A Bi-dimensional Approach to Measuring the Gender Schema

Susan Alexandra Freedman
Center for Gender Studies
Radford University
Abstract

Gender Schematicity has most often been measured using traits. This provides information about how traits are processed: whether the gender schema is used in processing traits. This measurement may not be appropriate for providing a global measure of gender schematicity. The current study measured gender schematicity using both traits and careers. A response time latency task was designed to measure the gender schema of 20 female college students enrolled in introductory psychology courses.

Findings indicate that feminine traits are encoded most successfully, followed by masculine traits, which have received more elaborate encoding than neutral traits. Results show that, for careers, masculine items are the most successfully encoded, and feminine items have received the least elaborate encoding. Thus, while these women are clearly feminine schematic for traits, it is equally true that they are not feminine schematic for careers.
A Bi-dimensional Approach to Measuring the Gender Schema

Cognitive structures concerned with processing information about gender have been called gender schemas (Bem, 1981a; Liben & Signorella 1980; Martin & Halverson, 1981). Money and Erhardt (1972) suggest that, in establishing gender identity, each child establishes two schemas. Money and Tucker (1975) explain that one schema tells you what to expect of your sex, including yourself. The other tells you what to expect of and how to react to, the opposite sex. Gender schematic individuals have a more readily available "map" for gender-related information. They may also be more prone than others to spontaneously invoke this heterogeneous network when processing information.

Bem (1981) proposed a model (Gender Schema Theory) for the schematic processing of gender-related information. She describes gender-schematic individuals, as having a "generalized readiness to encode information-including information about the self - in terms of the culture's definitions of masculinity and femininity" (p. 1193, 1982). Self schema theory (Markus, Crane, Bernstein & Siladi, 1982) proposes that individuals may be classified as feminine schematic, masculine schematic, schematic for both classes of information, or aschematic. Markus et al. (1982) found that individuals were better at remembering information that was "gender-appropriate" for their gender. Gender schematic individuals have a more readily available "map" for gender-related information.
Individuals differ in levels of gender schematicity. Signorella and Frieze, (1986, cited in Lips, 1988) found that most individuals are not strongly gender-schematic. That is, their masculinity or femininity is not central to their self concept. Thus, for some individuals, the gender schema does not play a large role in their self concept.

Schematic information processing, while efficient and necessary, can at times be a liability. Taylor and Crocker (1981) suggest that schematic processing results in selective attention, encoding, and retrieval. Thus, it will also lead to information loss. Individuals who employ the wrong schema may also: encode all the wrong data, define ambiguous or inconsistent information as being schema-consistent, use the wrong criteria in evaluating behavior, form incorrect expectations, and employ inappropriate behavioral scripts. While schematic processing is efficient, it may also contribute to inaccurate coding or loss of information.

The activation of an individual's gender schema may influence how she encodes information about herself and others as well as how she chooses to behave. McKenzie-Mohr and Zanna (1990) suggest that the use of a schema may result in behaviors which are in keeping with the schema. The activation of an inappropriate schema may contribute to discomfort or inappropriate behavior, as well as cognitive reliance on a less-than-appropriate schema.
It is possible to measure gender schemas through speed of processing schema relevant information. Bem (1981) notes that schematic individuals should be more likely to organize information in schema-related categories, and spontaneously make distinctions along these dimensions. The use of a schema results in shorter response latencies for information which is consistent with that schema (Taylor & Crocker, 1981). The speed of processing of gender related information can be used to measure gender schemas.

Research in this area has largely focused on the use of self-report measures of attributes. Turcotte (1989) notes that the "most frequently employed attribute measures have been the Bem Sex Role Inventory (BSRI; Bem; 1974) and the Personal Attributes Questionnaire (PAQ; Spence et al.; 1975)". These measures consist of empirically chosen adjectives that are desirable for both sexes, but judged more typical of females or males. The PAQ also uses traits which are sex-specific; appropriate only for members of one sex. These scales, unlike the older unidimensional ones, make it possible to examine the gender schema. They do have the limitation of examining this only through self report along the dimension of traits or attributes.

Criticisms of these measures includes validity issues for the BSRI (Lips & Colwill, 1978), and sole reliance on positive items (Holahan & Spence, 1980; Spence et al., 1979) for these measures. Attempts to incorporate negative items have usually involved describing the absence of positive traits.
al., 1979). Turcotte (1989) notes that there have been few self-report scales available for assessing sex-role behavior. The Sex Role Behavior Scale (SRBS; Orlofsky, 1981) and the short-form SRBS (Orlofsky & O'Heron, 1987) are notable exceptions. They have not yet however, been demonstrated to effectively measure gender schematicity. Gender schematic individuals use this gender related dimension to evaluate and encode new information. Bem (1981a) says "highly gender schematic individuals do not differ from others in their ability to organize information on the basis of gender, but in their threshold for doing so spontaneously" (p.197). Thus, gender schematicity should not be limited to the dimension of traits. This schematicity should extend itself to other dimensions of information, used in evaluating self and others.

