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[to cite]:

[url]:
http://www.acrwebsite.org/volumes/15526/gender/v01/GCB-01

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Cognitive Availability of Receivers' Gender Schemas as a Mediator of Source Sex Effects with Regard to Perceptions of Source Credibility

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Audience perception of a source's credibility is important to the effectiveness of many advertisements. Advertising practitioners have traditionally assumed that audiences attribute higher credibility to male sources than to similar female sources. However, empirical studies investigating the relationship between the sex of advertising sources and perceptions of source credibility have produced mixed results. One reason for this variability may be failure to capture the degree to which individual receivers invoke their gender schemas when processing information about the source. Receiver sex-typing, or the level of cognitive availability of receivers' gender schemas, may mediate source sex effects. Research questions are proposed.

BACKGROUND

There is ample evidence that an audience's perceptions of source characteristics may influence the persuasiveness of a marketing communication (Fireworker & Friedman 1977; Friedman & Friedman 1979; Kamen, Azhari & Kragh 1975; Mowen & Brown 1981). However, there exist few guidelines regarding what factors one might look for in a spokesperson in order to achieve the desired audience perceptions of that spokesperson. It is not enough to know what audience perceptions one might like to create in order to maximize the persuasibility of a message. There must be an understanding of how various factors affect these perceptions of the source, and hence, how to increase the probability that desirable audience perceptions will be achieved.

In order to fully utilize the knowledge we have gained from the source effects research, we must investigate how certain source variables in a marketing communication may affect and shape audience perceptions of source characteristics. One source variable which may be hypothesized to affect audience perceptions of the source is the source's sex. We may ask, for example: are male advertising sources viewed as more credible than similar female advertising sources?

There is little empirical evidence regarding how the sex of an advertising source may affect receivers' perceptions of that source's credibility, and the few studies which have been done in this area have yielded somewhat contradictory results. Percy (1983) notes:

"The issue of women specifically as sources in advertising has not really been explored as much as one might think. Most studies of women in advertising have been concerned with content analysis of the role played by the source, independent of the impact upon communication" (pp. 85-86).

Given that a practitioner has some idea of what source characteristics he/she would like an audience to attribute to a source, consideration must be given as to which aspects of the source actually serve as cues in this attribution process. If sex of the source is in fact a significant cue, we must attempt to understand more fully how the process of attributing specific source characteristics may be tied to this cue.

Advertising Practices

The traditional assumptions regarding the superiority of male advertising sources are reflected in the results of a number of content analysis studies. Most of these types of studies were conducted in the 1970s and found that between 80 and 90 percent of advertising sources were male (Culley & Bennett 1976; Dominick & Rauch 1972; Hennessee & Nicholson 1972). More recently, a 1986 Screen Actors Guild study found that males delivered the advertising pitch in about 80 percent of the advertisements studied. In addition, Gilly (1988) conducted a review of sex roles in advertising and found that whereas female characters tend to receive advice, male characters tend to give it. This apparent assumption that the
male voice represents the voice of authority may or may not be warranted.

Every year, a great deal of money, time and effort is spent in order to find and use effective advertising sources. Making decisions regarding the choice of an advertising source on the basis of general assumptions regarding a sex's credibility is less than optimal. However, in turning to the available research literature for guidance, there appear to be no clear-cut answers to the questions surrounding sex of source effects on perceptions of source characteristics.

LITERATURE REVIEW

Historically, one of the most important source characteristics related to the persuasiveness of a mass media advertisement has been found to be perceived source credibility. A source's credibility can be defined as the source's perceived ability to know the right answer and motivation to communicate it truthfully to the audience (Hass 1981). Hovland, Janis and Kelly (1953) defined source credibility specifically as "expertness" and "trustworthiness," and a number of factor analytic studies have indeed revealed these two distinct dimensions within the characteristic of credibility (Infante 1980; McCroskey 1966). Studies of the relationship between the sex of a source and each of these components are reviewed here.

