Factor 2, .77; and Factor 3, .66 (N = 387). These data along with the factor intercorrelations indicate the adequate homogeneity of the scale as well as the importance of each factor in contributing to the overall score.

Test–Retest

Reliabilities of the Sexual Self-Schema Scale were obtained for 2- and 9-week intervals. The total score reliability value for 2 weeks (N = 20) was .89 ($p < .0001$). Coefficients for each factor were as follows: Factor 1, .72; Factor 2, .76; and Factor 3, .85. As expected, the total score reliability (N = 172) of the measure over a 9-week interval was .88 ($p < .0001$).[2] These reliabilities are high and suggest the stability characteristic of individual difference measures.

Discussion

Data from six studies document the feasibility, validity, and reliability of assessing a woman's cognitive view of her sexual

[2] This coefficient is .80 after correcting for restriction of range; see Footnote 1 for details.

self. A semantic representation of a sexual woman was obtained. Specifically, a sexual woman is viewed as one who experiences passionate and romantic emotions and who evidences a behavioral openness to sexual experiences, romantic experiences, or both; such a woman suffers little from embarrassment or conservatism regarding sexuality. Importantly, the construct is related to intrapersonal and interpersonal aspects of sexuality across time—past, current, and future self-views. The measure appears to be unhampered by social desirability or affective biases in responding. Support was also provided for convergent validity; the measure is correlated but distinguishable both from a broad band of sexual constructs and measures focusing narrowly on current sexual functioning, such as measures of sexual desire, excitement, and orgasm. Discriminant validity data indicated that the measure is differentiated from personality measures of extraversion and self-esteem and adds significant incremental predictive power when these variables are controlled. Finally, the measure reliably demonstrates these properties, consistent with a stable, individual difference metric.

PART II: CLARIFICATION OF THE BIPOLAR REPRESENTATION AND FURTHER VALIDITY TESTS

This study focuses on providing support for the definition, the predictive power, and incremental validity (Sechrest, 1963) of the sexual schema construct. Again, a group-differences paradigm was used with a bipolar representation of schema (i.e., positive vs. negative sexual schema). For extension from the validation study above (Part I, Study 6), the repeated measure interval used was extended to 8 weeks, with additional sexuality measures and a greater emphasis on interpersonal aspects of sexuality. In testing the incremental value of the schema measure in the prediction of sexual outcomes, we used other measures of individual differences in sexuality as prior entries in regression analyses. Finally, we also wished to rule out a number of alternative hypotheses that commonly occur in group-difference sexuality research and that might be confounded with the group differences of positive versus negative sexual self-schema.

Method

Participants

Four hundred unmarried undergraduate women were screened with the measure during the 1st week of an academic quarter. The mean schema score for the entire group was 59.04 with a standard deviation of 13.95, replicating previous findings. Women scoring in the top and bottom quartiles (i.e., top and bottom 100) on sexual self-schema were then contacted by mail, phone, or both for participation in a two-part study entitled, "Designing a Measure of Self-Concept." Of those contacted, 90 positive ($M = 75.78$, $SD = 5.66$) and 82 negative ($M = 41.04$, $SD = 9.04$) scorers participated. As would be expected, the groups differed significantly in sexual self-schema scores, $F(1, 170) = 929.01$, $p < .0001$.

The mean age of participants was 19 years, 4 months ($SD = 1.54$), with a mean education level of a 1st-year student ($M = 13.34$, $SD = 0.61$). Caucasians accounted for 84.3% of the sample; African Americans, 9.3%; and Asians, Hispanics, Native Americans, or other, 6.4%. Using the Kinsey classification of sexual orientation, 95.9% of the women described themselves as exclusively heterosexual, 2.9% as predominantly heterosexual, and 1.2% as bisexual. Mean annual (i.e., parental) income was in the $50,000–$60,000 bracket ($M = 4.09$, $SD = 2.47$). With regard to religious affiliation, 36.0% described themselves as Roman Catholic, 20.9% as Protestant, 22.7% as other, and 20.3% as no preference. The mean frequency of religious attendance was *several times a year* ($M = 2.01$, $SD = 1.39$), and the mean rating of religious importance fell between *somewhat* and *moderately important* ($M = 2.49$, $SD = 1.17$).

Procedures

All students in introductory psychology completed brief screening assessments for later study participation during the first two class periods of the academic quarter. When potential participants were contacted, they were informed that study participation would include completion of questionnaire items that were sexual in nature. In addition, it was emphasized that responses would be confidential (participants were identified by the last six digits of their social security number) and that participation was voluntary. One hundred seventy-four of the 200 women contacted agreed to participate. Although participants were informed of their freedom to discontinue participation at any time without penalty, only 2 participants (both negative schema scorers) failed to complete the second half of the study, for an attrition rate of 1.15% and an overall participation rate of 86%. During the 2nd and 3rd weeks of the quarter, participants were tested in groups of 25 on a battery of measures. A second questionnaire was mailed to participants and returned to the experimenters during the 11th week of classes. Women received 2 hours of experiment credit for participation.

Measures

Schema Hypothesis 1: Sexual Schema Consists of Cognitive Generalizations About Sexual Aspects of the Self

We expected schema groups to differ along self-reported arousability, attitudes toward various sexual practices, willingness to engage in uncommitted sexual relationships, and global ratings of oneself as a "sexual person."

SAI (Hoon et al., 1976). The SAI reflects women's judgments of their sexual arousability across a variety of sexual experiences. Factor analysis indicates that the measure assesses arousal for seductive activities, body caressing, oral–genital and genital stimulation, intercourse, masturbation, and erotica (Andersen, Broffitt, Karlsson, & Turnquist, 1989). Research indicates that the SAI is both internally consistent (with Kuder-Richardson reliability estimates ranging from .92 to .96) and stable (with 4-month test–retest reliabilities ranging from .74 to .90).

Sexual Opinion Survey (SOS; Fisher et al., 1988). The SOS was administered as a measure of erotophobia–erotophilia, or "the disposition to respond to sexual cues along a negative–positive dimension of affect and evaluation" (Fisher et al., 1988, p. 123). Items on the SOS reflect women's evaluations of 21 sexual practices or experiences. Factor analysis identified three item clusters, including open sexual display, sexual variety, and homoeroticism (Gilbert & Gamanche, 1984). Studies indicate that the SOS shows adequate internal consistency and reliability, with Cronbach alpha coefficients in the .85 to .90 range, and 2-month test–retest reliability of .80 (Fisher et al., 1988).

SOI (Simpson & Gangestad, 1991a). The seven-item SOI was administered as a measure of women's sociosexual orientation, or willingness to engage in uncommitted sexual relations. Items include both behavioral and attitudinal indexes. Studies indicate adequate internal con-

sistency (Cronbach's $\alpha = .73$) and convergent and discriminant validity, many of which have been validated by self- and sexual partner data (Simpson & Gangestad, 1991a).

Global sexuality rating. A single item was included to tap a woman's global ratings of her sexuality. Specifically, women were asked, "Compared to other women about your age, how would you rate yourself as a sexual person?" Responses were indicated on a 9-point scale, with the following anchor points: 0 = *much less sexual than most women my age*; 4 = *about as sexual as most women my age*; and 8 = *much more sexual than most women my age.*

Schema Hypothesis 2: Sexual Schema Is Derived From Past Experiences

We expected that women who experienced positive affects with sexual activity (such as arousal) and who viewed themselves as loving individuals would report a more extensive history of sexual and romantic involvements and activities. In contrast, the more conservative or inhibited stance of women with negative schema would have a general inhibitory effect in these same areas. One might speculate that a negative view of the self might originate from the development of sexual inhibitions in response to previous traumatic sexual events. Hence, to elaborate on the potential origins of a negative self-view, we assessed general and potentially difficult facets of women's sexual history.

General indexes. For replication, three indexes were again administered. The full (24-item) Previous SES (from the DSFI; Derogatis & Melisaratos, 1979) assessed the range of lifetime sexual experiences, including preliminary and intimate foreplay, anal activity, intercourse, and masturbation. Studies indicate that the internal consistency (Spearman-Brown, Kuder-Richardson) of the SES falls in the .85 to .90 range (Andersen & Broffitt, 1988). In addition, participants were asked to indicate (a) "With how many partners have you had sex in your lifetime?" and (b) "With how many partners have you had sex on one and only one occasion?" Responses were recorded on scales ranging from (a) 0 = *none* to 9 = *over 20 partners* and (b) 0 = *none* to 9 = *over 9 partners*, respectively.

