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**GENDER-BASED DIFFERENCES IN PROCESSING
OF PROMOTIONAL MESSAGES: AN EXAMINATION
OF MEYERS-LEVY'S SELECTIVITY HYPOTHESIS**

Abstract: An experiment in which 329 undergraduates (186 females, 143 males) read magazine articles or advertisements for four products provides support for Meyers-Levy's selectivity hypothesis, which suggests that females are comprehensive information processors, while males utilize heuristics to process information schematically. The results suggest that women exposed to promotional messages: processed messages more thoroughly, based on cognitive responses generated; responded more favorably than men to mediated promotional messages, based on a series of attitudinal and believability measures; and expressed more favorable dispositions toward mediated communications in general.

Do men and women process promotional communications differently?

The issue of gender has received increased attention from researchers in advertising and public relations. One major avenue of research has involved critical analyses of portrayals of women and men in ads and in the media content generally (Arliss, 1991; Busby, 1975; Busby & Lichty, 1993; Dervin, 1987; England & Gardner, 1983; Goffman, 1974; Percy & Lautman, 1994; Pearson, Taylor & Todd-Mancillias, 1994; Rakow, 1992; Riffe et al., 1993; Steeves, 1987; von Zoonen, 1994).

A second major research initiative has involved the role of women in these fields, particularly in public relations, which undergone an extensive feminization during the past two decades (Broom, 1982; Cline, 1989; Cline and Toth, 1985; Cline et al., 1986; Dozier and Broom, 1993; Hon, 1994; Public Relations Review, 1988; Rakow, 1987, 1989; Selow and Wright, 1983; Scrimger, 1985; Theus, 1985; Toth, 1989; Toth and Grunig, 1989; Toth and Cline 1991; Wright et al., 1991).

By contrast, comparatively little research has been conducted on gender differences pertaining to the audiences for advertising and public relations messages. With a few notable exceptions, gender has been ignored as an explanatory variable by behavioral researchers, despite indications that significant differences exist in the cognitive processing of promotional messages (Meyers-Levy, 1989a).

This paper reports the findings from a experimental study involving both men and women, who read promotional messages presented alternatively as magazine ads and articles. The findings suggest that, in fact, males and females process promotional messages differently. More specifically, the results provide support for Joan Meyers-Levy's (1989) selectivity hypothesis, which posits that differences exist in the information processing strategies utilized by women versus men.

LITERATURE REVIEW

Gender and Persuasion

Prior relevant research in psychology has focused principally on the differential influenceability of women versus men.

Early published research generally supported the belief commonly held in society that females were less confident about making judgments (Leney 1977) and were could be persuaded more easily than males (Eagly 1978). In recent years, however, such findings have been attacked on both conceptual and methodological grounds (Eagly and Carli, 1981; Deaux, 1984).

Alice Eagly (1978) provided a comprehensive narrative review of the earliest gender studies. Most of these studies were conducted in the 1950s and 1960s, prior to the Women's Movement. Whereas previous research reviews reported strong effects, Eagly found mixed results when studies were divided between those involving exposure to persuasive messages, and those that examining small-group conformity, i.e. where participants were asked to reach a consensus on a topic. Of 62 persuasive message studies examined, Eagly determined that 51 studies (82%) revealed no gender differences related to persuasive messages, while only 10 studies found women were more persuadable and one study found men were more persuadable. Of the 61 conformity studies, 38 studies (62%) found no differences, while 21 studies found that women conformed more than men, and two studies found men conformed more.

In a subsequent meta-analysis, Eagly and Carli (1981) found that an average effect size of less than 1% of variance in influenceability could be attributed to gender. Stiff (1994, p. 136) observes that "No doubt, there are some persuasive instances in which women and men find themselves more susceptible to influence than members of the opposite sex, but these situations are not sufficiently frequent to maintain the belief that important gender differences exist in persuadability."

Meyers-Levy's Selectivity Hypothesis

After the question began to fade in prominence among social cognition researchers, interest in gender was rejuvenated by Joan Meyers-Levy (1989a), who posited that males and females do not differ as to their susceptibility to persuasion. In her selectivity hypothesis, Meyers-Levy posits that both men and women are active processors of messages, but differ in the strategies that they use to process information.

Meyers-Levy suggested that males are schematic processors of information, i.e. they do not engage in comprehensive processing of all information. Instead, males' characteristic mode of processing is distinguished by a greater use of efficiency-striving heuristics (Tversky and Kahneman, 1973, 1974), often in the form of predominant self-oriented schemas. While the specifics vary by circumstance, Meyers-Levy suggests that males streamline their processing of external world information by focusing on how information affects them as individuals. Thus, males are more self-focused or self-centered (Eagly, 1978).

