

Gender Schema Theory: A Cognitive Account of Sex Typing

Sandra Lipsitz Bem
Cornell University

Gender schema theory proposes that the phenomenon of sex typing derives, in part, from gender-based schematic processing, from a generalized readiness to process information on the basis of the sex-linked associations that constitute the gender schema. In particular, the theory proposes that sex typing results from the fact that the self-concept itself gets assimilated to the gender schema. Several studies are described which demonstrate that sex-typed individuals do, in fact, have a greater readiness to process information—including information about the self—in terms of the gender schema. It is speculated that such gender-based schematic processing derives, in part, from the society's ubiquitous insistence on the functional importance of the gender dichotomy. The political implications of gender schema theory are discussed, as is the relationship of the theory to the concept of androgyny.

The distinction between male and female serves as a basic organizing principle for every human culture. Although societies differ in the specific tasks they assign to the two sexes, all societies allocate adult roles on the basis of sex and anticipate this allocation in the socialization of their children. Not only are boys and girls expected to acquire sex-specific skills, they are also expected to have or to acquire sex-specific self-concepts and personality attributes, to be masculine or feminine as defined by that particular culture (Barry, Bacon, & Child, 1957). **The process by which a society thus transmutes male and female into masculine and feminine is known as the process of sex typing.**

The universality and importance of this process is reflected in the prominence it receives in psychological theories of development, which seek to elucidate how the developing child learns the appropriate repertoire. Psychoanalytic theory empha-

sizes the importance of identification with the same-sex parent (e.g., Sears, Rau, & Alpert, 1965); social learning theory emphasizes the explicit rewards and punishments for behaving in sex-appropriate ways as well as the vicarious learning that observation and modeling can provide (e.g., Mischel, 1970); cognitive-developmental theory emphasizes the ways in which children socialize themselves once they have firmly labeled themselves as male or female (Kohlberg, 1966). (See Maccoby & Jacklin, 1974, and Mussen, 1969, for reviews of these theories.)

But what is it that is learned? Clearly the developing child is learning content-specific information, the particular behaviors and attributes that are to be linked with sex. In most societies, this is a diverse and sprawling network of associations encompassing not only those features directly related to male and female persons, such as anatomy, reproductive function, division of labor, and personality attributes, but also features more remotely or metaphorically related to sex, such as the angularity or roundedness of an abstract shape and the periodicity of the moon. Indeed, there appears to be no other dichotomy in human experience with as many entities assimilated to it as the distinction between male and female.

But there is more. It is proposed here that in addition to learning such content-specific

Preparation of this article was supported in part by National Science Foundation Grant BNS-78-22637 to Sandra Lipsitz Bem and in part by a small seed grant from the Center for Research on Women at Stanford University. The author would like to express her thanks to Daryl J. Bem and Lee D. Ross for critical comments on the manuscript and to Nancy Van Derveer and Mary Milne for computer programming.

Requests for reprints should be sent to Sandra Lipsitz Bem, Department of Psychology, Uris Hall, Cornell University, Ithaca, New York 14853.

information, the child is also learning to invoke this heterogeneous network of sex-related associations in order to evaluate and assimilate new information. The child, in short, learns to process information in terms of an evolving gender *schema*, and it is this gender-based schematic processing that constitutes the heart of the present account of sex typing.

The Gender Schema

A schema is a cognitive structure, a network of associations that organizes and guides an individual's perception. A schema functions as an anticipatory structure, a readiness to search for and to assimilate incoming information in schema-relevant terms. Schematic processing is thus highly selective and enables the individual to impose structure and meaning onto the vast array of incoming stimuli. Schema theory—if it can be called a theory—construes perception as a constructive process wherein what is perceived is a product of the interaction between the incoming information and the perceiver's preexisting schema (Neisser, 1976; Taylor & Crocker, in press). The readiness with which an individual invokes one schema rather than another is referred to as the *cognitive availability* of the schema (Nisbett & Ross, 1980; Tversky & Kahneman, 1973, 1974).

Schematic processing can manifest itself in a number of ways. For example, individuals who have a generalized readiness to process information in terms of a particular schema should be able to encode schema-consistent information quickly; they should organize information in schema-relevant categories; they should make highly differentiated judgments along schema-relevant dimensions; and when given a choice, they should spontaneously choose to make discriminations along those same dimensions. In general, their perceptions and actions should reflect the kinds of biases that schema-directed selectivity would produce (Nisbett & Ross, 1980; Taylor & Crocker, in press).