Negative indexes. Individual items assessed the incidence, frequency, and reported impact of preadolescent sexual exhibition or touching experiences, using the methodology of Wyatt, Peters, and Guthrie (1988). The incidence was evaluated with the following items: (a) "Back before you were 12 or 13 years old, did a man or much older boy exhibit himself (show his genitals) to you?" and (b) "Back before you were 12 or 13 years old, did a man or much older boy touch you sexually?" In addition, participants rated the frequency of these experiences on a scale from 0 = *never* to 4 = *on a regular basis*. Next, participants were asked to rate how they felt about the event(s) at the time. Possible responses included *did not understand, positive, indifferent, somewhat upset, moderately upset*, and *very upset*. Finally, participants were asked, "Regardless of how you felt at the time, how do you think about it now? What kind of effect has the experience had on your life since then?" Possible responses ranged from 0 = *positive effect* to 4 = *extremely negative effect.*

Schema Hypothesis 3: Sexual Schema Is Manifest in Current Experiences

We anticipated that sexual self-schema would be reflected in women's current sexual experiences. The full (24-item) Current SES (from the DSFI; Derogatis & Melisaratos, 1979) was administered at both assessments. Items are the same as those of the Previous version (discussed above), yet assess the frequency of sexual activities experienced in the past 30 days. Responses were rated on a 10-point scale ranging from 0 = *this activity did not occur* to 9 = *activity occurred 2 or more times a day.* Again, studies indicated that the internal consistency (Spearman-Brown, Kuder-Richardson) of the SES falls in the .85 to .90 range, whereas the stability of the Current version ranges from .55 to .85 (Andersen & Broffitt, 1988).

Schema Hypothesis 4: Sexual Schema Guides the Processing of Domain-Relevant Social Information

We expected high schema scorers to make predictions about their future sexual behaviors that were consistent with their sexual self-views. To conceptually replicate the validation study, participants were asked, "With how many different partners do you foresee yourself having sex with during the next 5 years?" Projections were recorded on a 10-point rating scale ranging from 0 = *none* to 9 = *over 9 partners.* In addition, we hypothesized that sexual self-schema guides how an individual perceives, processes, and responds to future cues. Thus, we examined the contribution of the schema measure in predicting sexual behaviors over the 9-week interval. Specifically, we predicted that positive schema women would report higher frequencies of sexual intercourse, more sexual partners, and more brief (one-night) sexual encounters over the 9-week period than their negative schema counterparts. Thus, three indexes were included in the second assessment battery: (a) "How many times have you engaged in vaginal intercourse since the time you filled out the first questionnaire?," which was rated on a 10-point scale ranging from 0 = *zero* to 9 = *about once a day or more*; (b) "With how many different partners have you had sex since the time you filled out the last questionnaire?," which was rated on a scale from 0 = *none* to 9 = *over 9 partners*; and (c) "With how many different partners have you had sex on one and only one occasion since you filled out the last questionnaire?," which was rated on a scale from 0 = *none* to 9 = *over 9 partners.*

Relationship Hypotheses

Although the focus of the schema measure is sexual, it is clear that the construct has relevance for romantic (love) relationships. In line with the validation data, we expected that women with a positive schema would report more extensive involvement in romantic (love) relationships. Two indexes were included at the first assessment: (a) "Have you ever been in a romantic (love) relationship with someone?" and (b) "How many relationships have there been like this?" Responses to each were rated on a scale from 0 = *no* to 1 = *yes* and 0 = *none* to 7 = *11 or more relationships*, respectively.

As an extension, we hypothesized that individuals with a positive, well-articulated sexual self-schema would view their sexuality in a consistently positive fashion; information inconsistent with their self-view would not necessarily alter their self-view. Specifically, we expected that women with a positive self-view would view themselves as "sexual" regardless of whether or not they were involved in a current romantic relationship. In contrast, the self-view of women with a negative schema might be more variable depending on their current involvement. To test this hypothesis, at the initial assessment we obtained current relationship status. Women were asked, "Are you currently involved in a romantic (love) relationship?," and responses were scored 0 = *no* or 1 = *yes*. Using this self-classification, we then examined two important sexual variables, global sexuality ratings ("Compared to other women about your age, how would you rate yourself as a sexual person?") and SAI scores, as dependent variables.

Results and Discussion

Preliminary Analyses

Historically, sociodemographic variables such as age, education level, parental occupation level, and religious background

have been correlated with sexual variables (e.g., Kinsey et al., 1953). If sociodemographic differences existed between positive and negative schema scorers, they might serve to confound the relationship between sexual self-schema and sexuality measures. To rule out this possibility, ANOVA and chi-square analyses were conducted. Using an alpha level of .01, there were no significant group differences on age, family income, sexual orientation, or mother–father occupation. A marginally significant group difference was obtained for the age variable, $F(1, 170) = 4.66$, $p < .03$, with an average 6-month age differential between the positive (M = 19 years, 7.12 months; SD = 1.79) and negative (M = 19 years, 1.11 months; SD = 1.16) schema groups. A detailed analysis of religiosity revealed no significant differences on religious preference, attendance, or importance. In summary, sociodemographic characteristics do not covary with schema scores, and the differences described below are not due to age, education, income, or religious differences.

Schematic Hypotheses

Sexual Schema Includes Cognitive Generalizations About the Self

A MANOVA for the SAI, the SOS, the SOI, and global sexual self-ratings was significant, $F(4, 167) = 10.50$, $p < .01$. Follow-up ANOVAs for each of the individual measures were also significant. Replicating the validation study, these findings indicate that women with a positive sexual schema, in contrast to women with a negative view of the sexual self, describe themselves as more able to become sexually aroused in response to sexual events (with SAI scores of 44.69 vs. 35.87), evaluate various sexual practices more positively (with SOS erotophobia scores of 60.07 vs. 71.77), are more willing to engage in uncommitted sexual relationships (with SOI scores of 45.91 vs. 28.49), and rate themselves as more sexual (4.56 vs. 2.83, on a scale of 0 to 8) than their negative schema peers.

Sexual Schema Is Derived From Past Experiences

A MANOVA with the Previous SES, reported lifetime partners, and reported frequency of brief sexual encounters was significant, $F(3, 168) = 12.81$, $p < .01$, as were follow-up ANOVAs for each of the measures. Replicating the validation results, positive schema women reported experiencing a broader range of lifetime sexual behaviors (with SES scores of 18.79 vs. 14.40), more lifetime sexual partners (3.17 vs. 1.35 partners), and more brief sexual encounters (1.31 vs. 0.48 encounters) than did the negative schema women.

Other analyses focused on the occurrence and nature of traumatic sexual experiences in the groups. Paralleling other findings (e.g., Wyatt et al., 1988), 21.5% of the women reported experiencing sexual exhibition, and 19.8% reported being sexually touched by a man or older boy before age 12 or 13. Using ANOVA and chi-square analyses and an alpha level of .01, however, no significant differences were obtained between the positive and negative schema groups on either incidence, frequency, or reported impact of these potentially negative sexual experiences. Taken together, these data suggest that there is no apparent relationship between negative schema scores and the occurrence of early, traumatic sexual events.

Sexual Schema Is Manifest in Current Experiences

Scores obtained at both assessments on the Current SES were entered into a 2 (schema: positive vs. negative) × 2 (time: Week 2 vs. Week 11) repeated measures ANOVA. Replicating the validation study, there was a significant effect for group, $F(1, 170) = 7.97$, $p < .01$, and no significant effect for time or the interaction. Again, these findings support the view that sexual self-schema is related to stable, behavioral differences in sexual activity.

Sexual Schema Guides the Processing of Domain-Relevant Social Information

Conceptually replicating the validation study, a one-way ANOVA indicated that schema groups significantly differed in their predictions of the number of sexual partners they anticipated having over the next 5 years, $F(1, 170) = 11.11$, $p < .01$. Women with a positive self-view anticipated engaging in intercourse with significantly more partners (M = 2.61 partners, SD = 2.19) than their negative schema counterparts (M = 1.71 partners, SD = 1.17), confirming that positive schema women are more confident about making behavioral predictions about their sexual futures.

In fact, a MANOVA calculated with the three interim behavioral indexes (i.e., frequency of vaginal intercourse, number of different sexual partners, and number of brief sexual encounters) was significant, $F(3, 168) = 7.79$, $p < .01$. Follow-up ANOVAs for each of the variables were also significant. As predicted, positive schema women reported more intercourse (3.81 vs. 2.40 experiences), more partners (0.84 vs. 0.44 partners), and more brief encounters (0.38 vs. 0.06 encounters) during the 9-week period than did the negative schema women. Hence, in addition to being confident about future sexual possibilities, positive sexual schema women were, in fact, more sexually active in the intervening months, and schema scores effectively predicted these group differences.

Summary of Schematic Findings

Providing replication and added empirical support to the aspects of a cognitive representation of the sexual self, contrast group findings indicate that intrapersonal and interpersonal processes are regulated through sexual schema. The construct serves as an apparent mechanism to process information about the self. For example, women with a positive self-view not only have entered sexual relationships more willingly in the past than have negative schema women but, on reflection, they anticipate doing so in the future. Positive sexual schema may also have affect or emotional-regulating properties in that women are more likely to experience positive emotions—sexual arousal, love, or both—with sexual experiences.