By contrast, females are characterized by Meyers-Levy as more comprehensive processors, who attempt to assimilate all available cues and attempt to engage in a more effortful, comprehensive, piecemeal analysis of information. According to Meyers-Levy, females process equally information relevant to themselves and to others. Compared to males, she suggests that females relate to the concerns

of others, focus their attention more broadly in an attempt to understand and respond to others' states of mind, and consider seemingly tangential and often subtle cues in concert with more focal cues.

Meyers-Levy and Sternthal (1991) suggest that the mechanism explaining the difference is the threshold level at which the sexes readily elaborate upon messages. Females, who possess lower thresholds, were found to be quicker to process elaboratively information relevant both to themselves and to others. By contrast, males needed greater incentives before they would engage in similar processing, i.e. they needed to recognize that the information presented was relevant to them. Elsewhere, Meyers-Levy (1989b) suggested that the process can be traced further to the differential priming of the left and right hemispheres of the brain, whereby males exhibit more specialized lateralization and females exhibit more symmetrical organization and activation patterns. (See also the widely publicized studies by Shaywitz et al. (1995; see also Rugg, 1995).

By suggesting that gender differences are a matter of information processing strategies, Meyers-Levy moved the question squarely into the center stage of cognitive and consumer research. Schema-based explanations for processing emerged in the 1970s and 1980s, when researchers distinguished between schematic versus piecemeal processing in a variety of arenas (Alba, 1983; Markus and Zajonc, 1985; Meyers-Levy, 1988). For example, Sujan (1985; Sujan and Dekleva, 1989) found that processors with high levels of knowledge about products (experts) engage in high levels of schematic processing, while inexpert processors (novices) default to piecemeal processing.

Meyers-Levy (1989a) argues that her distinction, based on information processing strategies, conceptualizes gender differences at a more abstract level, and thus is a more parsimonious explanation of gender effects. She also reviews how this explanation integrates various theories suggested previously. Most notably, these include: Gutmann's (1970) distinction between males as being allocentric (distinguished by sharp separation between self and the external world) and women as being autocentric (diffused or no boundary between self and other objects); the characterization by Bakan (1966) and Carlson (1971, 1972) of men as being agentic (self-assertive and self-purposive) in their behavior, versus women being communal in their outlook (emphasizing interpersonal relationships and attachment); Engle's (1891) contrasting of the role of men versus women as being dominant versus submissive; and Jungian precepts that men are more analytical and logical compared to women, who are more subjective and intuitive (Broverman, et al. 1968; Jung, 1963).

HYPOTHESES

Meyers-Levy's theory has important implications for advertising and public relations because it suggests that males and females process promotional messages differentially. The present study sought to validate Meyer-Levy's notion by testing three distinct hypothesis evolving out of her theorizing:

- H1: Females engage in more thorough analysis of product messages, as measured in
- a) a higher number of cognitive thoughts
 - b) greater topic and brand name recall
 - c) greater recall of product attributes/copy points.

H1 addresses directly the comprehensiveness-of-processing proposition. The selectively hypothesis predicts that it is not necessary for males to process a message thoroughly; instead, it is sufficient to use a heuristic approach that requires grasping only the essence of the argument. On the

other hand, if females are more comprehensive processors, the theory suggests that females should be more thorough and should be able to provide more details about what they see or hear.

One method for analyzing the comprehensiveness of processing is found in cognitive response theory. Greenwald (1968) suggested that individuals generate a series of evaluative statements, which moderate the acceptance of persuasive messages. These cognitive responses can include support statements, counterarguments, and source derogation or bolstering statements. By following a schematic processing regimen, Meyers-Levy suggests that males should rely on one or two focal points in making judgments about a message, which would make the generation of a large number of cognitive responses unnecessary. By contrast, as predicted in H1a, women would be expected to generate more responses (see Petty, Ostrom and Brock, 1981).

Similarly, under a schematic (versus piecemeal) processing regimen, not all message details must be processed. Compared to comprehensive processors, who analyze information on a piecemeal basis, schematic processors would be expected to learn less specific message content (Cameron, 1994). Thus, a logical expectation for males would be lower levels of pass-through acquisition of message content. Women would be expected to have higher recall levels, which can be measured alternatively as topic or brand recall (H1b) or in terms of specific arguments made in the message (H1c).

H2: Females generate more favorable attitudinal responses when judging a product message, including

- a) more positive attitude toward the message and toward the brand, and higher purchase intent,
- b) higher believability assessments, and
- c) more positive valence of cognitive thoughts.

This hypothesis extends Meyers-Levy's theorizing to consider the influence of gender-based information processing strategies on responses to messages, not merely depth of processing.