What gender schema theory proposes, then, is that the phenomenon of sex typing derives, in part, from gender-based schematic processing, from a generalized readi-

ness to process information on the basis of the sex-linked associations that constitute the gender schema. In particular, the theory proposes that sex typing results, in part, from the fact that the self-concept itself gets assimilated into the gender schema. As children learn the contents of the society's gender schema, they learn which attributes are to be linked with their own sex and, hence, with themselves. This does not simply entail learning where each sex is supposed to stand on each dimension or attribute—that boys are to be strong and girls weak, for example—but involves the deeper lesson that the dimensions themselves are differentially applicable to the two sexes. Thus the strong-weak dimension itself is absent from the schema that is to be applied to girls just as the dimension of nurturance is implicitly omitted from the schema that is to be applied to boys. Adults in the child's world rarely notice or remark upon how strong a little girl is becoming or how nurturant a little boy is becoming, despite their readiness to note precisely these attributes in the "appropriate" sex. The child learns to apply this same schematic selectivity to the self, to choose from among the many possible dimensions of human personality only that subset defined as applicable to his or her own sex and thereby eligible for organizing the diverse contents of the self-concept. Thus do self-concepts become sex typed, and thus do the two sexes become, in their own eyes, not only different in degree but different in kind.

Simultaneously, the child also learns to evaluate his or her adequacy as a person in terms of the gender schema, to match his or her preferences, attitudes, behaviors, and personal attributes against the prototypes stored within it. The gender schema becomes a prescriptive standard or guide (Kagan, 1964; Kohlberg, 1966), and self-esteem becomes its hostage. Here, then, enters an internalized motivational factor that prompts the individual to regulate his or her behavior so that it conforms to the culture's definitions of maleness and femaleness. And that sex-typed behavior, in turn, further reinforces the gender-based differentiation of the self-concept through the individual's observation of his or her own behavior (cf. Bem, 1972). Thus do cultural myths become

self-fulfilling prophecies, and thus do we arrive at the phenomenon known as sex typing.

It is important to note that gender schema theory is a theory of process, not content. Because sex-typed individuals are seen as processing information in terms of and conforming to whatever definitions of masculinity and femininity the culture happens to provide, it is the process of partitioning the world into two equivalence classes on the basis of the gender schema, not the contents of the equivalence classes, that is central to the theory. Accordingly, sex-typed individuals are seen as differing from other individuals not primarily in terms of how much masculinity or femininity they possess, but in terms of whether or not their self-concepts and behaviors are organized on the basis of gender. Many non-sex-typed individuals may describe themselves as, say, dominant or nurturant without implicating the concepts of masculinity or femininity. When sex-typed individuals so describe themselves, however, it is precisely the gender connotations of the attributes or behaviors that are presumed to be salient for them (cf. Bem & Allen, 1974).

As a recent review by Taylor and Crocker (in press) points out, the schema concept has been a heuristically valuable, if ill-defined, concept within psychology. The gender schema is currently at a comparable level of conceptual maturity. For example, although it is likely that much of the information in the gender schema consists of "fuzzy sets" organized around male and female prototypes (e.g., Cantor & Mischel, 1979; Rosch, 1975), the theory does not explicitly commit itself with respect to the exact nature or structure of the gender schema. The intent of this article is not to specify the precise structural representation of gender knowledge nor even to establish that the gender schema satisfies some well-defined set of necessary and sufficient conditions for calling it a schema. Rather, the purpose is to provide a new perspective on the process of sex typing and to test a set of empirical propositions deriving from that perspective.

The Gender-Based Schematic Processing of the Sex-Typed Individual

As noted earlier, schematic processing can manifest itself in a number of ways, and cog-

nitive psychologists have found studies of memory a fruitful way of probing schema-like structures. For example, if an individual is spontaneously inclined to encode and organize information on the basis of some underlying schema or network of associations, then thinking of one schema-related item should enhance the probability of thinking of another. Thus, if the individual has been given a number of items to memorize and is then asked to recall them in whatever order they happen to come to mind, the sequence of recall should reveal runs or clusters of items that were linked in memory via the schema (Bousfield & Bousfield, 1966; Hamilton, Katz, & Leirer, 1980). In the following study, we used this clustering paradigm to provide a first test of gender schema theory. If sex-typed individuals do, in fact, organize information in terms of the gender schema, then they should show more clustering of gender-relevant items in free recall than non-sex-typed individuals.

Study 1: Gender Clustering in Free Recall¹

Method. Forty-eight male and 48 female Stanford undergraduates were preselected for this study on the basis of their scores on the Bem Sex Role Inventory (BSRI; Bem, 1974), an instrument that identifies sex-typed individuals on the basis of their self-concepts or self-ratings of their personal attributes. The BSRI asks the respondent to indicate on a 7-point scale how well each of 60 attributes describes himself or herself. Although it is not apparent to the respondent, 20 of the attributes reflect the culture's definition of masculinity (e.g., *assertive*) and 20 reflect its definition of femininity (e.g., *tender*), with the remaining attributes serving as filler. Each respondent receives both a masculinity and a femininity score, and those who score above the median on the sex-congruent scale and below the median on the sex-incongruent scale are defined as sex typed. Those who show the reverse pattern are designated as cross-sex typed; those who score above the median on both scales are designated as androgynous; and those who score below the median on both scales are designated as undifferentiated.²

¹ This study was conducted as part of a senior honors thesis at Stanford University by Rachel Moran.