These data also clarify the schematic processes for women with a negative self-view. Theirs is a very different history, with fewer sexual experiences and relationships, weaker positive

affects, and more negative and conservative attitudes toward sexual matters. When asked to make predictions about their sexual future, they are less confident. We elaborate on possible etiologies for these effects; however, these data suggest that one obvious possibility, early traumatic sexual contacts, is not the primary basis for negative views of the sexual self.

Relationship Hypotheses

Consistent with the results from the validation study, 97% of the positive sexual self-schema women reported that they had ever been in romantic (love) relationships, whereas only 78% of the low schema women reported any such involvements, a statistically significant difference, $\chi^2(1, N = 172) = 13.88$, $p < .01$. A related analysis indicated that the schema groups also differed in their reported frequencies of previous romantic relationships, $F(1, 170) = 10.05$, $p < .01$, with positive schema women reporting a mean of 2.12 previous romantic relationships and negative schema women reporting a mean of 1.49 previous relationships.

Additionally, we examined the maintenance of the sexual self-view in the context of relationship variability. Using data from the initial assessment, a 2 (schema: positive vs. negative) × 2 (current relationship: yes vs. no) ANOVA was conducted on the women's self-ratings of their sexuality. Results indicated expected, significant effects for sexual self-schema group, $F(1, 168) = 28.38$, $p < .01$, and relationship status, $F(1, 168) = 5.61$, $p < .02$, indicating that, in general, women with a positive schema or women currently involved in a romantic relationship rated themselves more of a sexual woman; in both cases, scores were slightly above or at the mean point (4 = *I am as sexual as most women my age*). Importantly, there was a significant Schema × Relationship Status interaction, $F(1, 168) = 5.09$, $p < .03$, as illustrated in Figure 1. As predicted, the positive schema group consistently rated their sexuality above average across levels of relationship status (not involved, $M = 4.53$; involved, $M = 4.57$). Not having a current partner did not provide disconfirming, disruptive information to positive sexual self-schema women; their self-view was unshaken. In contrast, the sexuality ratings of the negative schema women were not consistent. If directly queried about their sexual self-view, women with a negative schema will describe themselves more positively (although still not as sexual as the "average" peer) if they have a current partner ($M = 3.5$). If negative schema women do not have a partner, the self-evaluation is very low ($M = 1.9$; 0 = *I am much less sexual than women my age*). A similar pattern of results was found when considering the sexual arousability (SAI) scores. Analyses indicated significant effects for sexual self-schema, $F(1, 168) = 28.92$, $p < .01$, relationship status, $F(1, 168) = 6.92$, $p < .01$, and the Schema × Relationship Status interaction, $F(1, 168) = 8.43$, $p < .01$. Again, the sexual arousability of the positive schema women remained consistent and high across levels of relationship status (not involved, $M = 45.0$; involved, $M = 44.52$), but the arousability of the negative schema scorers varied with current romantic involvement (not involved, $M = 30.39$; involved, $M = 40.15$).

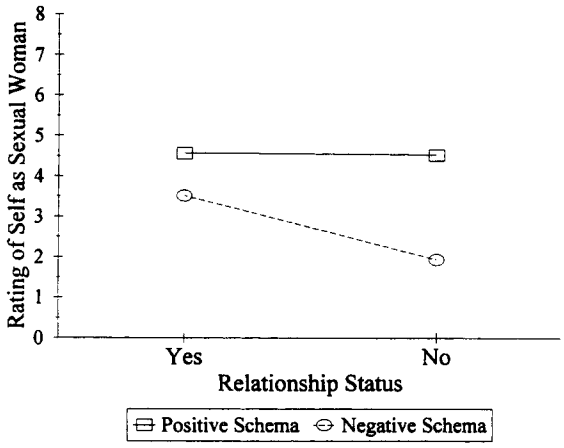

Figure 1. Significant interaction between sexual schema (positive vs. negative) and presence of a current romantic relationship (yes vs. no) factors in women's global rating of themselves as sexual women. Responses were on a 9-point scale, with the following anchors and midpoint: 0 = *much less sexual than most women my age*, 4 = *about as sexual as most women my age*, and 8 = *much more sexual than most women my age*. (The solid line indicates the positive schema group, and the dashed line represents the negative schema group.)

Incremental Validity of the Sexual Self-Schema Scale

As noted in the introductory paragraphs, there are at least three other important individual difference approaches to sexuality. As a first step toward determining the relationship between the schema construct and the other approaches, Pearson product–moment correlations were calculated between the sexual schema scale and measures typifying each approach (i.e., sexual behavior [the SES], attitudes [the SOS and the SOI], and arousability [the SAI]). Squared correlation coefficients (r^2s) indicated that sexual self-schema accounted for 14.95% of the variance in the measure of sexual behavior (i.e., lifetime sexual activities, SES). Furthermore, sexual schema accounted for 11.49% of the variance in sexual attitudes regarding willingness to engage in uncommitted sexual relations (SOI) and 11.29% of the variance in negative sexual attitudes (SOS). Finally, sexual schema accounted for 18.19% of the variance in the measure of sexual arousability (SAI). All of these findings were significant at the $p < .001$ level. (See Footnote 1.)

A series of hierarchical regression analyses tested the incremental validity of the Sexual Self-Schema Scale. In particular, we wanted to determine how much of the variance in sexual behaviors, attitudes, and arousability could be explained by sexual self-schema beyond that explained by other measures. In the first set, hierarchical regression analyses were constructed to account for the variance in prediction of lifetime sexual behaviors (Previous SES). In each of the analyses, either the SOI, SOS, or SAI was entered as the first independent variable, followed by sexual self-schema scores. In predicting sexual behavior, results indicated that sexual self-schema accounted for significant increments in explained variance beyond attitudes toward sex in uncommitted relationships (SOI; incremental

variance = 6.62%, $p < .01$), negative–positive attitude toward sex (SOS; incremental variance = 7.05%, $p < .01$), and sexual arousability (SAI; incremental variance = 3.05%, $p < .01$).

Second, hierarchical analyses were conducted for the prediction of negative–positive sexual attitudes (SOS); either the SOI or SAI was entered first, followed by sexual self-schema. In the prediction of sexual attitudes, results indicated that sexual self-schema accounted for a significant increment in explained variance beyond attitudes toward sex in uncommitted relationships (SOI; incremental variance = 3.67%, $p < .01$) and a marginally significant increment beyond sexual arousability (SAI; incremental variance = 1.12%, $p < .10$).

Third, a final series of hierarchical analyses were conducted to predict sexual arousability (SAI); either the SOI or SOS was entered first, followed by sexual self-schema. In the prediction of sexual arousal, results again indicated that sexual self-schema accounted for significant increments in explained variance beyond both the attitudes toward sex in uncommitted relationships (SOI; incremental variance = 11.13%, $p < .01$) and negative–positive sexual attitudes toward sex (SOS; incremental variance = 6.34%, $p < .01$). To summarize, these analyses demonstrate that the Sexual Self-Schema Scale displays significant incremental validity in the prediction of sexual behaviors, attitudes, and responses (arousal) beyond that provided by other important, individual difference approaches.

PART III: CLARIFICATION OF THE BIVARIATE REPRESENTATION

The above study evidenced strong construct validity for the sexual schema scale in distinguishing between women differing in the valence of their schematic representation (i.e., positive vs. negative sexual self-views). From a methodologic standpoint, a bipolar model contrasts participants at opposite ends of a distribution of sexual schema scores. However, the construct is defined by two dimensions, a positive aspect (which is assessed by Factors 1 and 2) and an aspect that is, by comparison, more negative (Factor 3). We hypothesized that examination of a bivariate model would have both conceptual and methodologic advantages. From a conceptual standpoint, a bivariate model would allow both positive and negative dimensions to have some functional independence, be opposing in their effects on behavior, and provide for the possibility of effects due to differential levels of activation. From a methodologic standpoint, it would allow clarification of sexual schemas for women who would score in the middle of a distribution. That is, relative to women on the ends of a distribution who have either strong positive or strong negative sexual self-views, women in the middle of the distribution may be there for different reasons (e.g., weak endorsements of both positive and negative schematic items or strong endorsements of schematic items that differ in valence).

In this initial clarification of the bivariate model, we considered women's scores on the combination of Factors 1 and 2 as representing the positive dimension of sexual schema and the score for Factor 3 as representing the negative dimension. Data for 221 women were available, consisting of the schema score along with other sexuality measures similar to those described above for the repeated measures design. For simplicity, a median split procedure[3] was used to create the four groups, shown pictorially in Figure 2. The four groups that were contrasted were positive schematic (n = 59), co-schematic (n = 48), aschematic (n = 45), and negative schematic (n = 69).