Sex of Source and Perceived Expertness

One approach to studying the relationship between source sex and perceived expertise is to present respondents with an article, speech, artwork, etc. which is variously said to come from either a male or female source. The researcher then measures respondents' perceptions of source competence. Goldberg (1968) was one of the first to use this technique, and it has been used since in many different contexts. Most of these studies have revealed a distinct pro-male bias, such that male sources are perceived as more competent than female sources, even while all variables other than sex are held constant (for a review of these studies, see Wallston & O'Leary 1981). One study conducted by Miller and McReynolds (1973) is particularly relevant since it keyed in on the specific area of persuasive discourse, rather than the broad area of communication. They found, as predicted, that even while holding source qualifications and message content constant, receivers' perceived competence ratings for the male source were significantly higher than for the female source. In addition, as recently as 1987 it was found that even when male and female speakers read the exact same speech, subjects perceived male speakers as doing a better job of giving the facts and better justifying the conclusions than female speakers (Aries 1987).

However, while the consistent pro-male bias in many of the studies in this area appears quite convincing, there have been some studies whose findings have been in direct contrast to these. For example, Beltran (1984) conducted a study in which subjects listened to audio tapes of a speaker, variously male or female, discussing current computer technology and its effects. Beltran found that the sex of the communicator did not significantly affect receivers' perceptions of source competence.

Additionally, Freiden (1984) conducted a study which specifically addressed the issue of sex-of-source effects within a print advertising context. Freiden varied both the type of source and the sex of the source in an ad which described a color television set. He found that while source type (celebrity, CEO, expert, or typical consumer) had a significant effect on audience perceptions of source competence, the sex of the source did not. In both the Beltran and Freiden studies, the message was relatively technical in nature, and this technical tone may have served to "override" any assumptions of competence or incompetence related to sex. On the other hand, as Beltran (1984, p.86) writes in noting the differences between her findings and those of many earlier studies, "it appears possible that the positively valued traits of competence and rationality are no longer the exclusive province of the male gender."

Sex of Source and Perceived Trustworthiness

Some researchers maintain that expertise is the most important component of credibility (e.g., Percy 1983), and still others feel that the major factor underlying source credibility is trust (e.g., Smith 1973). Smith states that the negative side of trustworthiness is the major component of credibility because "the untrustworthy speaker, irrespective of his other qualities, is viewed as a questionable source" (1973, p. 309).

Unfortunately, as Friedman, Santeramo, and Traina (1978) point out in their study of the
trustworthiness of celebrity endorsers, little is known about the attributes of sources which are conducive to trust.

It might theoretically be argued that a female source will be viewed as more trustworthy, given the fact that the trait of "honesty" has in some studies been found to be positively related to "femininity" (e.g., Feather 1984). In addition, a study by Subich (1984) showed that in evaluating a counselor, the stereotypical feminine sex role was perceived by subjects as more trustworthy than the stereotypical masculine sex role. LaFrance and Carmen (1980) propose that because women tend to avoid "power behaviors," they indicate greater responsiveness than males, and so should score higher on characteristics such as goodwill and fairness.

In Freiden's 1984 study regarding how source sex affects receivers' perceptions of the source within a print advertising context, it was found that the sex of the source had no significant effect on respondents' ratings of "spokesperson trustworthy." In contrast to this, Gitter & Jaspers (1981) conducted a study in which the subjects were asked to read a paragraph describing the speaker while the researchers varied, among other things, the sex of the speaker in this description. They found that significantly higher ratings of trustworthiness were attributed to a female spokesperson than to a male. To complicate matters still further, Aries (1987) found that subjects rated male speakers as more honest than female speakers when sources read the same speech. Obviously, more research is needed to adequately answer this question.

CONCEPTUAL FRAMEWORK

Given the somewhat mixed results described here, a better understanding of the actual process whereby receivers attribute varying levels of specific characteristics to male and female sources is needed. One receiver characteristic which may have a significant impact on this process is the receiver's sex-typing. Sex-typing may be defined as the degree to which individual receivers rely on their gender stereotypes in processing information about others.

Schema Theory, and specifically Bem's Gender Schema Theory, are invoke here and explored with regard to how they may be related to sex of source effects.

Schema Theory

Schema Theory is a direct descendant of Gestalt psychology in that it posits that organized prior knowledge shapes what is perceived and recorded in memory (Fiske & Taylor 1984). Proponents of Schema Theory postulate that because of the complexity of information that is presented to individuals at any moment, schemas are used to enable individuals to function in a world that otherwise would be of paralyzing complexity. Schemas can be thought of as networks of associations that organize and guide how people perceive, remember, and make inferences about the raw data of their world.