² The BSRI was chosen as the selection instrument because it has a number of features that make it especially appropriate for identifying sex-typed individuals. Most importantly, previous research has indicated that individuals classified as sex typed by the BSRI are sex typed in their behavior (Bem, 1975; Bem, Martyna, & Watson, 1976) and are motivated to select sex-typed activities (Bem & Lenney, 1976). In addition, the masculine and feminine items on the BSRI were specifically

In the experimental session, subjects were presented with a sequence of 61 words in random order. These words included 16 proper names, 15 animal names, 15 verbs, and 15 articles of clothing. Half of the proper names were male and half were female. One third of the items within each of the other semantic categories had been consistently rated by undergraduate judges as masculine (e.g., *gorilla, hurling, trousers*), one third as feminine (e.g., *butterfly, blushing, bikini*), and one third as neutral (e.g., *ant, stepping, sweater*). The words were presented on slides at 3-sec intervals, and subjects were told that their recall would later be tested. Three seconds after the presentation of the last word, they were given a period of 8 min to write down on a sheet of paper as many words as they could, in any order.

Results. It will be noted that subjects could cluster words in recall both according to the semantic categories and according to gender. The particular list of words recalled by each subject was scored for gender clustering by counting the number of sequential pairs that belonged to the same gender. Intrusions—words “recalled” that had not been on the stimulus list—were categorized by two independent judges and included in the clustering computation. Two types of sequential pairs were counted: gender clustering within semantic category (e.g., *gorilla/eagle* or *bikini/nylons*) and gender clustering across semantic categories (e.g., *hurling/Daniel* or *butterfly/dress*). In order to control for the total number of items recalled as well as for the extent of an individual’s category clustering, the amount of gender clustering within and across semantic categories was expressed as the percentage of category and noncategory pairs, respectively, that were clustered on the basis of gender. The mean of these two percentages defined the total amount of an individual’s gender clustering.

The hypothesis that sex-typed individuals would show the most gender clustering was tested by means of a planned comparison

selected so as to reflect the definitions of sex appropriateness held by American society at large (Bem, 1974, 1979). In principle, however, sex-typed individuals could have been selected by means of any instrument or procedure that assesses the extent to which one’s self-concept and/or behavior matches the culture’s definitions of masculinity and femininity, and studies using other selection procedures will be described below. Similarly, the BSRI itself can be scored in several alternate ways (e.g., Bem, 1977; Orlofsky, Aslin, & Ginsburg, 1977). For research purposes in which group data are analyzed, it seems unlikely that the differences among the various scoring systems would be of much consequence.

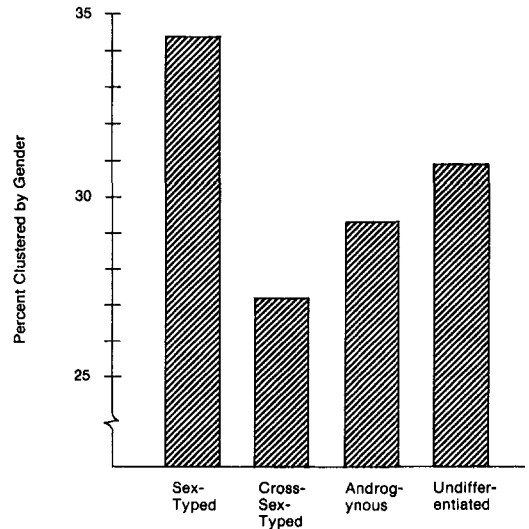


Figure 1. Mean percentage of sequential pairs within and across categories clustered on the basis of gender by sex-typed, cross-sex-typed, androgynous, and undifferentiated subjects.

contrasting the gender clustering of sex-typed subjects with the gender clustering of cross-sex-typed, androgynous, and undifferentiated subjects combined. Additional planned comparisons tested whether cross-sex-typed subjects differed significantly from androgynous and undifferentiated subjects combined and whether androgynous and undifferentiated subjects differed significantly from one another. The results are presented in Figure 1. Because there were no main effects or interactions on this measure involving sex, the results for male and female subjects have been combined.

As can be seen in Figure 1, sex-typed subjects clustered a significantly higher percentage of words on the basis of gender than the other three groups, $t(88) = 2.01$, $p < .025$, one-tailed. There were no significant differences among the groups in the amount of category clustering, $F(3, 88) < 1$, ns . As can also be seen in Figure 1, cross-sex-typed subjects did not differ significantly from androgynous or undifferentiated subjects, $t(88) = 1.07$, ns ; and androgynous and undifferentiated subjects did not differ significantly from one another, $t(88) < 1$, ns . Although there were no sex differences in the total amount of gender clustering, sex-typed males differed from other males primarily in the amount of gender clustering

within semantic category, male $t(88) = 2.51$, $p < .01$, one-tailed; female $t(88) < 1$, ns ; whereas sex-typed females differed from other females primarily in the amount of gender clustering across semantic categories, female $t(88) = 2.30$, $p < .025$, one-tailed; male $t(88) < 1$, ns .