Gender schematicity as measured by traits may not extend to other dimensions of the self. The gender schema is most likely one of a number of schemas, all of which are available for the individual to rely upon. Graesser & Nakamura (1982) have suggested that separate schemas may represent many different domains of knowledge. Individuals may rely on different schemas, depending upon which one is applicable to the situation at hand.

Individuals who are gender schematic should process information using the gender schema. Previous research has focused on the trait dimension of information. Gender schematicity as measured using traits may not correlate with measures using other self-relevant items, and may be misleading
when used for categorization. The current study measured gender schematicity using both traits and careers.

Method

Subjects
Twenty female college students between the ages of 18 and 24 enrolled in introductory Psychology classes received extra credit for their participation in this study.

Apparatus
Stimulus words were presented using a computer program which was modified for this study. The traits presented were adjectives chosen or adapted from the BSRI and the Personal Attributes Questionnaire (PAQ,; Spence et al., 1975) M and F scales. The list of careers was drawn from the work of Croxton, et al., (1989), Garland and Smith (1981), Kalin, et al., (1980), Panek, et al., (1977), and O'Connor (1982). The lists of attributes and careers are presented in the Appendix.

Procedure
The gender schema was measured using a response time latency measure. The time between presentation and response reflects the availability of the gender schema. Individuals were asked to respond "yes" or "no" to a series of stimulus words. These words consisted of traits and careers, presented in random order. The subjects' task was to determine whether or not each trait was self descriptive, and whether or not each of the careers was appropriate for her to consider. They were to then respond accordingly, by depressing the appropriate key.
Results

Analysis of Variance revealed that response time was significantly shorter for feminine traits than for neutral traits, \( F(2,18) = 11.47, p < 0.001 \). Response time for masculine traits fell in the middle range. This was nearly reversed for careers, however. Response times for masculine careers was significantly shorter than for feminine careers, \( F(2,18) = 4.62, p < 0.0164 \). Response time for neutral careers fell in the middle range. Further analysis, using Duncan's Multiple range test revealed that feminine traits elicited shorter response times than masculine traits, and that masculine traits elicited significantly shorter response times than did neutral traits, Alpha = 0.05. Masculine careers elicited shorter response times than neutral careers, but no significant difference was found between neutral and feminine careers, Alpha = 0.05.

Discussion

Findings indicate that feminine traits are encoded most successfully, followed by masculine traits, which have received more elaborate encoding than neutral traits. Results further suggest that, for careers, masculine items are the most successfully encoded, and feminine items have received the least elaborate encoding.

Those individuals who participated in this study are apparently schematic for feminine traits, and for masculine careers. Thus it cannot be said that they are gender schematic for both areas of self relevant information. It may be that
careers are encoded along some dimension other than gender.

It may be inappropriate to obtain a global rating of gender schematicity, based only on measurements using traits. A global measure of gender schematicity would thus need to incorporate multiple dimensions, including, but not limited to, traits. Alternatively, it may be that gender schematicity as measured by traits may not extend to the dimension of careers. There may be other self-relevant information which is not encoded as part of the gender schema, and is processed using some other dimension. This is one area which future research may examine. Categorizing someone as gender schematic based on a measure which uses only traits may be misleading, unless it is specifically noted that only this aspect of self-relevant information has been measured.
Measuring the Gender Schema

References


Measuring the Gender Schema


Appendix

Attributes:

Feminine: Neutral: Masculine:

affectionate adaptable active
childlike conceited adventurous
compassionate conventional aggressive
considerate friendly ambitious
creative happy analytical
emotional efficient assertive
feminine jealous athletic
flatterable likeable competitive
gentle moody dominant
gullible reliable forceful
kind secretive forward
neat sincere independent
shy solemn individualistic
sympathetic theatrical intellectual
tender truthful masculine
understanding unpredictable outgoing
warm unsystematic outspoken
Careers:

Feminine:
ballet dancer
bank teller
beautician
cheerleader
childcare
elementary school teacher
flight attendant
interior decorator
librarian
nurse
nutritionist
secretary
social worker
telephone operator

Neutral:
T.V. newpserson
art historian
clerk
dishwasher
factory worker
high school teacher
historian
linguist
medical technologist
occupational therapist
psychologist
radiology technologist
singer
writer

Masculine:
business executive
accountant
dentist
engineer
garbage collector
lawyer
mayor
minister
optician
physician
physicist
plumber
police officer
truck driver
Author notes

Earlier versions of this paper were presented at the 37th Annual Conference of the Southeastern Psychological Association, March, 1991 Hartford, CT.

This research is funded in part by a grant from the Women's Research Institute at Virginia Tech.

Statistical analysis was performed with the help of the Statistical Consulting Lab at Radford University.

I am grateful to Dr. Hilary Lips for her many helpful comments on earlier versions of this paper, and to one anonymous reviewer.

I am indebted to the Reference Librarians at Radford University for their expertise and support.