Payne, Connor and Colletti (1987) point out:

"Processing information schematically is hypothesized to be qualitatively and quantitatively different from nonschematic processing. For example, both encoding and recall are assumed to be facilitated as a function of the activation of schemas, particularly for schema-consistent information. Increases in the speed and efficiency of processing are also attributed to this process. In cases where the perceiver does not have access to all the relevant information about an event, another function of schematic processing is to fill in the missing data in a manner consistent with the organization of the schema." (p. 937)

As implied above, the functions which a schema performs have been broken down into two categories: the functions of encoding and retrieval, and the functions of interpretation and inference-making (Taylor & Crocker 1981). With regard to the first set of functions, the schema concept proposes that what is perceived by an individual is a product of the interaction between incoming information and the receiver's preexisting schemas related to that incoming information (Neisser 1976).

In the latter function, schemas play an inference-making role in that they provide "expected" or "default" values which are associated with the schema's variables (Minsky 1975; Rummelhart & Ortony 1978; Rumelhart & Norman 1978; Schank & Abelson 1977; Taylor & Crocker 1981). Specifically, if information is missing from the
"raw data," or "input," the schema can fill in these missing data with best guesses based on prior experience and knowledge.

A common type of schema is a role schema, or a schema related to a specific societal role. Each individual in a society can be seen as possessing achieved roles (e.g., training, education) and ascribed roles (e.g., sex, age), and each of these roles has attached to it societal expectations for appropriate standards and behavior. These expectations are organized in people's minds as role schemas, or the cognitive structures that organize one's knowledge about the appropriate norms and behaviors attached to a social role (Kinder et al. 1980).

Role schemas related to sex roles (also called gender-schemas) have particular importance in the area of person perception. The salience of a person's sex in affecting others' perceptions of that person has been addressed in a number of studies which show that an individual's sex has an important effect on the characteristics that others tend to attribute to that individual (e.g., Kessler & McKenna 1978; Ruble & Stangor 1986; Tunnell 1981).

Given that these gender schemas may be influential in the process of person perception, what types of information might these gender schemas include? A seminal work in the area of sex role research was a review done by Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1972). They found that different clusters of personality traits are typically attributed to each sex. The positively valued male traits are characterized by rationality and competence, whereas the positively valued female traits are characterized by warmth and expressiveness. These findings have been repeatedly substantiated with the male traits commonly called "agentic," and the female traits being termed "communal" (see, for example, Bakan 1966; Bem 1981; Block 1973; Feather 1982; Orlofsky 1981; Spence & Helmreich 1979; Spence, Helmreich & Stapp 1975).

Furthermore, this type of sex role stereotyping appears to be somewhat universal in nature. In a study of 30 nations, Williams and Best (1982) found a considerable degree of generality throughout the cultures studied, evidenced most strongly in the association of agentic traits with males and communal traits with females. This agentic/communal distinction has emerged as a common theme in many discussions of gender identity.

The question arises: If a marketing communication receiver's gender schemas are invoked when forming perceptions of an advertising source, how might this affect how an individual perceives male and female sources? More specifically, how might this affect those factors which have been shown to affect the persuasiveness of an ad, for instance, the receiver's attribution of credibility to the source?

Schema Theory would predict that a receiver's perceptions of the source would be based not only on the objective incoming information regarding that source, but also on the receiver's preexisting schemas which are invoked when processing this incoming information. If a gender schema is, in fact, utilized in a receiver's process of evaluating an advertising source, the content of that schema will in part determine the characteristics which the receiver attributes to the source.

Furthermore, given the previous discussion of sex role stereotypes, one might expect that if gender schemas are in fact involved in the process of formulating perceptions of source characteristics, then in an advertising situation male and female sources may be perceived quite differently. For example, male sources might generally be perceived as more competent than similar female sources, due to their assumed rational and agentic nature. In addition, females, due to their assumed communal nature, may generally be perceived as more trustworthy than similar male sources.