In addition to this clustering study, there are a number of other memory studies already in the literature that are also consistent with gender schema theory's major proposition that sex-typed individuals engage in gender-based schematic processing more than do non-sex-typed individuals. In one such study, for example, Kail and Levine (1976) selected 7- and 10-year-old girls who had been identified as sex-typed or non-sex-typed on the basis of toy preferences and asked them to recall words that had been presented to them immediately before a brief distractor task. This procedure was repeated over several trials. Previous research in short-term memory has demonstrated that recall declines over trials if all of the stimulus words are members of a single category (e.g., all color names or all spelled-out numbers) but that recall improves again following a shift from one category to another—a phenomenon known as release from proactive inhibition (Wickens, 1972). This improvement in performance is taken as evidence that the individual has, correspondingly, shifted his or her encoding categories for the stimulus words. Kail and Levine reasoned that sex-typed individuals should show this effect when stimulus words shifted from masculine to feminine or vice versa, whereas non-sex-typed individuals should be relatively less sensitive to this shift in gender connotation and hence should fail to show as much release from proactive inhibition. Their results supported this hypothesis.

In a second memory study with children, Liben and Signorella (1980) found that 6-, 7-, and 8-year-old children with highly stereotyped views of sex-appropriate behavior were significantly more likely than less stereotyped children to remember pictures that were consistent with the culture's gender stereotypes. And, in a study with college students using the BSRI, Taylor (in press) found that when sex-typed subjects were asked to recall and identify "who said what"

after listening to a group discussion, they were more likely than androgynous subjects to make within-sex rather than cross-sex errors, that is, to confuse women with women and men with men.

Studies using other paradigms have also yielded supporting results. For example, it was suggested earlier that an individual who engages in schematic processing should make highly differentiated judgments along schema-relevant dimensions and when given the opportunity should spontaneously choose to make discriminations along these same dimensions. In another study with college students using the BSRI, sex-typed subjects made significantly more differentiated judgments of masculinity–femininity than did androgynous subjects when rating handwriting samples, and they also weighted the dimension of masculinity–femininity more heavily than did androgynous subjects when making similarity judgments of these samples (Lippa, 1977). And finally, subjects identified as sex-typed on the BSRI differentiated between male and female stimulus persons significantly more than did androgynous subjects when asked to segment each person's videotaped sequence of behaviors into units that seemed natural and meaningful to them (Deaux & Major, 1977).

Although these several studies support the proposition that sex-typed individuals process gender-relevant information in terms of a gender schema, they do not address the critical issue of whether the self-concept itself gets assimilated to the schema. Accordingly, the following study was designed to demonstrate that sex-typed individuals organize their self-concepts in terms of the sex-linked associations that constitute the gender schema.

Study 2: Gender-Schematic Processing of the Self-Concept³

When describing themselves on the BSRI, sex-typed individuals by definition rate sex-congruent attributes as more self-descriptive than sex-incongruent attributes. But what

³ This study was completed as part of a doctoral dissertation at Stanford University by Brenda Girvin. The assistance of Virginia Coles, Columbus Cooper, Tim Reagan, and Michael Wilkins is gratefully acknowledged.

process do sex-typed individuals go through when deciding that a particular attribute is or is not self-descriptive? Gender schema theory implies that they may simply "look up" the attribute in the gender schema and answer in the affirmative if the attribute is sex-congruent; that is, they do not go through the time-consuming process of recruiting behavioral evidence from memory and then judging whether the evidence warrants an affirmative answer. This implies that sex-typed individuals ought to be faster than non-sex-typed individuals when they make schema-consistent judgments, such as, that a sex-congruent attribute is self-descriptive or that a sex-incongruent attribute is not. Conversely, sex-typed individuals ought to be slower than non-sex-typed individuals in those few instances when they make schema-inconsistent judgments, such as, that a sex-congruent attribute is not self-descriptive or that a sex-incongruent attribute is (Markus, 1977; Taylor & Crocker, in press).

This reasoning was tested in a doctoral dissertation on self-schemata by Girvin (1978), who sought the same kind of evidence for the schematic processing of "self" information on the gender dimension that had previously been found on the independence-dependence dimension by Markus (1977). The measure most directly relevant here was the individual's response latency when asked to make a dichotomous *me/not me* judgment about each of the 60 attributes on the BSRI itself.⁴

Method. Forty-eight male and 48 female Stanford undergraduates were preselected on the basis of a median split on the BSRI as sex typed, cross-sex typed, androgynous, or undifferentiated. During an individual experimental session, the 60 attributes from the BSRI were projected on a screen one at a time and the subject was requested to push one of two buttons, "ME" or "NOT ME," to indicate whether the attribute was self-descriptive. The subject's response latency was recorded for each judgment.

Results. For purposes of this discussion, two measures of gender-schematic processing were computed for each subject, the mean latency of schema-consistent judgments (sex-congruent ME and sex-incongruent NOT ME) and the mean latency of schema-inconsistent judgments (sex-congruent NOT ME and sex-incongruent ME). In order to control for individual differences in general response latency, both measures

were expressed as difference scores between these schema-relevant latencies and the subject's mean latency for the sex-neutral attributes on the BSRI. There were no overall differences among the sex types in their response latencies to the neutral attributes themselves, $F(3, 88) < 1$, *ns*.