H2a draws upon the consumer research literature to incorporate three conventional measures of attitudes used in product message research. Attitude toward the message is an extension of the attitude toward the ad construct (Mackenzie and Lutz, 1989; Mackenzie, Lutz and Belcher, 1986; Mitchell and Olson, 1981). Attitude toward the brand is a special case of the generic object attitude A(o) construct (Heath, et al., 1994). Purchase intent is a special case of behavioral intention (Ajzen and Fishbein, 1980; Sheppard, Hartwick and Warshaw, 1988) and represents a self-reported probability statement that a particular action (i.e. product purchase) will be undertaken. H2b considers specifically the valence of cognitive thoughts, i.e. the degree to which the moderating cognitive thoughts examined in H1 are either positive or negative. Cognitive response theory suggests that in order for a message to be persuasive, it must generate sufficient support statements or source bolstering, and not be subjected to excessive counterarguments or source derogations.

If men are comparatively self-centered in their processing of messages, it would be expected that men are likely to respond less favorably to a message that does not appear to relate to them directly. Similarly, males are likely to engage in more counterarguing or source derogations about such messages. By contrast, women might be expected to respond more favorably to messages of all sorts because of their more comprehensive, open approach to processing. They are also more likely to see benefits in messages for others, not just themselves. As a result they are likely to engage in less counterarguing, and are more likely to generate support statements, represented in a higher proportion of positive (versus negative) cognitive responses.

H3: Females are more positively predisposed toward mediated sources of information.

The third hypothesis explores the logical implication that the relative openness of the information processing strategies used by males versus females influence their predispositions toward various sources of information, particularly toward news and toward advertising. Thus, as a separate measure, this study sought to examine whether males and females exhibit differences in their attitudes toward mediated information sources in general and in beliefs about how mediated information sources work.

If men are more self-purposeful and allocentric, they are less likely to be positively predisposed to recognizing the value of external sources of information in general, and might be more cynical, cautious or resistant to such sources. By contrast, the selectivity hypothesis might suggest that females would be more receptive to mediated information due to their communal, open and integrative approaches, which stresses examining all possible sources of information.

METHOD

To investigate these questions, an experiment involving undergraduates at the University of North Dakota in Spring, 1994. The focus of the study was to investigate differences between the processing of news versus advertising, but also allowed for the examination of these questions.

The study involved a multi-factor experiment involving 186 female and 143 male undergraduates (N=329) who read four promotional messages pertaining to products of potential interest to college students. These featured a new imported soda, a natural shampoo, an ecologically safe disposable flashlight battery and a new brand of college notebooks designed to facilitate notetaking. The pretext of the study was that students were being asked to help evaluate articles and ads for products that might appear in a new monthly magazine for college students.

This paper addresses only effects involving gender and one of the other factors incorporated in the study, product knowledge. Messages were presented either as news or advertisements, with strong or weak arguments, and the four products were chosen after a pretest revealed that they represented two distinct levels of (high and low) product involvement. For this analysis, however, the scores for all subjects are combined across the four messages, to reduce vagaries that might be related to gender.

Participants read the four messages in a classroom setting outside of regular class hours for extra credit. Immediately upon reading the messages, participants read a questionnaire which captured all data used in the analysis.

Cognitive Thought and Recall Measures. Participants were asked first, on an unaided basis, to write down everything they could remember about what they had read, following cognitive thought-listing procedures (Greenwald, 1968; Cacioppo and Petty, 1981). Then, on separate sheets that identified the topic of each message (e.g. college notebooks), students were asked on an aided basis to respond to the following questions: What was said? Your thoughts and feelings at the time: What made this message persuasive or not persuasive?

Recall comments were analyzed as to whether the subjects were able to recall the general topic and the brand name (or reasonable approximation). In addition, the actual number of distinct facts or

copy points contained in the message were counted as a measure of the extent of recall. Cognitive responses (i.e. elaborations or comments about the message, as opposed to pure message recall) were similarly counted and classified as either negative or positive. Cognitive responses were classified as being product-related thoughts (i.e. issue relevant) or nonproduct thoughts (i.e. related to the message, source, argument strength, or incidental comments unrelated to the product).

The coding was conducted by a graduate student trained by the researcher, but who was blind to the hypotheses. A second coder (of the opposite sex) then was employed to validate the cognitive response analysis, using a random sample representing 20% of all respondents. The resulting 91% concurrence rate, based on a total of 4,400 potential judgments, suggested that the coding procedures provided acceptable reliability.

Attitudinal and Believability Assessments. Bipolar, seven-point semantic differential scales were used to measure attitudes and believability. Half of the items were randomly reversed in direction and later recoded to assure consistency; for each scale, a mean index was computed and used as the basis for analysis.

Attitude toward the message: Participants were asked to respond to complete the sentence, "The message on [name of product] was..." using five-item scale that included: interesting/boring, attention-getting/not attention-getting, good/bad, liked it/didn't like it, fun/not fun.