Gender Schema Theory

Gender Schema Theory addresses the fact that these sex role stereotypes are internalized to varying degrees among the individuals in a society, and that, therefore, the resultant gender schemas are more cognitively available to some than to others (Bem 1981). Bem proposes that an individual's "sex-typing" can be defined as the degree to which an individual possesses a generalized readiness to process information regarding the self and others on the basis of the sex-linked associations which constitute the individual's gender schemas (Bem 1981).
There is some support for the contention that sex-typing varies among individuals in our society. One study which investigated the way items are clustered during free recall found that sex-typed subjects (as measured by the Bern Sex Role Inventory, or BSRI) were more likely to cluster their free-recall patterns in terms of sex than were nonsex-typed subjects (Bem 1981). Additionally, studies have shown that sex-typed subjects are more likely than nonsex-typed to categorize people on the basis of sex. In one study, subjects were asked to recall "who said what" after listening to a taped conversation either among three men and three women or among three blacks and three whites. Subsequent analysis of the subjects' errors showed that sex-typed subjects confused the members of the opposite sex with one another significantly more than nonsex-typed subjects (this was not true of the same sex), whereas there was no such relationship between sex-typing and race, showing that this phenomenon is specific to sex (Frable & Bem 1985). (For more support of the relationship between sex-type and gender schematic processing, see Anderson 1978; Deaux & Major 1977; Kail & Levine 1976; Liben & Signorella 1980; Lippa 1977; Neimeyer, Banikotes & Merluzzi 1981; Taylor & Falcone 1982; and Ward 1980.)

Furthermore, given that sex roles and attitudes toward the importance of those sex roles are currently going through a period of quite rapid change, it would be surprising if a researcher did not find a high degree of variability in subject sex-typing. In other words, we might reasonably expect to find a high degree of variability in the cognitive availability of subjects' gender schemas.

This variability may account, at least in part, for the diversity of mixed research findings regarding the effects of source sex on audience perceptions of source credibility. There has been no research to date which specifically addresses the issue of how a receiver's sex-type may affect the degree to which his/her perceptions of specific advertising source characteristics are influenced by the sex of the source.

This author proposes that while the sex of a source will be a significant (although unconscious) cue as to source credibility for some receivers, for other receivers the sex of the source will be irrelevant. By capturing individual receiver differences related to sex-typing, we might begin to more fully understand the process whereby receivers attribute credibility to a source, and in what instances and for what audiences we might expect sex of source effects to occur.

**RESEARCH PROPOSITIONS**

There has been a great deal of research in the marketing communications source effects area emphasizing the importance of the receivers' source characteristic perceptions as mediators of the persuasiveness of a communication. In addition, there has also been great current interest in the schema concept and how it relates to consumers' processing of advertisement information. Given this, it is surprising that so little research has been done which addresses the issue of how receivers of marketing communications may utilize schemas in processing information about the source, thereby affecting important source characteristic perceptions.

Infante (1980), in a study which examined the construct validity of commonly used scales for the measurement of source credibility, places the construct of source credibility within the framework of Fishbein's attitude theory (Fishbein 1963), describing the construct of source credibility as a set of beliefs that a receiver has about the attributes of the source. Each of these beliefs is weighted by the receiver's evaluation of the attribute, thereby constituting an attitude toward the source.

Infante's research represents an important step in the process of locating the somewhat nebulous concept of source credibility within a nomological network. However, this network does not address those factors in a source-receiver advertising communication process which influence these important beliefs. One factor which may be hypothesized to affect a receiver's formulation of perceptions of an advertising source is the sex-typing of that receiver.

Within the consumer behavior literature, most attempts to directly relate personality variables to such dependent variables as attitudes, perceptions, intentions, or purchase behavior have had little theoretical support. Most major theoretical models of consumer behavior (e.g., Howard & Sheth 1969) hypothesize that personality variables affect information processing variables directly
and affect output variables only indirectly (see Figure 1).

In line with this thinking, Bern's Gender Schema Theory provides a theoretical base for understanding how a personality variable such as sex-typing, affects the way that individuals process information, thereby affecting the formulation of perceptions regarding the self and others (Gentry & Haley 1983). Figure 2 is an illustration of this process.

Bern's Gender Schema Theory further proposes that individual sex-typing, or an individual's generalized readiness to process information regarding the self and others on the basis of sex-linked associations, can be measured by the Bem Sex Role Inventory, or BSRI. The BSRI is a sex role orientation measurement model. It is based on the concept of psychological sex role androgyny; that a degree of femininity and masculinity is present in all people regardless of sex. The BSRI is composed of 60 personality characteristics: 20 feminine-oriented (e.g., affectionate, sensitive), 20 masculine-oriented (e.g., ambitious, independent); and 20 neutral traits (e.g., happy, conceited). A seven-point Likert scale, with 1 representing "always or almost always true" and 7 representing "never or almost never true," is used to assess the respondent's perception of himself/herself on each of the 60 personality characteristics.