The hypothesis that sex-typed subjects would show the most gender-schematic processing was tested by means of a planned comparison contrasting sex-typed subjects with cross-sex-typed, androgynous, and undifferentiated subjects combined. Additional orthogonal planned comparisons tested whether cross-sex-typed subjects differed significantly from androgynous and undifferentiated subjects combined and also whether androgynous and undifferentiated subjects differed significantly from one another. The results for both schema-consistent and schema-inconsistent judgments are presented in Figure 2. Positive scores signify faster responding for schema-relevant than for neutral judgments; negative scores signify slower responding. Because there were no main effects or interactions involving sex, the results for male and female subjects have been combined.

As can be seen, sex-typed subjects were, in fact, significantly faster than the other three groups when making schema-consistent judgments about themselves, $t(88) = 5.13$, $p < .001$, one-tailed; and they were also significantly slower than the others when making schema-inconsistent judgments, $t(83) = 2.97$, $p < .005$, one-tailed. These results support the central hypothesis of gender schema theory that sex typing is accompanied by a readiness to process information about the self in terms of the gender schema, and they indicate that the attributes on the BSRI are themselves processed in this fashion.⁵

⁴ More recently, Markus and her colleagues have themselves begun to investigate the schematic processing of "self" information related to gender (Markus, Crane, Bernstein, & Salidi, in press). Their preliminary findings appear to be consistent with gender schema theory in many respects.

⁵ The same pattern of significant results is obtained when the schema-consistent and schema-inconsistent judgments themselves are analyzed before converting them into difference scores. Moreover, the main effect of sex type is significant in a two-way analysis of variance, using either the judgments themselves or the dif-

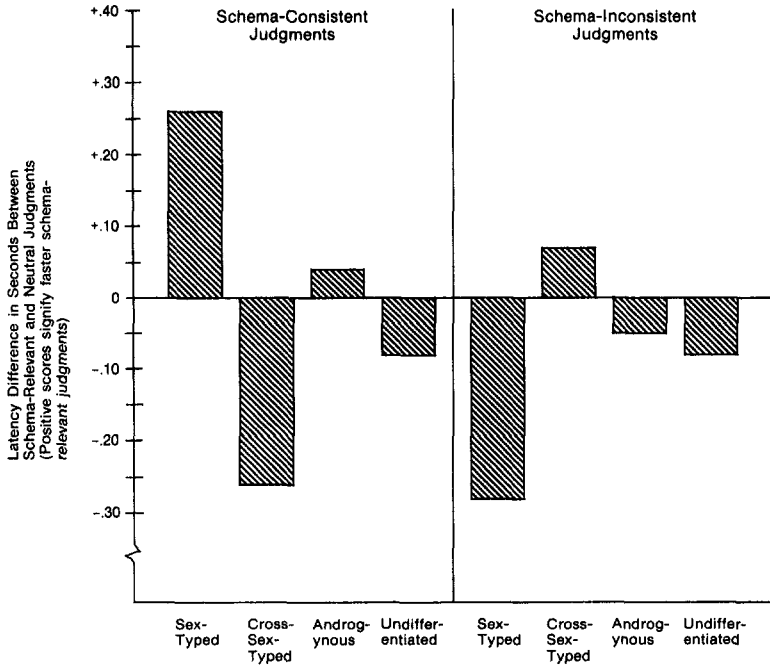


Figure 2. Gender-schematic processing in response latencies for schema-consistent and schema-inconsistent judgments by sex-typed, cross-sex-typed, androgynous, and undifferentiated subjects.

The data in Figure 2 also explicitly raise a question about cross-sex-typed individuals. Like sex-typed subjects, cross-sex-typed subjects partition the attributes on the BSRI into gender categories, but they rate the sex-incongruent set as more self-descriptive. Do they invoke a gender schema to process self-relevant information or not? If they do, then their results should be the mirror image of the sex-typed subjects' results. That is, they should reach their judgments slowly in those few instances when they decide that sex-congruent attributes are self-descriptive or that sex-incongruent attributes are not (the schema-consistent judgments), and conversely, they should reach their judgments quickly in these modal instances when they decide that sex-congruent attributes are not

self-descriptive or that sex-incongruent attributes are (the schema-inconsistent judgments). Unfortunately the data in Figure 2 are mixed. In the orthogonal planned comparison, cross-sex-typed subjects are significantly different from androgynous and undifferentiated subjects when making schema-consistent judgments about the self, $t(88) = 3.17, p < .01$, two-tailed, but not when making schema-inconsistent judgments, $t(83) = 1.64, ns$. The question thus remains unanswered, although it should be recalled that in the clustering study, cross-sex-typed subjects displayed the least amount of gender clustering of all the groups, implying that they are not inclined to process information in terms of a gender schema.