In Part II above, we discussed the hypotheses and findings for the positive and negative groups; the hypotheses for these groups using the bivariate model do not differ. Thus, we focus here on the remaining groups. Aschematics were viewed as individuals lacking in a coherent schematic framework to guide relevant perceptions, cognitions, and behaviors. One manifestation of the latter representation was the pattern of responding to the schematic traits, which was that aschematic women provided weak endorsements of both positive and negative schema adjectives. We hypothesized that such women would have lower rates of sexual behavior, perhaps a product of lower sexual motivation or drive to engage in sexual activity and have less positive (perhaps more affectively neutral) presentations of the positive aspects of sexuality. Alternatively, co-schematics were regarded as individuals with a schematic representation of their sexuality, yet one that was, in some sense, "conflicted." Their pattern of responding to the schematic traits was one of strong endorsements of both positive and negative aspects. We hypothesized that co-schematic women might evidence the same levels of sexual behavior as the aschematic women yet report discrepancies in their sexual affects.

Two measures were included to assess level of sexual behavior. The number of lifetime sexual partners was used as an indicator of prior sexual engagement (i.e., a measure of sexual history), whereas the number of different sexual behaviors in the last 60 days was used as an indicator of the sexual behavior repertoire as currently manifest. Data are provided in portions A and B of Figure 3. As indicated, the aschematic and co-schematic groups report a "middling" number of lifetime sexual partners, significantly different from the lowest level of the negative group and the highest level of the positive group. Yet, when current behavior is the rubric, the range of activities for the negative, aschematic, and co-schematic groups is restricted and signifi-

[3] As Part II used a different method to determine membership in the positive and negative schema groups than that proposed for Part III, we provide detail regarding the consistency of the methods. To examine this issue we compared the "hit" rate on defining women as positive or negative with the two procedures. We first compared use of the top and bottom thirds of the distribution with assignment defined by the median split procedure with the data from the first contrast study group (Part I, Study 6). These analyses indicated that 69% of the participants labeled *positive* and 76% of the participants labeled *negative* were assigned to the same group using the median split procedure. As might be expected, the "misses" for each category fell exclusively into the next conceptually relevant group. That is, the positive schema misses fell into the aschematic group, and the negative schema misses fell into the co-schematic group. For comparison purposes, we also looked at the same type of data when the top and bottom fourths of the distribution are used to define the positive and negative schema groups (as done in Part II). As would be expected, the hit rates are higher, with 70% of the participants labeled *positive* and 88% of the participants labeled *negative* assigned to the same group, respectively, with the median split procedure. Inspection of the means from the two procedures results in virtually identical values for the positive and negative schema groups.

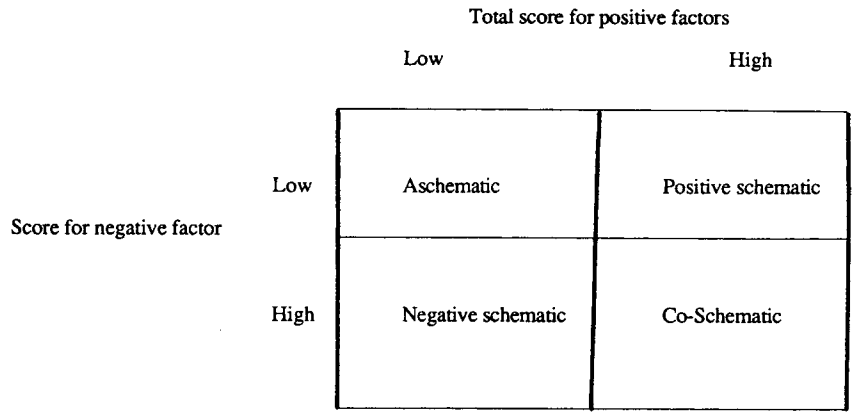

Figure 2. Four sexual schema subgroups examined by considering scores on the positive (Factor 1: Passionate–Romantic and Factor 2: Open–Direct) and negative (Factor 3: Embarrassed–Conservative) dimensions of the scale. Women classified as "positive" scored high on the positive factors and low on the negative factor, whereas women classified as "negative" scored low on positive factors and high on the negative factor. Women classified as "co-schematic" scored high on both the positive and negative factors, whereas women classified as "aschematic" scored low on both the positive and the negative factors.

cantly different from the positive schematic group. Of some note is the trend for the means of the three groups to order in the expected direction.

To distinguish between the aschematic and co-schematic groups and to demonstrate the possible discrepancy in the co-schematic group, measures were included to assess different, positive affects regarding sexuality. Two were included; the SAI assessed sexual arousability for sexual activities, and Hatfield's Passionate Love Scale was used to assess the respondent's feeling of love toward a past romantic partner. Considering the data for sexual arousal in Panel C of Figure 3, the negative, aschematic, and co-schematic groups reported equivalent and significantly lower levels of sexual arousability for sexual activities in comparison to the positive schema group. This equivalence on sexual arousal for the nonpositive groups is in contrast to the pattern for the measure assessing feelings of love. As indicated in Panel D of Figure 3, the negative and aschematic groups report equivalent, low levels of love for a previous sexual partner, whereas the co-schematic and positive schematic groups report equivalent and significantly higher levels of love for their sexual partner. Furthermore, the aschematic group reports the absolute lowest level of passionate love and the conflicted group reports the highest, making clear the separation between aschematic and co-schematic self-views. Also, consideration of the data in Panels C and D for the co-schematic group suggests that the "conflict" may be one arising from reports of low arousal with sexual activity juxtaposed with strong passionate love for the partner. In summary, these data add further clarification to the schema construct and reveal distinct patterns of sexual expression not only for women who differ in the valence of their sexual schema (i.e., positive vs. negative) but who also differ in the activation of the components (i.e., high vs. low activation).

GENERAL DISCUSSION

These studies indicate that there are systematic individual differences among women in their view of the sexual self, that the sexual self-view can be validly and reliably measured, and that it predicts sexually relevant emotions and behaviors. This sexual self-view, or sexual schema, is defined as a cognitive generalization about sexual aspects of the self. The view is derived from past experience, manifest in current experience, influential in the processing of sexually relevant social information, and gives guidance for sexual behavior. This construct was operationalized by assessing women's normative beliefs about the important personality dispositions of a sexual woman, pursuant of Galton's (1884) lexical hypothesis. Consistent with the hypothesis, there was conceptual and empirical overlap in the words selected and rated by younger and older women, and, thus, the data support the generalizability of the construct across the age decades sampled (20s to 70s). In this process the initial list of 300 trait adjectives reflecting potential positive (e.g., experienced, romantic) and negative (e.g., cold, self-conscious) aspects of sexual self-concept was honed to the final 26-item listing (see Appendix).

In developing the scale, we incorporated the tests of construct validity that have been recommended for the stages of measurement construction (e.g., Anastasi, 1988; Campbell & Fiske, 1959; Cronbach & Meehl, 1955). The validity analyses can be briefly summarized. Studies of measurement error indicate that the Sexual Self-Schema Scale is unhampered by social desirability or biased by negative affect. The scale displays convergent validity with measures of sexual responding and with other individual difference approaches in sexuality. Yet, the scale evidences significant incremental validity in the prediction of sexual attitudes, behaviors, and arousal beyond that provided with other individual difference approaches (e.g., sociosexuality). Discriminant validity was found with other, nonsexual personality domains (i.e., extraversion, self-esteem). To our knowledge, the Sexual Self-Schema Scale represents not only the first assessment of a cognitive view of the sexual self but one that has broad band validity and incremental utility for the explanation and prediction of sexual phenomena.