Bem uses four categories to classify respondents on the basis of their responses: undifferentiated (those who score below the median on both the masculine and feminine dimensions), sex-typed (masculine males - high masculine score/low feminine score, and feminine females - high feminine score/low masculine score), cross sex-typed (feminine males and masculine females), and androgynous (those who score high on both dimensions). Nonsex-typed include those respondents who fall into the categories undifferentiated and androgynous; the theory makes no predictions regarding cross sex-typed individuals. The BSRI has repeatedly been shown to possess a high degree of reliability and internal consistency (for a recent confirmation of this, see Qualls 1987).

However, researchers have criticized Bem's Gender Schema Theory (and its operationalization, the BSRI) on a number of different levels. Some (e.g., Mills & Tyrrell 1983) have taken exception to the fact that the BSRI is a self-descriptive questionnaire which asks respondents to rate items on how characteristic certain attributes are to oneself. They question the hypothesis that self-ratings bear a meaningful relation to individuals' perceptions of others; that another person's sex assumes more importance in the process of person perception for perceivers whose self-concept is more closely organized around gender.

Tunnell (1981), however, conducted a study investigating whether respondents' self-ratings (using the BSRI) were related to the vocabulary used by respondents in describing important people in their lives, and confirmed the hypothesis that:

"an individual's self-ratings on a large number of descriptive terms have meaning in that they indicate critical dimensions on which the individual perceives him- or herself, and that these dimensions will direct the ways in which the individual perceives others" (Tunnell 1981, p. 1127).

Assuming that the BSRI does, in fact, measure cognitive availability of gender schemas, and that levels of cognitive availability of these gender schemas will in fact affect the process of person perception, and given that individuals may be classified according to this inventory into categories of sex-typed versus nonsex-typed, one might propose the following hypothesis:

H1: A respondent's sex-type will be correlated with the degree to which the sex of an advertising source affects his/her perception of source characteristics, such that sex-typed respondents will be more likely to perceive male and female sources differently than will nonsex-typed respondents.

Further, given the previous discussion of sex role schemas, the following two hypotheses are proposed:

H2: Sex-typed respondents will attribute more expertise to male advertising sources than to female advertising sources, all else held constant.
H3: Sex-typed respondents will attribute more trustworthiness to female advertising sources than to male advertising sources, all else held equal.

To test these hypotheses, one would investigate how the interaction between the two independent variables, sex of source and sex-typing of respondent, affect the dependent variables perceived source expertise and perceived source trustworthiness.

Generally, a confirmation of the hypothesis would find that respondents in the condition male source/sex-typed receiver attribute significantly more expertise to the source, and significantly less trustworthiness to the source than do respondents in the female source/sex-typed receiver condition. Furthermore, there would be no significant differences found for either perceived source expertise or perceived source trustworthiness between respondents in the conditions male source/nonsex-typed receiver and female source/nonsex-typed receiver.

As noted, the BSRI may be used to measure respondent sex-typing. Respondent perceptions of source expertise and source trustworthiness might effectively be measured by using the scales from Infante’s 1980 study cited earlier, or through the use of the scales recently set forth and validated by Ohanian (1990).

One final caution regarding recommended procedures concerns the type of product that might be used in the advertisements designed to test these hypotheses. The influence of communication topic, or the issue about which the source is speaking, is an important consideration. A good deal of research has led to the realization that one cannot rationally assume that a receiver’s perceptions of the characteristics of a source are distinct from his/her perception of the concept or topic of the source’s message (e.g., Rokeach & Rothman 1965). This interaction was extended further by Kanungo and Pang (1973) who found that the “fittingness” of the sex of the source to the product being advertised was an important variable in product advertisements.

Therefore, the researcher would be well advised to choose a product that has been shown to be a “neutral” product, that is, not perceived as being particularly “masculine” or “feminine” in nature (see, for example, Gentry, Doering, and O’Brien 1977).

REFERENCES


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Figure 1

Personality Variables → Information Processing Variables → Output Variables (e.g., attitudes, perceptions, etc.)

Figure 2

Sex-type of Individual → Utilization of Gender Schemas in Information Processing → Perceptions of Self and Others