Attitude toward the brand: Participants were also asked to complete the sentence, "I would describe [name of product] as..." using six items that included: good/bad, pleasant/unpleasant, high quality/low quality, like it/don't like it, desirable/not desirable, favorable/unfavorable.

Purchase intent was measured by asking participants to describe their plans to purchase each of the products, assuming they were available in their area, using a four-item scale: intend to/don't intend to, likely to/not likely to, don't plan to/plan to, willing to/not willing to.

Believability, a separate measure of the credulity of the message (Gunther, 1992), was evaluated by participants on a five-item scale that included: informative/not informative, trustworthy/untrustworthy, accurate/inaccurate, convincing/unconvincing, believable/not believable.

Attitudes toward Advertising/News in General. Semantic differential scales were also used to ascertain participants predispositions toward the constructs of Advertising in General and News in General. On separate scales, participants were asked to rate each as interesting/boring, trustworthy/not trustworthy, relevant/not relevant, accurate/inaccurate, persuasive/not persuasive, believable/not believable, informative/not informative, involving/not involving, and useful/not useful.

Beliefs About Advertising/Publicity Practices. Finally, using a series of questions adapted from Hallahan (1994, 1995), participants responded to 15 statements dealing with advertising and publicity practices (see Table 4). Participants were asked to respond on a 7-point Likert-type scale, indicating the degree to which they strongly agreed or strongly disagreed.

Other Data Collected. Participants indicated their sex by checking off whether they were female or male in the last section of the question. Data concerning major, size of hometown and grade point average was collected at the same time. For each of the product categories, students completed a three-item product knowledge scale, indicating the degree to which they were familiar/not familiar,

knowledgeable/not knowledgeable and experienced/ inexperienced in using the product, as well as a six-item product involvement scale extracted from Zaichowsky's (1985, 1986) product involvement inventory: relevant to me/not relevant to me, important/not important, of concern to me/of no concern to me, matters to me/doesn't matter to me, involving/not involving, means a lot to me/means nothing to me.

RESULTS

Confound checks. No significant differences were detected between males and females on any of the demographic measures or in the level of task involvement on a five-item scale completed near the end of the instrument, indicating that the subject groups were equally conscientious. On the product involvement manipulation check, females indicated that products were more involving ($M=4.595$; Females: $M=4.884$, Males: 4.226 ($F(1,327)=52.30$, $p\leq.001$). However, these results, contradict the results of two product involvement pretests ($N=140$ and $N=55$), which revealed no statistically significant differences based on gender when the same six items were used in a semantic differential test that listed various generic product categories. Such results, however, are consistent when the predicted hypotheses and are not surprising since the manipulation check was taken after subjects processed the messages.

Extent of Processing. Support for Hypothesis 1 was found in counting the number of total and product thoughts generated as well as in recall of topic and product attributes/copy points. As summarized in Table 1, analysis of variance showed that females generated a significantly higher number of total thoughts ($M: 13.30$; Females: $M=14.26$, Males: $M=12.05$; $F(1,327)=18.08$, $p\leq.001$). When product knowledge was used as a covariate to examine the influence that overall product knowledge might have on the gender effect, the results were significant ($F(1,325)=20.45$, $p\leq.001$), but did not alter the significance level of the gender effect ($F(1,325)=13.105$, $p\leq.001$).

The same trend was found when only issue-relevant (product related) thoughts were examined. Females generated more thoughts about the products ($M=10.32$; Females: $M=11.21$; Males: $M=9.17$; one-way ANOVA: $F(1,327)=18.42$, $p\leq.001$). Although level product knowledge was significant as a covariate ($F(1,325)=13.530$, $p\leq.001$), the gender effect was preserved ($F(1,325)=13.840$, $p\leq.001$). Significantly, no differences were detected between females and males was in the number of nonproduct thoughts, i.e. those related to message execution, messages, arguments, source or other comments ($p\leq.608$).

For the recall measures, females, on an unaided basis, mentioned the topic or category of product more frequently ($M=82\%$, Females; $M=85\%$, Males: $M=79\%$; $F(1,327)=5.90$, $p\leq.015$), suggesting an effort on their part to put the messages in context. However, the strongest evidence for the more systematic processing hypothesis comes from the significantly higher recall of attributes or copy points from the messages. Females recalled significantly more details when asked to write down everything they could remember about what they had read ($M=3.333$ mean attributes per message; Females: $M=3.52$, Males: $M=3.09$; $F(1,327)=8.96$, $p\leq.003$.) Significantly, product knowledge had no effect when tested as a covariate ($F<1$).