Finally, as can also be seen in Figure 2, there were no significant differences between androgynous and undifferentiated subjects either in their latencies for schema-consistent judgments, $t(88) = 1.40, ns$, or in their latencies for schema-inconsistent judgments, $t(83) < 1, ns$. This null result indicates that androgynous and undifferentiated subjects are similarly disinclined to process information about themselves in terms of the gen-

ference scores. And finally, although ME judgments have shorter latencies overall than NOT ME judgments for all subjects, this difference is not artifactually producing either the short latencies of sex-typed subjects when they make schema-consistent judgments nor the long latencies when they make schema-inconsistent judgments. In fact, the obtained differences among the groups in their proportions of ME and NOT ME judgments work against the hypothesis.

der schema, as might be predicted by their both endorsing approximately equal amounts of masculinity and femininity when rating themselves on the BSRI.

Taken together, the results of these studies indicate that sex-typed individuals have a greater readiness than cross-sex-typed, androgynous, or undifferentiated individuals to process information—including information about the self—in terms of the gender schema, and hence support the major contention of gender schema theory that sex typing is derived, in part, from gender-based schematic processing.

The Heterosexuality Subschema

Although the specific contents of the gender schema are not of direct concern to the account of sex typing proposed here, the sex-related associations involving heterosexuality have a distinctive status that warrants special treatment. First of all, the phenomenon of heterosexual attraction seems likely itself to have fostered the development of gender-based schematic processing in many young adults by facilitating the generalization that the two sexes are—and are supposed to be—quite different from each other. Certainly the motto *vive la difference* derives both its sense and its punch from the common experience of being attracted to members of the other sex and wanting to do what one can both to preserve and to facilitate that heterosexual attraction.

In addition, many societies, including our own, treat an exclusively heterosexual orientation as the sine qua non of adequate masculinity and femininity. Regardless of how closely an individual's attributes and behavior match the male or female prototypes stored within the gender schema, violation of the prescription to be exclusively heterosexual is sufficient by itself to call into question the individual's adequacy as a man or a woman. The society thus attaches strong affect to this portion of the gender schema, thereby motivating many individuals to be especially vigilant with respect to their heterosexuality. Partly in the service of highlighting the fact that they are exclusively heterosexual, such individuals may develop a generalized readiness to encode all cross-sex interactions in sexual terms and all mem-

bers of the opposite sex in terms of sexual attractiveness, in short, a readiness to invoke the heterosexuality subschema in social interaction.⁶

Because they are predisposed to process information in terms of the gender schema generally, it is proposed here that sex-typed individuals are among those who are likely to have a generalized readiness to invoke the heterosexuality subschema in their social interactions and, in particular, to respond differentially to the physical attractiveness of members of the opposite sex with whom they are interacting. This hypothesis was tested as part of a study by Andersen and Bem (in press) in which sex-typed and androgynous subjects of both sexes engaged in getting-acquainted telephone conversations with four different partners. The subjects were led to believe that each of their partners was either physically attractive or physically unattractive, a belief manipulated by means of a Polaroid snapshot allegedly taken of the partner a few moments before. Each subject conversed with two allegedly attractive and unattractive partners of his or her own sex as well as with two allegedly attractive and unattractive partners of the opposite sex. The partners in this study were all naive, not confederates, and all were strangers to the subjects with whom they conversed. Each conversation lasted approximately 8 min. and was totally uncontrived.

Three independent judges—all blind with respect to the subject's BSRI category as well as the partner's sex and alleged physical attractiveness—listened to the subject's half

⁶ Indeed, this is the basis of the feminist objection to the ubiquitous sexual coloring of so many cross-sex interactions. The objection is not to sexuality per se but to the promiscuous availability of the gender schema—and the heterosexuality subschema in particular—in situational contexts where other schemata should have priority. The objection is to individuals whose heterosexuality subschemata have such low activation thresholds that they code all cross-sex interactions in sexual terms and all members of the other sex in terms of sexual attractiveness rather than in terms of other dimensions that are more individuating or more relevant to the situational context. There is no implication here that individuals for whom the heterosexuality subschema is readily available are necessarily higher in sexual motivation per se than other individuals, although it is plausible that enhanced sexual motivation might be one factor that would increase anyone's readiness to process information in sexual terms.

of each conversation and rated him or her on a number of dimensions. Among other things, the results indicated that sex-typed subjects were more likely than androgynous subjects to behave differentially toward attractive and unattractive members of the opposite sex, displaying greater animation, enthusiasm, and interest toward those they thought more attractive. It appears, then, that the sex-typed individual may have a generalized readiness to code members of the opposite sex in terms of sexual attractiveness and that this readiness may be powerful enough to influence his or her social behavior in spontaneous social interaction.

The Antecedents of Gender-Based Schematic Processing: Some Speculations

What prompts so many individuals to organize information in general, and their self-concepts in particular, in terms of gender? Why the prevalence of gender-based schematic processing? The answer would seem to derive, in part, from the society's ubiquitous insistence on the functional importance of the gender dichotomy, from its insistence that an individual's sex makes a difference in virtually every domain of human experience. The typical American child cannot help but observe, for example, that what parents, teachers, and peers consider to be appropriate behavior varies as a function of sex; that toys, clothing, occupations, hobbies, domestic chores—even pronouns—all vary as a function of sex.

Society thus teaches the developing child two things about gender. First, as noted earlier, it teaches the substantive network of sex-related associations that can come to serve as a cognitive schema. Second, it teaches that the dichotomy between male and female has extensive and intensive relevance to virtually every aspect of life.