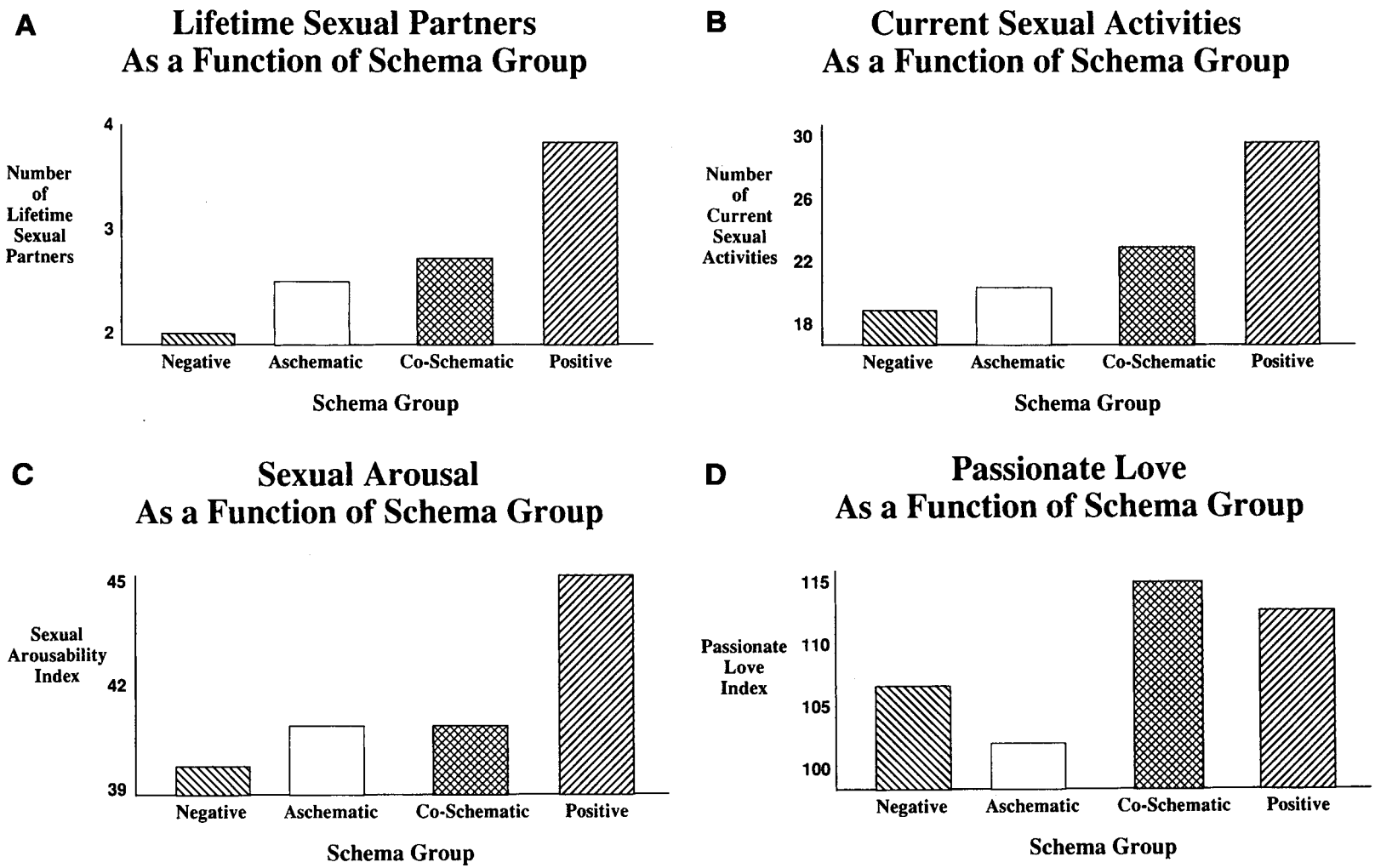

Figure 3. Differences between negative, aschematic, co-schematic, and positive sexual schema groups in measures of sexual behavior and sexually relevant affect. In all cases, significant group differences are noted by superscript. Within a panel, common superscripts across groups indicate no significant differences, whereas different superscripts indicate $p < .05$. Panel A: Mean number of sexual partners in a woman's lifetime. Panel B: Mean number of different sexual behaviors in the last 60 days. Panel C: Mean score on the Sexual Arousability Index. Panel D: Mean score on Hatfield's Passionate Love Scale.

Aside from its unique cognitive focus and the validity strengths, the Sexual Self-Schema Scale may represent a methodological advance with its discrete and unobtrusive item format. Of the approximately 300 titles generated by participants for the measure, none (0%) included any reference to sex or sexuality, with ones like "general traits" being the most common guess. This format contrasts markedly with that of the explicit, direct items in other sexuality measures (e.g., behavioral frequency reports for intercourse, anal intercourse, oral–genital contact; attitude statements such as "Sex without love is OK" or "Engaging in group sex is an entertaining idea"; or arousal ratings for "When you masturbate"). Although items of this sort may be a "necessary evil" to accurately assess sexual attitudes, behaviors, and responses with any specificity, sex researchers (e.g., Abramson, 1990; Catania et al., 1990) are understandably concerned that the affectively loaded and intrusive nature of the items may have paved the way for measurement error and participation bias. In this context, the schema measure may have the potential to remedy some methodological problems. For example, regarding participation bias, the process data indicate that respondents have little or no perception that a sexual phenomena is being assessed. If the schema measure was used for screening with a second round of solicitation for participation in an explicitly sexual investigation, researchers would have a sexually relevant indicator of the types of acceptors and refusers, because the contrasted groups' findings indicate the predicable differences in sexuality that exist, for example, in positive and negative schema groups. Or as another example, different strategies of recruitment could be designed for participants who differ in schema scores if there was some concern that negative schematic individuals, in being less open and more embarrassed about sexuality, might be disproportionately represented among study refusers. In fact, most studies examining participation bias do find that participants tend to be more sexually liberal and permissive, less sexually anxious, and report higher rates of sexual behavior (e.g., Catania et al., 1986; Morokoff, 1986). Other examples might be described, but the point is that the sexual schema measure may provide such methodologic utility.

This research also raises several important questions, including ones about the origins of and the centrality of the sexual schema construct. In the following sections, we address some of these issues and begin with a discussion of the construct.

What Is Sexual Self-Schema?

In addition to the definition provided above, other analyses indicate that sexual schema includes two positive aspects, an inclination to experience passionate–romantic emotions and a behavioral openness to sexual experience, and a negative aspect, embarrassment or conservatism, which appears to be a deterrent to sexually relevant affects and behaviors. However, the measure is more than the sum of the parts, as convergent validity for the measure reveals that schematic individuals who differ in valence, positive versus negative, evidence very different sexual selves.[4] Women with a positive sexual schema, relative to those with a negative schema, view themselves as emotionally romantic or passionate and as women who are behaviorally open to romantic and sexual relationships and experiences. These women tend to be liberal in their sexual attitudes and are generally free of such social inhibitions as self-consciousness or embarrassment. Positive schema women, for example, tend to evaluate various sexual behaviors more positively, report higher levels of arousability across sexual experiences, and are more willing to engage in uncommitted sexual relations. Positive schema women also report having experienced a wider range of lifetime sexual activities, more sexual partners, and more short-term (one-night) sexual encounters. This schematic representation is not merely a summary statement of sexual history, but it marks current and future possibilities, as positive schema women, for example, anticipate more sexual partners in the future than their negative schema counterparts. Despite this seemingly unrestricted view of sexuality, it is perhaps important to note that affects and behaviors indicative of romantic, loving, intimate attachments are also central to the women with a positive sexual schema, as they report extensive histories of romantic ties. It is this latter aspect that distinguishes the sexual schema construct from other approaches, the most notable being Simpson and Gangestad's (1991a) concept of sociosexuality. In their view, individuals who are characterized as "unrestricted" in their sexual orientation report higher rates of sexual behavior as do the positive schema women; however, unrestricted individuals also have less commitment and weaker affectional bonds. Thus, it is perhaps notable that the positive schematic representation of a sexual woman shown here includes both arousal–drive and romantic–attachment elements.

Conversely, women holding clear negative self-views of their sexuality tend to describe themselves as relatively emotionally cold or unromantic, and, by their own admission, they are behaviorally inhibited in their sexual and romantic relationships. These women tend to espouse conservative and, at times, negative attitudes and values about sexual matters and may describe themselves as self-conscious, embarrassed, or not confident in a variety of social and sexual contexts. Finally, there may be some potential vulnerability for negative women, because their self-view can be significantly moderated or defined by others (see Figure 1), whereas this does not appear to be the case for the positively schematic women.

The validity data obtained from older (M age = 34 years, range = 25–46 years) women supports the generalizability of the sexual self-schema construct. This sample reported strong relationships between sexual self-schema as sexual affects (e.g., sexual arousability, .41) and sexual responsiveness for the stages of the sexual response cycle. Notably, a significant relationship was not found between sexual self-schema and the range of current sexual activities (i.e., the SES), unlike the findings from the undergraduate samples. Because of the smaller sample size and the absence of lifetime sexual activity data (which typically shows the strongest relationship with sexual schema), the latter

[4] Although additional data will be necessary to confirm the sensitivity of the measure for women who differ in their sexual orientations, we believe the measure will be appropriate for bisexual or lesbian women. There was insufficient data to test this hypothesis, as only 4.1% (n = 7) of the sample in Part II selected a category other than "exclusively heterosexual" in describing their sexual orientation.

may reflect inadequate statistical power. Alternatively, there may be a more restricted range of sexual activities in older women, because of such factors as sexual maturation, intact long-term sexual relationships, and established patterns of sexual interactions with a partner. Such factors may render the relationships between sexual schema and sexual behavior less robust than those for younger women whose behavior may be less constrained and more apt to reflect their sexual self-views. A similar discrepancy between sexual affects and motivation and actual rates of sexual behavior (intercourse) have been found in menopausal aged women receiving hormone replacement therapy (e.g., Sherwin, Gelfand, & Brender, 1985). In summary, these findings illustrate the generalizability of the sexual schema construct and the need for further clarification across the age span.