Although males recalled brand names with slightly higher frequency than did females, the difference was not statistically significant (mean recall of all four brand names: $M=56\%$, Females: $M=54\%$; Males: $M=58\%$; $F(1,327)=1.02$, $p\leq.312$). Product class knowledge had no effect on recall ($p\leq.12$).

These data are consistent with the selectivity hypothesis. The higher cognitive responses and

recall measures for topic and attributes suggest that females might have engaged in more thorough processing. However, the fact that males were able to recall brand names with equal proficiency, but not details, suggests that they might have used a more focused processing strategy.

Favorableness of Responses. Hypothesis 2 suggested that females are likely to be more favorable in their responses to persuasive communications.

Due to the highly inter-correlated nature of the measures related to attitude toward the message, attitude toward the brand and purchase intent, and consistent with procedures used by consumer researchers, the analysis began by first conducting a multivariate analysis of variance (MANOVA) procedure that combined the three dependent measures. A significant main effect for gender was found (Wilks lambda=.95574; $F(3,318)=4.90$, $p\leq.002$). The same trend is shown in Table 1, where the results for the three underlying dependent measures used in the MANOVA are displayed along with the simple one-way ANOVA results for each. Females indicated more positive attitudes toward the messages ($M=4.54$, Females: $M=4.71$; Males: $M=4.34$), more positive attitude toward brand ($M=4.73$; Females: $M=4.87$; Males: $M=4.57$), and higher purchase intent ($M=4.21$; Females: $M=4.38$; Males: $M=3.98$). These main effects were qualified, however, by a significant interaction when product knowledge was treated as a covariate. Although not significant in the MANOVA procedure (interaction Wilks lambda: .98324, $F(3,318)=1.80$, $p\leq.146$), separate univariate interaction effects were detected for each of the underlying dependent measures: attitude toward the message ($F(1,320)=5.072$, $p\leq.025$); attitude toward the brand ($F(1,320)=4.572$, $p\leq.035$); and purchase intent ($F(1,320)=3.329$, $p\leq.069$).

To examine these results, a median split procedure was performed so that individuals were categorized as being either high or low in product knowledge for the four products, resulting in groups of 163 and 165 individuals respectively. An ANOVA procedure was then used with gender and (high or low) product knowledge as factors; the results are presented in Table 2.

The data in Table 2 suggest that high-product knowledge males demonstrated the most negative attitudes toward the message and the brands and the lowest purchase intent. Reading across the data in Table 2, the next two highest attitudinal measures were found for low-product-knowledge males for low-product-knowledge females. The most positive attitudes expressed were by high-knowledge females. The interaction for attitude toward the message was significant at $p\leq.043$, and the interaction for attitude toward the brand was marginally significant at $p\leq.055$. Of special note are the purchase intent scores for females, which were virtually the same ($M=4.38$) in both product knowledge conditions.

When believability and valence of thoughts are considered, the same general trend emerges: Main effects were found for believability ($M=4.79$; Females: $M=4.91$; Males: $M=4.64$, $F(1,327)=8.28$, $p\leq.001$), but were qualified by the same gender-by-product knowledge interaction at a marginally significant level (Table 2: $F(1,324)=2.578$, $p\leq.062$). Main effects for total thoughts were found for total thoughts, favoring females ($M=56\%$, Females: $M=58\%$, Males: $M=54\%$; $F(1,327)=3.82$, $p\leq.051$). However, product knowledge's effect appeared to be evident among males: High product knowledge males generated significantly fewer positive thoughts ($M=46\%$) compared to the other three groups, whose thought valences were virtually the same ($58\%-59\%$).

These data suggest that while females generated higher assessments of messages than males overall, the effect might be moderated, in part, by product knowledge. In keeping with the selectivity hypothesis, the data suggest that high product knowledge males were most discerning in their scrutiny of messages. Their lower attitudinal assessments of messages and the lower valence of positive thoughts

suggest that higher product knowledge might have worked to narrow the criteria upon which they evaluated messages from their own self-centered perspective, while product knowledge might have had the opposite effect for females.

Predispositions Toward Mediated Communication. Hypothesis 3 tested whether females were more likely to express positive predispositions toward various sources of information, based on their more communal or comprehensive processing strategies. Two methods were used to consider this proposition. First, differences were compared between females' and males' responses to the semantic differential scales for Attitude Toward Advertising and Attitude Toward News. Second, gender-based differences were examined on the 15 belief statements pertaining to publicity and advertising practices.

Analysis of the semantic differential items supports H3. Table 3 presents the results of one-way ANOVAs performed on each of the 18 items (nine for news, nine for ads), as well as for the separate indexes constructed for these two constructs by computing mean scores for attitudes toward advertising and attitudes toward news.