It is this latter knowledge, moreover, that is here presumed to transform a passive network of associations into an active and readily available schema for interpreting reality. Children will learn many associative networks of concepts throughout life, many potential cognitive schemata, but it is the learned centrality or alleged functional importance of particular categories and distinctions that animates their associated net-

works and gives these schemata priority and availability over others. In the case of the gender schema in particular, it may also be that sex has evolved to be a basic category of perception for our species and that the gender schema thereby has a **biologically based priority over many other schemata**. Be that as it may, however, society's ubiquitous insistence on the functional importance of the gender dichotomy cannot help but render the gender schema even more cognitively available—and in more remotely relevant contexts—than it would be otherwise. Not everyone becomes equally sex typed, of course, and individual differences presumably derive from the extent to which one's particular socialization history has stressed the functional importance of the gender dichotomy.

Is There a Feminist Moral to Gender Schema Theory?

The central figure in gender schema theory has been the sex-typed individual. This represents a shift of focus from my earlier work in which it was the non-sex-typed individual, the androgynous individual in particular, who commanded center stage. That earlier focus reflected both theoretical and political concerns.

At the theoretical level, the recent debate within personality psychology over the cross-situational consistency of behavior has challenged the common practice of dismissing individuals who are not consistent as merely sources of uninteresting error variance. In the arena of sex role research, this practice prevented the androgynous individual, the individual who is flexibly masculine or feminine as circumstances warrant, from even being conceptualized. Although we routinely see such individuals among our colleagues, our lovers, and presumably our subjects, they were strangely absent from our theories and our journals—until the concept of androgyny brought them into focus.

Politically, of course, androgyny was a concept whose time had come, a concept that appeared to provide a liberated and more humane alternative to the traditional, sex-biased standards of mental health. And it is true that the concept of androgyny can be applied equally to both men and women and

that it encourages individuals to embrace both the masculine and the feminine within themselves. But the concept of androgyny can also be seen as replacing a prescription to be masculine *or* feminine with the doubly incarcerating prescription to be masculine *and* feminine. The individual now has not one but two potential sources of inadequacy to contend with (cf. Sampson, 1977).

Even more importantly, however, the concept of androgyny is insufficiently radical from a feminist perspective because it continues to presuppose that there is a masculine and a feminine within us all, that is, that the concepts of masculinity and femininity have an independent and palpable reality rather than being themselves cognitive constructs derived from gender-based schematic processing. A focus on the concept of androgyny thus fails to prompt serious examination of the extent to which gender organizes both our perceptions and our social world.

In contrast, the concept of gender-based schematic processing has the potential for "raising our consciousness" in precisely this way. It can lead us, for example, to notice how the male-female distinction is insinuated in totally gratuitous ways into the society's curriculum for the developing child. In elementary schools, for example, boys and girls line up separately or alternately; they learn songs in which the fingers are "ladies" and thumbs are "men"; they see boy and girl paper doll silhouettes alternately placed on the days of the month in order to learn about the calendar. Children, it will be noted, are not lined up separately or alternately as blacks and whites; fingers are not "whites" and thumbs "blacks"; black and white dolls do not alternately mark the days of the calendar. The irony is that even though our society has become sensitized to negative sex stereotypes and has begun to expunge them from the media and from children's literature, it remains blind to its gratuitous emphasis on the gender dichotomy itself. Our society seeks to deemphasize racial distinctions but continues to exaggerate sexual distinctions.

Thus, to the extent that gender schema theory contains a feminist moral, it is that the network of associations that constitutes the gender schema ought to become more

limited in scope and that society ought to temper its insistence upon the ubiquitous functional importance of the gender dichotomy. In short, human behaviors and personality attributes should cease to have gender, and society should stop projecting gender into situations irrelevant to genitalia.

Were this to occur, we might then come to accept as a given the fact that we are male or female as un-self-consciously as we now accept as a given the fact that we are human. Our maleness or femaleness would be self-evident and nonproblematic; rarely would we be prompted to ponder it, to assert that it is true, to fear that it might be in jeopardy, or to wish that it were otherwise. The gender distinctions that remained would still be perceived—perhaps even cherished—but they would not function as imperialistic schemata for organizing everything else, and the artificial constraints of gender on the individual's unique blend of temperament and behavior would be eliminated. The feminist prescription, then, is not that the individual be androgynous, but that the society be aschematic.