Considering a bivariate rather than a bipolar model to represent the positive and negative aspects of sexual schema may provide significant clarity in differentiating aschematics from co-schematics and in differentiating both groups from the positive and negative schema groups described above. In the majority of schema research, dimensions are assumed to be bipolar (e.g., introversion–extroversion, masculine–feminine). Furthermore, use of a rating scale that ranges from *independent* to *dependent,* for example, also implies that a person would not, simultaneously, be both independent and dependent. Yet, the research of Sande, Goethals, and Radloff (1988) has indicated that individuals who rate themselves at the neutral point on a bipolar dimension often rate themselves high on both of the corresponding unipolar dimensions. Related analyses of attitude research suggest that bipolar dimensions may be insufficient and that consideration of bivariate models along with a dimension of coactivation may be important (see Cacioppo & Berntson, 1994, for a discussion). It is perhaps not surprising, then, that in much of the schema literature the performance of aschematics has been inconsistent when defined through a bipolar paradigm. For example, Markus (1977) pondered over two possibilities for the inconsistent performance of the aschematics:

> It would appear, therefore, that subjects who have been categorized as aschematics do not have clear and precise cognitive structures about the self in the domain of independence, for if they did, these structures would allow them to generate relatively unambiguous judgments about their future behavior. There is, of course, the more remote possibility that aschematics are individuals who are truly inconsistent in their behavior, such that one day they may be timid and shy in a discussion and the next day surly and aggressive. (p. 76)

Our strategy of using the bivariate dimensions with the positive and negative schema components resulted in the identification of two additional topologies and a differentiation between them. We labeled one group as *true* aschematic because of their weak endorsements of both the words composing the positive factors (Factors 1 and 2) as well as the negative factor (Factor 3). In contrast, the co-schematic women provided strong endorsements of both positive and negative schema words as self-descriptive.

This is only the first examination of the aschematic and co-schematic groups, and further clarification is needed. However, the behavioral and affective data presented in Figure 3 provide an important preview. These data, coupled with the more extensive analysis of the positive and negative groups, suggest that negativity in schematic representations, even when it is "weak," seems to function by reducing sexual activation. This may arise from many mechanisms, including, for example, accompanying negative affect, which increases the likelihood of avoidance or behavioral choice of situations (persons or partners) that do not activate sex. The data in Figure 3 suggest that the aschematic and the co-schematic groups have a "middling" level of behavior—not as low as the negative schema group, yet not as high as that for the positive schema group. Interestingly, both groups report comparable, lower levels of sexual arousal. Further research will need to clarify whether the basis for the lower arousal is the same in each group. In view of the difference between the groups in the activation of negative schematic representations, it would be consistent if aschematic women felt that they were less arousable, per se, whereas co-schematic women also reported affects that interfered with arousal (e.g., sexual anxiety). Such a pattern would also be in line with the current data indicating less activation of positive schematic affects (i.e., love) for the aschematic in contrast to the co-schematic women.

What Are the Possible Origins of Sexual Self-Schema?

In view of the multifaceted nature of sexual schema, there are likely numerous independent antecedent events that have contributed to its manifestation. Although there are likely others, we elaborate on two perspectives, developmental–learning processes and psychobiologic events. For the first, consideration of a developmental–learning perspective for a personality process such as sexual schema results in the positing of a history of schema-relevant stimulus–response reinforcements in which schematic-relevant behavior or responses are reinforced, but aschematic-relevant behavior (or schematic behavior of the converse valence) is ignored or perhaps even punished (Mussen, Conger, & Kagen, 1963). Other learning processes would be important as well, such as imitation, observational learning, and identification (Bandura, 1969), and female children would be seen as differentially imitating (identifying with) same-gender adults, particularly their mother or female caretaker. During the earliest periods, such as the preschool, sex-relevant developmental tasks include the identification of one's own gender and comprehending reproductive knowledge (Serbin & Sprafkin, 1987). In the latter case, the literature suggests that the source of sex education is related to later sexual behavior. That is, adolescents who obtain information from parents behave more conservatively and more responsibly in terms of contraceptive use than those who receive information from peers (e.g., Lewis, 1963). Although there are many explanations for this finding, one of the more accepted is that parents who give such information are those also who tend to have a more accepting and open attitude toward sexuality. In contrast, parents who are confused or anxious about their children's emerging sexuality may suppress or punish sexual expression or, at best, ignore it.

Another salient example of the potential importance of social learning contributions to sexual schema development are caretaker reactions to prepuberty masturbation and related autoerotic experiences. There are considerable gender differences in

this behavior; in a meta-analysis of gender differences in sexual attitudes and behaviors, the largest gender difference (effect size, $d = .96$) was found in the incidence of masturbation (Oliver & Hyde, 1993). Gagnon and Simon (1973) argued that this behavior was the origin of many, if not most, other gender differences in sexuality. Even though it is a low base-rate event for women (Leitenberg, Detzer, & Srebnik, 1993), masturbation appears to play a critical role in sexual maturation and self-knowledge, as women who have masturbatory histories have, in general, a wider sexual behavior repertoire and are more sexually (i.e., orgasmically) responsive (e.g., Kinsey et al., 1953). Another example of its use comes from the literature on the treatment of orgasmic dysfunction; directed masturbation, a series of focused body and genital-touching exercises, is the most successful technique for treating inorgasmia (Andersen, 1983). In any event, to the extent that parents or others respond differentially to the expression of autoerotic events, we hypothesize that female children will form different attitudinal or emotional reactions to their self-initiated sexuality, which, in turn, will lead to different behavioral or responsiveness enactments. In summary, the normal process of acquiring knowledge and skills about the sexual self is hypothesized to result in differentiations in the valence and importance of the sexual self in the prepubertal female.

Children in the preschool years and later, during the elementary years, are gathering a great deal of information about ways of expressing male–female intimacy through observation of parental models (Crooks & Bauer, 1980). In this regard, attachment theorists have suggested that different infant-caretaker styles are related to patterns of child emotionality (Bowlby, 1969, 1979) but that they may eventually be important in producing individual differences in preferences for adult romantic relationships (e.g., Hazan & Shaver, 1987; Simpson, 1990). In this regard, it is significant that women with a positive self-view of their sexuality also report more experience with romantic (love) relationships. We suggest that this connection between sensuality and attachment (e.g., manifest in the item content of Factor 1) is an important one, as it suggests that both are sought by the positively schematic woman. This duality appears to be a preference rather than a worrisome need, as self-evaluations for women with a positive self-view do not plummet (or even waiver) when a partner is unavailable.

We hypothesize that by the time of puberty, initially small differences in children's sexual and attachment learning histories become amplified, such that expressive emotions, social behaviors, and sexual phenomena produce differences in schematic emotions, behaviors, and responses. During this period, peer involvement can be especially important. Peer interactions can influence one's exposure to sexual cues in at least three ways: by controlling an adolescent's actual sexual experiences, by directing emotional attachments to others, and by influencing exposure to explicit sexual information (Storms, 1981). Young women with a more positive sexual self-view may gravitate toward other persons or situations conducive to the expression of schematic behaviors or responses. Conversely, for those young women who have fewer positive experiences (or even a "null" environment for sexuality and attachment), they would be expected to evidence fewer approach behaviors and, possibly, even avoidance of positive schematic representations. For the young women who approach, they would be expected to develop new behavioral repertoires (e.g., ones increasingly "sexual" or "romantic") and, as partners are selected, choose ones who are similarly skilled. As men are important determiners of the frequency of heterosexual couples' sexual activity, young women who choose more experienced partners will, in turn, develop greater frequency and diversity in their sexual repertoire. We hypothesize that the societal reaction to the young, positively schematic adolescent will be differentially supportive of schema-relevant emotions, behaviors, and so on at puberty. With the change in physical appearance, not only will the positively schematic young woman identify herself as a sexual being but others will be more apt to experience her as a sexual person and treat her accordingly. In summary, through a process of self-perception (D. J. Bem, 1972), differences in a woman's sexual behavior, attitudes, and responses from those of other people may then be reflected in her beliefs about herself and become the guiding principles of her actions.

There are likely to be other important factors operative in the development of sexual schema, and here we mention, only briefly, psychobiological ones. The case is more speculative, in part, because of the dearth of data on hormone–behavior relationships in adult women. There has been little study of sex hormone effects on personality in pubertal girls, and that data are disconfirming (Udry & Talbert, 1988). In adult women, estrogens are undoubtedly important for normal vaginal response, especially lubrication, but beyond that, the role of estrogen in facilitating sexual behavior or responsiveness remains unclear (Walling, Andersen, & Johnson, 1990). More tentatively, both estrogens and androgens may be involved in sexual desire and orgasm (Bancroft, 1987). Specifically, there is accumulating evidence that testosterone is associated with cognitive aspects of sexuality, for example, sexual thoughts, sexual desire, and a greater cognitive sensitivity to sexual stimuli (Alexander & Sherwin, 1993), with the mechanism being that testosterone prompts cognitive attentional processes cued to sexual stimuli (Bancroft, 1980). Such may be the sort of processes relevant for the premenopausal, adult woman. However, by the time of young adulthood, sexual schematic representations would be in place, and so the impact of hormones on noncognitive aspects of sexuality, such as sexual behavior, may be small, but clarifying research is needed.