Females expressed more positive attitudes toward advertising on each of the nine items (although the difference was not statistically significant on three items) and for the index overall ($M=4.71$; Females: $M=4.84$; Males: $M=4.54$, $F(1,327)=9.17$, $p\leq.003$). Similarly, females appeared to be more favorably predisposed to news (although the difference was not significant on three different items) and for the index overall ($M=5.58$; Females: 5.70 ; Males: $M=5.43$, $F(1,327)=7.77$, $p\leq.006$). While both groups were more positively predisposed to news, the mean difference scores for individuals between Attitude Toward News scores versus Attitude Toward Advertising scores was virtually identical ($M=.88$; Females: $.87$; Males: $.89$; $F<1$, $p\leq.71$). These results suggest that females were more positively predisposed to mediated messages, without regard to content class (news or advertising). This is supportive of the idea that females are willing to seek and consider all sources of information.

When the results from the battery of media practices statements are considered, gender-based differences were found at statistically significant levels on one-third of the items, which lends further credence to the selectively hypothesis. Table 4 lists all 15 statements, which are grouped based on a factor analysis (varimax rotation) that revealed five underlying dimensions of the items. The items had been constructed to examine preferences for sources, as well to probe four dimensions of the potential differences between news versus advertising--a scheme that was validated in the factor analysis.

Females indicated a preference for obtaining product information in the form of ads versus news ($M=4.30$; Females: $M=4.52$; Males: $M=4.02$; $F(1,327)=8.37$, $p\leq.004$) and, at a marginally significant level, freely acknowledged that they fully understood that the intent of advertising to sell them something ($M=5.69$; Females: $M=5.80$; Males: $M=5.54$, $F=2.97$, $p\leq.085$). These results suggest that women might be more willing than men to utilize information in the form of ads, which they found to be more interesting but not more accurate, trustworthy or useful.

Females also agreed with several statements that indicated a willingness to more readily consider persuasive messages contained in media. At a statistically significant level, women agreed with the following statements: "A positive news story about a product or service is essentially a recommendation to purchase it" ($M=4.68$, Females: $M=4.85$, Males: $M=4.50$; $F(1,327)=4.12$, $p\leq.043$); "When I read a news story, I feel confident that the reporter has researched the story fully," ($M=4.61$; Females: $M=4.78$; Males: $M=4.39$; $F(1,327)=7.12$, $p\leq.008$); and "Seeing positive information about a product in the news gives it stature and importance in my mind" ($M=4.95$, Females: $M=5.10$; Males: $M=4.76$; $F(1,327)=6.38$,

$p \leq .010$). Interestingly, at a marginally significant level, females were also more likely to agree with the statement, "I let down my defenses when I see product information in the form of news" ($M=3.79$; Females: $M=3.91$; Males: $M=3.63$; $F(1,327)=3.303$, $p \leq .083$).

The results, although not conclusive, lend credence to the argument that one reason that women might have been considered to be more persuadable in early gender persuasion research was that females were simply more open to examining various arguments, while males resisted influence attempts merely because messages did not appear to be relevant to their self-schemas. Similarly, men simply might have been less willing to admit they had been influenced. A notable difference between genders appears to be in the apparent interest of females in advertising. No difference based on gender was found for interest level of news, which generally rated considerably higher than advertising overall. However, in the case of advertising, men appeared to find advertising less interesting generally.

DISCUSSION

This research provides evidence that is consistent with Meyers-Levy's selectivity hypothesis. Despite the important limitations in this study, the results suggest that gender-based differences in processing is a viable question that deserves further research.

Limitations of Study. The robustness of this study's findings are rooted, in part, in the fact that the results represent the combined findings over four messages, representing different content classes and products. To better understand potential gender effects, future replications are needed to increase the number of messages over which gender effects are pooled, and thus further eliminate vagaries based on gender-based differences in the processing of any particular message for any product.

Beyond a limited number of messages, the results of this investigation are circumscribed by the fact that gender effects were one of only several factors under investigation. The study from which these results were culled did not directly manipulate the threshold levels of processing for the two genders (Meyers-Levy and Maheswaran, 1991). Also, no data related to confidence of judgments were collected, and the procedures did not attempt to match participants based on gender or previously ascertained levels of product knowledge.

Of special concern in future investigations will be whether the measures used here are appropriate for measuring processing by both genders. Some feminist researchers have criticized behavioral methodologies, most of which have been developed by male researchers, but which might unintentionally bias the findings (Eichler, 1988). Future research needs to examine this question more thoroughly in order to assure that gender differences are genuine and are not attributable to investigatory artifacts, such as higher verbal skills for females (which might contribute to the larger number of cognitive responses) or to differential responses to the experimental procedures (such as females being more compliant).

Implications for Promotional Programs. One important implication of this research for advertising and public relations communicators is to focus attention on the fact that campaign results might be affected significantly by different cognitive processing strategies among audience members.