References

- Andersen, S. M., & Bem, S. L. Sex typing and androgyny in dyadic interaction: Individual differences in responsiveness to physical attractiveness. *Journal of Personality and Social Psychology*, 1981, 41, 74-86.
- Barry, H., Bacon, M. K., & Child, I. L. A cross-cultural survey of some sex differences in socialization. *Journal of Abnormal and Social Psychology*, 1957, 55, 327-332.
- Bem, D. J. Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6). New York: Academic Press, 1972.
- Bem, D. J., & Allen, A. On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. *Psychological Review*, 1974, 81, 506-520.
- Bem, S. L. The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 1974, 42, 155-162.
- Bem, S. L. Sex role adaptability: One consequence of psychological androgyny. *Journal of Personality and Social Psychology*, 1975, 31, 634-643.
- Bem, S. L. On the utility of alternative procedures for assessing psychological androgyny. *Journal of Consulting and Clinical Psychology*, 1977, 45, 196-205.
- Bem, S. L. Theory and measurement of androgyny: A reply to the Pedhazur-Tetenbaum and Locksley-Colten critiques. *Journal of Personality and Social Psychology*, 1979, 37, 1047-1054.
- Bem, S. L., & Lenney, E. Sex typing and the avoidance

- of cross-sex behavior. *Journal of Personality and Social Psychology*, 1976, 33, 48-54.
- Bem, S. L., Martyna, W., & Watson, C. Sex typing and androgyny: Further explorations of the expressive domain. *Journal of Personality and Social Psychology*, 1976, 34, 1016-1023.
- Bousfield, A. K., & Bousfield, W. A. Measurement of clustering and of sequential constancies in repeated free recall. *Psychological Reports*, 1966, 19, 935-942.
- Cantor, N., & Mischel, W. Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12). New York: Academic Press, 1979.
- Deaux, K., & Major, B. Sex-related patterns in the unit of perception. *Personality and Social Psychology Bulletin*, 1977, 3, 297-300.
- Girvin, B. *The nature of being schematic: Sex-role self-schemas and differential processing of masculine and feminine information*. Unpublished doctoral dissertation, Stanford University, 1978.
- Hamilton, D. L., Katz, L. B., & Leirer, V. O. Organizational processes in impression formation. In R. Hastie, T. Ostrom, E. Ebbesen, R. Wyer, D. Hamilton, & R. Carlston (Eds.), *Person memory: The cognitive basis of social perception*. Hillsdale, N.J.: Erlbaum, 1980.
- Kagan, J. Acquisition and significance of sex-typing and sex role identity. In M. L. Hoffman & L. W. Hoffman (Eds.), *Review of child development research* (Vol. 1). New York: Russell Sage Foundation, 1964.
- Kail, R. V., & Levine, L. E. Encoding processes and sex-role preferences. *Journal of Experimental Child Psychology*, 1976, 21, 256-263.
- Kohlberg, L. A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E. E. Maccoby (Ed.), *The development of sex differences*. Stanford, Calif.: Stanford University Press, 1966.
- Liben, L. S., & Signorella, M. L. Gender-related schemata and constructive memory in children. *Child Development*, 1980, 51, 11-18.
- Lippa, R. Androgyny, sex typing, and the perception of masculinity-femininity in handwriting. *Journal of Research in Personality*, 1977, 11, 21-37.
- Maccoby, E. E., & Jacklin, C. N. *The psychology of sex differences*. Stanford, Calif.: Stanford University Press, 1974.
- Markus, H. Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 1977, 35, 63-78.
- Markus, H., Crane, M., Bernstein, S., & Siladi, M. Self-schemas and gender. *Journal of Personality and Social Psychology*, in press.
- Mischel, W. Sex-typing and socialization. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology* (Vol. 2). New York: Wiley, 1970.
- Mussen, P. H. Early sex-role development. In D. A. Goslin (Ed.), *Handbook of socialization theory and research*. Chicago: Rand McNally, 1969.
- Neisser, U. *Cognition and reality*. San Francisco: Freeman, 1976.
- Nisbett, R. E., & Ross, L. *Human inference: Strategies and shortcomings of social judgement*. Englewood Cliffs, N.J.: Prentice-Hall, 1980.
- Orlofsky, J., Aslin, A. L., & Ginsburg, S. D. Differential effectiveness of two classification procedures on the Bem Sex Role Inventory. *Journal of Personality Assessment*, 1977, 41, 414-416.
- Rosch, E. Cognitive reference points. *Cognitive Psychology*, 1975, 1, 532-547.
- Sampson, E. E. Psychology and the American ideal. *Journal of Personality and Social Psychology*, 1977, 35, 767-782.
- Sears, R. R., Rau, L., & Alpert, R. *Identification and child rearing*. Stanford, Calif.: Stanford University Press, 1965.
- Taylor, S. E. A categorization approach to stereotyping. In D. L. Hamilton (Ed.), *Cognitive processes in stereotyping and intergroup behavior*. Hillsdale, N.J.: Erlbaum, in press.
- Taylor, S. E., & Crocker, J. Schematic bases of social information processing. In E. T. Higgins, P. Hermann, & M. P. Zanna (Eds.), *The Ontario Symposium on Personality and Social Psychology* (Vol. 1). Hillsdale, N.J.: Erlbaum, in press.
- Tversky, A., & Kahneman, D. Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 1973, 5, 207-232.
- Tversky, A., & Kahneman, D. Judgment under uncertainty: Heuristics and biases. *Science*, 1974, 185, 1124-1131.
- Wickens, D. D. Characteristics of word encoding. In A. W. Melton & E. Martin (Eds.), *Coding processes in human memory*. New York: Wiley, 1972.

Received June 23, 1980 ■