Does Sexual Schema Influence a Woman's Self-View?

Individual differences in sexual self-schema are likely to have important implications for understanding women's self-view. Although the relationship to gender role remains to be examined (S. L. Bem, 1981), links to self-esteem seem relevant. For example, the research of Josephs, Markus, and Tafarodi (1992) on gender differences in self-esteem suggest that women's self-esteem derives, in part, from a connected and interdependent orientation. Accordingly, they suggest that

> For women, feeling good about one's self, or believing one's self to be of worth should derive, at least in part, from being sensitive to, attuned to, connected to, and generally interdependent with others. . . . Women with high self-esteem should differ from women with

> low self-esteem in the degree to which they are connected to others and others are included in their self-definition. (Josephs et al., 1992, p. 392)

The studies reported here are consistent with this view in two important ways. First, women indicated that a sexual woman is characterized not only by attributes indicative of a capacity for sexual passion and a lack of behavioral inhibition about sexual matters but also by attributes indicating a capacity for love and romance. The former characterization is indicative of sexual drive or motivation, whereas the latter underscores emotional attachment or connection as a context for sex. Second, positively schematic women had more extensive romantic (love) histories in the context of their broader sexual behavior repertoire than the negative schema women, suggesting that affectively positive schema women are motivated toward interpersonally intimate, as well as sexually intimate, relationships. According to Josephs et al. (1992), to the extent that a woman can foster and sustain relationships, this may provide, in part, a basis of her self-esteem (along with other aspects, such as "doing a job well" or "being a person of worth"). Finally, our preliminary data suggest that the relationship between sexual schema and attachment styles (Hazen & Shaver, 1987) is consistent with the importance of interpersonal connections to the positively schematic woman. We find that positive schema women are more apt to characterize themselves as secure in their attachment style (i.e., friendly and likable and seeing others as trustworthy), whereas negative sexual schema women are avoidant in attachment style (i.e., aloof and skeptical of others or overly eager to commit themselves to relationships). These data would also suggest that women with positive sexual schemas might tend, on average, to have higher self-esteem. If so, a positive sexual schema orientation might serve as a buffer if negative sexual events occur, in much the same way that higher self-esteem serves as a buffer for anxiety (Greenberg et al., 1992) and depression (Wilson & Krane, 1980).

Consideration of the theoretical linkages and broader implications of the sexual self-schema construct and Josephs et al.'s (1992) work on gender differences in self-esteem raises questions regarding the dimensions of sexual self-schema for men. For example, would the representations of men's sexual schema be apt to include factors related to individuality, autonomy, or independence, rather than those more akin to women, interdependence and emotional connectedness? Would sexual schema play a central role in men's self-esteem? To better understand the sexual schema construct, we are exploring these and related issues with men.

From a historical viewpoint, proposal of an individual difference (personality) construct for sexuality prompts consideration of its relationship to current psychoanalytic viewpoints. Having finally shifted from Freud's (1905/1957) emphasis on sex as an instinct and its central role in neuroses, object relations theory postulates instead a developmental sequence for the influence of sex on personality. Here the focus is on the interrelationship between the capacity for sensuality and the development of object relations (Person, 1987). The close relationship (bonding) between the infant and the mother (object) has tactile-sensory (sensual) components, and, as such, it is critical for emotional and cognitive development (Klein, 1976). In short, sensual pleasure becomes the vehicle for seeking object relations in the real world. Thus, some have suggested that the quest of sexuality is not only discharge of sexual pleasure but object seeking (Fairburn, 1952), that is, the establishment of intimate relationships. There is also the assumption in psychoanalytic theory that sexuality is linked to one's identity (e.g., Eissler, 1958, suggested that orgasm, for example, affirms one's personal existence). To the extent that an individual uses sexuality (e.g., for pleasure or to restore self-esteem), one's sexual "nature" will be experienced as more or less central to one's personality (Person, 1987). There are stark differences between the schema and gender difference research of Markus and that of the neoanalysts just described. However, the resonance of interpersonal connection and attachment in both Markus's theory of women's self-esteem and the linking with sexuality in object relations theory may be important for understanding the combination of sexual and romantic attachments in the concept of women's sexual self-schema.

Conclusion

We have given empirical substance to the view that women differ in cognitive representations of their sexual selves. We have clarified the dimensions of the construct as well as its relevance to other sexual measures tapping behavioral, attitudinal, and responsiveness domains. Our psychometric strategy appears to have resulted in a sexuality measure less vulnerable to methodologic shortcomings. We have offered a developmental learning perspective for the origins of sexual schema, emphasizing the important role of early childhood and puberty experiences. Thus, we offer the concept of sexual self-schema as a previously untapped, but seemingly important, aspect of women's sexuality and self-concept.

References

Abramson, P. R. (1990). Sexual science: Emerging discipline or oxymoron. *The Journal of Sex Research, 27,* 147–165.

Abramson, P. R. (1992). Adios: A farewell address (editorial). *The Journal of Sex Research, 29,* 449–450.

Alexander, G. M., & Sherwin, B. B. (1993). Sex steroids, sexual behavior, and selection attention for erotic stimuli in women using oral contraceptives. *Psychoneuroendocrinology, 18,* 91–102.

Anastasi, A. (1988). *Psychological testing* (6th ed.). New York: Macmillan.

Andersen, B. L. (1983). Primary orgasmic functioning: Diagnostic considerations and review of treatment. *Psychological Bulletin, 93,* 105–136.

Andersen, B. L., Anderson, B., & deProsse, C. (1989). Controlled prospective longitudinal study of women with cancer: I. Sexual functioning outcomes. *Journal of Consulting and Clinical Psychology, 57,* 683–691.

Andersen, B. L., & Broffitt, B. (1988). Is there a reliable and valid self-report measure of sexual behavior? *Archives of Sexual Behavior, 17,* 509–525.

Andersen, B. L., Broffitt, B., Karlsson, J. A., & Turnquist, D. C. (1989). A psychometric analysis of the Sexual Arousability Index. *Journal of Consulting and Clinical Psychology, 57,* 123–130.

Anderson, N. H. (1968). Likableness ratings of 555 personality-trait words. *Journal of Personality and Social Psychology, 9,* 272–279.

Bancroft, J. (1980). Endocrinology of sexual function. *Clinical Obstetrics and Gynecology, 7,* 253–281.

Bancroft, J. (1987). A physiological approach. In J. H. Geer & W. T. O'Donahue (Eds.), *Theories of human sexuality* (pp. 411–421). New York: Plenum.

Bandura, A. L. (1969). *Principles of behavior modification.* New York: Holt, Rinehart & Winston.

Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1–62). San Diego, CA: Academic Press.

Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review, 88,* 354–364.

Bentler, P. M. (1968). Heterosexual behavior assessment II: Females. *Behavior Research & Therapy, 6,* 27–30.

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment.* New York: Basic Books.

Bowlby, J. (1979). *The making and breaking of affectional bonds.* London: Tavistock.

Byrne, D. (1983). Sex without contraception. In D. Byrne & W. A. Fisher (Eds.), *Adolescents, sex, and contraception* (pp. 3–32). Hillsdale, NJ: Erlbaum.

Byrne, D., & Schulte, L. (1990). Personality dispositions as mediators of sexual responses. In J. Bancroft (Ed.), *Annual review of sex research: An integrative and interdisciplinary review* (Vol. 1, pp. 93–117). Lake Mills, IA: The Society for the Scientific Study of Sex.

Cacioppo, J. T., & Berntson, G. G. (1994). Relationship between attitudes and evaluative space: A critical review, with emphasis on the separability of positive and negative substrates. *Psychological Bulletin, 115,* 401–423.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait–multimethod matrix. *Psychological Bulletin, 56,* 81–105.

Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control theory approach to human behavior.* New York: Springer-Verlag.

Catania, J. A., Gibson, D. R., Chitwood, D. D., & Coates, T. J. (1990). Methodological problems in AIDS behavioral research: Influences on measurement error and participation bias in studies of sexual behavior. *Psychological Bulletin, 108,* 339–362.

Catania, J. A., McDermott, L., & Pollack, L. (1986). Questionnaire response bias and face-to-face interview sample bias in sexuality research. *Journal of Sex Research, 22,* 52–72.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52,* 281–302.

Crooks, R., & Bauer, K. (1980). *Our sexuality.* Menlo Park, CA: Benjamin/Cummings.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24,* 349–354.