Meyers-Levy (1989a) analyzes potential implications of her selectivity hypothesis for advertising strategists; some of her conclusions apply to other promotional campaigns as well. For example, in a campaign directed to females, she suggests that it might be advantageous to provide detailed and varied

information that is consistent with females' more comprehensive strategy. By contrast, she suggests that messages best directed to males should avoid extraneous or secondary detail.

The attitudinal and believability results suggest that common measures used in the formative research by campaign planners are susceptible to gender-based vagaries--a fact that has not been addressed in the theoretical literature. Results for males might tend to understate assessments, for example.

The results related to predispositions toward media suggest that males are either more cynical toward media, or might be difficult to reach because of their more narrow processing perspective. This suggests that males engage in more selective exposure and attention to messages, which necessitates creating greater opportunities for men to process messages (MacInnis and Jaworski, 1989). Such techniques might include greater repetition, use of multiple (or integrated) media, or use of third-party intermediaries, which would increase the likelihood of attending to a message and enhance message relevance.

Implications for Research. Alternative processing strategies involving females and males poses several potentially valuable questions for both advertising and public relations theorists and researchers.

First, are alternative communication strategies better suited to particular audiences based on gender? These results suggest that in certain instances, highly agentic approaches might be in order, such as in programs primarily directed to males. On the other hand, highly communal approaches might be employed elsewhere, such as with publics that are predominantly female.

Second, the selectivity hypothesis has interesting implications for the critical examination of many of the practices found in today's media system, which is predominantly managed by men. Many of the criticisms that have been lodged against news media can be seen as being rooted in male approaches to information processing: the penchant for simplification and superficiality, the emphasis on conflict in news (which involves reconciling different schemas) and the dependence on the familiar, culturally resonating frames or themes for storytelling.

In a similar way, male-dominated thinking can be seen as having impacted the approaches to communications programs. We speak today of campaigns, which utilize strategies and tactics--terms adapted from war, a method of problem resolution engaged in primarily by males. Similarly, many programs demonstrate a stress the importance of singularity of message (David Ogilvy's "Big Idea," Rosser Reeves' Unique Selling Proposition [USP], Patrick Jackson's admonition for organizations to speak with "One Clear Voice") It is interesting to speculate about the degree to which these ideas (along with other accepted concepts, such as source credibility, repetition and third-party endorsement) reflect more deeply rooted gender-based information processing strategies, which do not, in fact, apply equally to males and females.

A third question deals with whether the gender of advertising and PR professionals makes a difference in how promotional messages are received. Do female practitioners conceptualize problems and communicate differently from their male counterparts, presuming that the organizations in which they work provide the freedom to executive a program reflecting these differences?

It might be argued that gender correspondence, i.e. having females produce messages primarily related to females, and having males produce messages primarily related to males, might have some advantage. The unanswered question is whether this correspondence works because of more compatible

processing approaches, or is a function of other gender-related variable, such as topic knowledge, the ability to interface more effectively with same-sex audiences or clients, or language use. Further investigation is required.

Table 1

RESULTS FOR HYPOTHESIZED GENDER-BASED DIFFERENCES

One-way ANOVAs	Mean-All	Males	Females	F(1,327)	p	
Hypothesis 1 - Extent of Processing						
Total Thoughts	13.30	12.05	14.26	18.08	.001	
Product Thoughts	10.32	9.17	11.21	18.42	.001	
Nonproduct Thoughts	2.93	2.88	2.98	.26	.608	
Recall Topic	82%	79%	85%	5.90	.015	
Recall Brand	56 %	58%	54%	1.02	.312	
Recall of Attributes (Number)	3.33	3.09	3.52	8.96	.003	
Hypothesis 2 - Favorableness of Response						
Attitudinal Measures						
Attitude-message	4.54	4.34	4.71	15.75	.001	
Attitude-brand	4.73	4.57	4.87	8.53	.003	
Purchase Intent	4.21	3.98	4.38	10.42	.043	
Believability	4.79	4.64	4.91	8.28	.001	
Percent Positive						
Total Thoughts	56%	54%	58%	3.82	.051	Product
Thoughts	62%	59%	64%	3.13	.007	Nonproduct
Thoughts	33%	30%	35%	.84	.358	
Hypothesis 3 - Predispositions to Mediated Sources						
Attitude-advertising	4.63	4.47	4.76	7.78	.005	
Attitude-news	5.65	5.48	5.77	8.66	.004	

Table 2

**EFFECTS OF GENDER X PRODUCT KNOWLEDGE
INTERACTIONS ON ATTITUDINAL RESPONSES**

	Means				F	p
	Males High Know ledge	Males Low Know ledge	Females Low Know ledge	Females High Know ledge		
Attitude-message	4.23	4.41	4.59	4.80	4.109	.043
Attitude-brand	4.37	4.70	4.82	4.91	3.719	.055
Purchase intent Intent	3.71	4.17	4.38	4.38	3.325	.069
Believability	4.52	4.72	4.82	4.97	2.578	.062
% positive thoughts	46%	59%	58%	58%	8.349	.004