Derogatis, L. R., & Melisaratos, N. (1979). The DSFI: A multidimensional measure of sexual functioning. *Journal of Sex and Marital Therapy, 5,* 244–281.

Eissler, K. (1958). Problems of identity. *Journal of the American Psychoanalytic Association, 6,* 131–142.

Epstein, S. (1980). The self-concept: A review and the proposal of an integrated theory of personality. In E. Staub (Ed.), *Personality: Basic issues and current research* (pp. 253–275). Englewood Cliffs, NJ: Prentice Hall.

Fairburn, W. R. D. (1952). *An object relations theory of personality.* New York: Basic Books.

Fisher, W. A., White, L. A., Byrne, D., & Kelley, K. (1988). Erotophobia–erotophilia as a dimension of personality. *The Journal of Sex Research, 25,* 123–151.

Freud, S. (1957). Three essays on sexuality. In J. Stracheyh (Ed. and Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 3, pp. 189–221). London: Hogarth Press. (Original work published 1905)

Galton, F. (1884). Measurement of character. *Fortnightly Review, 36,* 179–185.

Gagnon, J. H. & Simon, W. (1973). *Sexual conduct: The social origins of human sexuality.* Chicago: Aldine.

Gilbert, F. S., & Gamanche, M. P. (1984). The Sexual Opinion Survey: Structure and use. *The Journal of Sex Research, 20,* 293–309.

Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4,* 26–42.

Goldberg, L. R. (1993). The structure of personality traits. *American Psychologist, 48,* 26–34.

Greenberg, J., Solomon, S., Pyszczynki, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology, 63,* 913–922.

Hatfield, E., & Sprecher, S. (1986). Measuring passionate love in intimate relationships. *Journal of Adolescence, 9,* 383–410.

Hazen, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52,* 511–524.

Hoon, E. F., Hoon, P. W., & Wincze, J. P. (1976). An inventory for the measurement of female sexual arousability: The SAI. *Archives of Sexual Behavior, 5,* 291–300.

Josephs, R. A., Markus, H. R., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of Personality and Social Psychology, 63,* 391–402.

Kelley, K., & Byrne, D. (1983). Assessment of sexual responding: Arousal, affect, and behaviors. In J. Cacioppo & R. Petty (Eds.), *Social psychophysiology* (pp. 467–490). New York: Guilford Press.

Kinsey, A., Pomeroy, W., Martin, C., & Gebhard, P. (1953). *Sexual behavior in the human female.* Philadelphia: W. B. Saunders.

Klein, G. S. (1976). Freud's two theories of sexuality. *Psychological Issues, 4,* 14–70.

Leitenberg, H., Detzer, M. J., & Srebnik, D. (1993). Gender differences in masturbation and the relation of masturbation experience in preadolescence and/or early adolescence to sexual behavior and sexual adjustment in young adulthood. *Archives of Sexual Behavior, 22,* 87–98.

Lewis, R. A. (1963). Parents and peers: Socialization agents in the coital behavior of young adults. *The Journal of Sex Research, 9,* 156–170.

Markus, H. (1977). Self-schema and processing information about the self. *Journal of Personality and Social Psychology, 35,* 63–78.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38,* 299–337.

Maslow, A., & Sakoda, J. (1952). Volunteer-error in the Kinsey study. *Journal of Abnormal and Social Psychology, 47,* 259–262.

Masters, W. H., & Johnson, V. E. (1966). *Human sexual response.* Boston: Little, Brown.

Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy.* Boston: Little, Brown.

Morokoff, P. (1986). The volunteer bias in the psychophysiological study of female sexuality. *The Journal of Sex Research, 22,* 35–51.

Mosher, D. L. (1966). The development and multitrait–multimethod analysis of three measures of three aspects of guilt. *Journal of Consulting Psychology, 30,* 25–29.

Mussen, P. H., Conger, J. J., & Kagen, J. (1963). *Child development and personality* (2nd ed.). New York: Harper & Row.

Oliver, M. B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin, 114,* 29–51.

Person, E. S. (1987). A psychoanalytic approach. In J. H. Geer & W. T. O'Donahue (Eds.), *Theories of human sexuality* (pp. 385–410). New York: Plenum Press.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Sande, G. N., Goethals, G. R., & Radloff, C. E. (1988). Perceiving one's own traits and others': The multifaceted self. *Journal of Personality and Social Psychology, 54,* 13–20.

Sechrest, L. (1963). Incremental validity: A recommendation. *Educational and Psychological Measurement, 23,* 153–158.

Serbin, L. A., & Sprafkin, C. H. (1987). A developmental approach: Sexuality from infancy through adolescence. In J. H. Geer & W. T. O'Donahue (Eds.), *Theories of human sexuality* (pp. 163–195). New York: Plenum Press.

Sherwin, B. B., Gelfand, M. M., & Brender, W. (1985). Androgen enhances sexual motivation in females: A prospective crossover study of sex steroid administration in the surgical menopause. *Psychosomatic Medicine, 47,* 339–351.

Simon, W., & Gagnon, J. H. (1987). A sexual scripts approach. In J. H. Geer & W. T. O'Donohue (Eds.), *Theories of human sexuality* (pp. 363–383). New York: Plenum Press.

Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology, 59,* 971–980.

Simpson, J. A., & Gangestad, S. W. (1991a). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology, 60,* 870–883.

Simpson, J. A., & Gangestad, S. W. (1991b). Personality and sexuality: Empirical relations and an integrative theoretical model. In K. McKinney & S. Sprecher (Eds.), *Sexuality and close relationships* (pp. 71–91). Hillsdale, NJ: Erlbaum.

Snyder, M., Simpson, A., & Gangestad, S. (1986). Personality and sexual relations. *Journal of Personality and Social Psychology, 51,* 181–190.

Storms, M. D. (1981). A theory of erotic orientation development. *Psychological Review, 88,* 340–353.

Udry, J. R., & Talbert, L. M. (1988). Sex hormone effects on personality at puberty. *Journal of Personality and Social Psychology, 54,* 291–295.

Walling, M., Andersen, B. L., & Johnson, S. R. (1990). Hormonal replacement therapy for postmenopausal women: A review of sexual outcomes and related gynecologic effects. *Archives of Sexual Behavior, 19,* 119–137.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54,* 1063–1070.

Whalen, S. R., & Roth, D. (1987). A cognitive approach. In J. H. Geer & W. T. O'Donohue (Eds.), *Theories of human sexuality* (pp. 335–362). New York: Plenum Press.

Wilson, A. R., & Krane, R. V. (1980). Change in self-esteem and its effects on symptoms of depression. *Cognitive Therapy and Research, 4,* 419–421.

Wyatt, G. E., Peters, S. D., & Guthrie, D. (1988). Kinsey revisited, Part I: Comparisons of the sexual socialization and sexual behavior of white women over 33 years. *Archives of Sexual Behavior, 17,* 201–239.

(*Appendix follows on next page*)

Appendix

Describe Yourself

Directions: Below is a listing of 50 adjectives. For each word, consider whether or not the term describes you. Each adjective is to be rated on a scale ranging from 0 = *not at all descriptive of me* to 6 = *very much descriptive of me.* Choose a number of each adjective to indicate how accurately the adjective describes you. There are no right or wrong answers. Please be thoughtful and honest.

Question: To what extent does the term _____ describe me?

Rating Scale:

Not at all descriptive	0	1	2	3	4	5	6	Very descriptive

1. generous
2. *uninhibited*
3. *cautious*
4. helpful
5. *loving*
6. *open-minded*
7. shallow
8. *timid*
9. *frank*
10. clean-cut
11. *stimulating*
12. unpleasant
13. *experienced*
14. short-tempered
15. irresponsible
16. *direct*
17. logical
18. *broad-minded*
19. kind
20. *arousable*
21. practical
22. *self-conscious*
23. dull
24. *straightforward*
25. *casual*
26. disagreeable
27. serious
28. *prudent*
29. humorous
30. sensible
31. *embarrassed*
32. *outspoken*
33. level-headed
34. responsible
35. *romantic*
36. polite
37. *sympathetic*
38. *conservative*
39. *passionate*
40. wise
41. *inexperienced*
42. stingy
43. superficial
44. *warm*
45. *unromantic*
46. good-natured
47. rude
48. *revealing*
49. bossy
50. *feeling*

Note. Scoring instructions: 1. The 26 Sexual Self-Schema Scale items are in italics. Factor scores are calculated by summing ratings on the items listed below. Item 45 is reversed keyed. Factor 1 = 5, 11, 20, 35, 37, 39, 44, 45, 48, and 50; Factor 2 = 2, 6, 9, 13, 16, 18, 24, 25, and 32; Factor 3 = 3, 8, 22, 28, 31, 38, and 41. 2. Sexual Self-Schema Score: Total = Factor 1 + Factor 2 − Factor 3.

Received March 23, 1994
Revision received June 14, 1994
Accepted July 5, 1994 ■