Table 3

PREDISPOSITIONS TOWARD SOURCES OF MEDIATED INFORMATION

Mean scores on semantic differential items; F and p values for one-way ANOVAs for differences based on gender

	All	Males	Females	F	p
Attitude Toward Advertising					
9-item scale	4.71	4.54	4.84	9.17	.003
Accurate	4.22	4.18	4.25	.19	.655
Believable	4.33	4.06	4.54	10.51	.001
Informative	5.23	5.06	5.37	5.24	.023
Interesting	5.12	4.78	5.39	13.75	.001
Involving	4.77	4.60	4.90	4.37	.037
Persuasive	5.32	5.09	5.50	8.69	.003
Relevant	4.76	4.56	4.91	5.57	.019
Trustworthy	3.60	3.54	3.64	.34	.559
Useful	5.03	4.95	5.10	1.13	.288
Attitude Toward News					
9-item scale	5.58	5.43	5.70	7.77	.006
Accurate	5.37	5.19	5.52	5.27	.022
Believable	5.51	5.25	5.71	11.57	.001
Informative	6.06	5.88	6.20	6.32	.012
Interesting	5.79	5.77	5.81	.07	.783
Involving	5.48	5.21	5.69	10.47	.001
Persuasive	5.06	5.02	5.09	.22	.632
Relevant	5.73	5.62	5.81	2.17	.141
Trustworthy	5.35	5.22	5.46	2.70	.102
Useful	5.89	5.69	6.05	8.33	.004

Table 4

**MEDIA PRACTICES BELIEFS STATEMENTS
LISTED BY FACTOR AND COMPARING GENDER**

	All	Males	Females	F	p	
<i>Means based on 7-point scale, 7=strongly agree. F and p statistics based on one-way ANOVA: F(1,327). Gender differences are shown only where statistically significant.</i>						
Statements--by Factor						
<i>Trustworthiness</i>						
A positive news story about product or service is essentially a Recommendation to purchase it.	4.68	4.50	4.85	4.12	.043	a
When I read a news story, I feel feel confident that the reporter has researched the story fully.	4.61	4.39	4.78	7.12	.008	
I let down my defenses when I see product information in the form of news.	3.79	3.63	3.91	3.03	.083*	
<i>Intent to Persuade</i>						
The media often act as spokespersons for special interests.	4.88					
When I see an ad, I know that someone is trying to sell me something.	5.69	5.54	5.80	2.97	.085*	
<i>News Ambiguity/Forewarning</i>						
News isn't written the same way as advertising.	5.07					
I can be confident that the news media aren't trying to sell me some product or service.	5.02					
Seeing positive information about a product in the news gives it stature and importance in my mind.	4.95	4.76	5.10	6.38	.010	

Table 4-Continued

The news media are independent institutions that are not beholden to other organizations in society.	3.95				
<i>Expertis</i>					
Stories about products aren't always going to be positive, but can be.	4.99				
Most news reporters and editors are more knowledgeable about products and services than advertising people.	3.52				
<i>Use/Preference</i>					
I pay less attention to news than to advertising.	5.01				
Ads are more reliable than news as a source of product information.	5.26				
I would prefer to obtain product information in ads rather than news.	4.30	4.02	4.52	8.37	.004
When I watch television, I pay the same attention to commercials as I do programs.	2.90				

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September 1, 1998

Celeste Condit and Bonnie Dow, Editors
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University of Georgia
Department of Speech Communication
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Athens, GA 30602

Dear Professors Condit and Dow:

Enclosed is a manuscript reporting findings of a major experiment that investigated differences in the cognitive processing patterns of men and women pertaining to promotional messages.

The study draws upon insightful theorizing of Professor Joan Meyers-Levy at the University of Chicago. Professor Meyers-Levy has published extensively in the consumer behavior and marketing literature, but her theorizing about the comprehensive processing patterns of women versus men has received little attention in communication.

I am submitting this article for publication for the first time, and I hope that you and the reviewers find it appropriate for *Women's Studies in Communication*. An earlier version of this research was presented as a paper at the Association for Education in Journalism and Mass Communication.

Please be aware that the study was conducted at the University of North Dakota. For that reason, you will probably want to exclude Lana Rakow from being a reviewer in order to maintain the integrity of the blind-review process.

Please let me know how I might assist you in your review of this submission. I would be happy to make whatever revisions that you and your reviewers think are appropriate, and I look forward to working with you to bring this article to publication.

Sincerely,

K.E. Hallahan
Assistant Professor