THE EFFECTS OF SEX OF AUDIENCE AND DEGREE OF EVALUATION ON TASK PERFORMANCE OF WOMEN ASSESSED ON FEAR OF SUCCESS

by

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A THESIS SUBMITTED IN PARTIAL FULFILMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Department

of

Psychology

We accept this thesis as conforming
to the required standard

[redacted]

UNIVERSITY OF VICTORIA

November 1976

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ABSTRACT

The purpose of this study has been to explore the behavior of women with respect to three different theoretical orientations: (1) male/female differences in problem solving, (2) social facilitation, with emphasis on evaluation, and (3) the motive to avoid success. In order to investigate these areas, relevant findings from past work have been identified and discussed. Also, three preliminary studies have been conducted, two of which focused on aspects of social facilitation and the motive to avoid success while the third focused on male/female differences in problem solving. Based on these findings, a final research project relating all three areas of concern was conducted. Significant results from the pilot study on male/female differences have shown that men and women perform better on tasks which appear to be sex-role related. Investigations into the sources of a significant four-way interaction showed that on the feminine task and in the presence of men, women with high fear of success scores had more correct responses when they were evaluated, whereas women with low fear of success scores had more correct responses when they were not evaluated. On the feminine task and in an unstructured setting, women high in fear of success had more correct responses in the presence of women, whereas women low in fear of success had more correct responses in the presence of men.

A significant main effect showed that regardless of order of presentation, females perform significantly better on female sex-role related tasks than on male sex-role related tasks. Questions can be raised whether the social facilitation and fear of success variables were operationalized vigorously enough to produce the theoretically-predicted effects. Also, questions remain concerning the content of the tasks and their relationship to sex-role socialization. Finally, an alternate perspective suggests investigating the possibility that sex-role socialization supercedes other variables, such as social facilitation, in influencing behavior.

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ACKNOWLEDGEMENTS

I feel very grateful to Ron Hoppe, Ph.D., for his ongoing patience and support, knowledgeable resourcefulness and promptness in responding to all phases of the thesis. I also want to extend special thanks for the valuable feedback provided by Lex Milton, Ph.D. and Brian Wharf, Ph.D. My research assistants, Margaret Rogers, Gary Graham and Ron Penner also deserve many thanks as do the many people who participated as subjects. I feel particularly appreciative of the support given me by my husband, Don. Not only did he carefully listen and respond to my ideas, make tapes, test subjects and score responses, but he actually helped make all this possible by his willingness to follow me to the University of Victoria so I could begin my journey toward becoming a psychologist.

CHAPTER I

INTRODUCTION

STATEMENT OF PURPOSE

The intent of this study is to examine and relate three diverse areas of thinking about human behavior, particularly as they relate to women. The focus will remain primarily on women because much of the previous research done on human behavior has been done on males and the results have been generalized to women. What is actually known about the behavior of women *qua* women leaves much to be explored. What is of special interest here is women's performances on tasks in the presence of others when the type of woman performing, the type of task performed, and the type of audience present is systematically varied. The rationale for exploring this particular confluence of events is that they mimic real-life situations in women's lives. And, as women of North America seek to expand their roles, as seen in greater attempts to enter the job market, it is a worthwhile effort to sort out fact from fancy with respect to knowing what type of woman will perform best on which kind of task in whose presence. Investigation of this problem therefore brings together the research and literature from these three areas: (a) social facilitation, because of its emphasis on the effects of the presence of others on behavior, (b) sex differences in problem solving, because it provides an avenue for developing tasks on which women have differing dominant responses, and (c) the motive to avoid success, for

it is on this motive that individual differences in task performance may be dependent.

OVERVIEW

Because tasks on which women have different competencies are needed to look at performances in the presence of others, the first area to be explored is male/female differences in problem solving. It has been discovered previously (Milton, 1959) that as the content of problems to be solved is made more sex-role appropriate, there is greater probability that persons of that sex-role orientation will do better. That is, men perform better on masculine problems while women perform better on feminine problems. However, with the changing mores concerning sex-role norms, it would be useful to know whether sex differences in problem solving still exist. If it can be shown that women still perform better on a feminine task than a masculine task, not only would it be a revealing aspect of male/female differences, but it would also provide a mechanism to explore women's dominant responses, a concept crucial to the understanding of social facilitation.

Dominant responses are those which are most likely to occur given the presentation of a stimulus. If the stimulus is novel or not well-learned, the most probable response is an incorrect one. If the stimulus is familiar or well-learned, the most probable response is a correct one. Thus, in the first case, the dominant response is an incorrect one, in the second case, a correct one. In the event women do perform significantly better on feminine tasks than masculine tasks, it will be possible to look at their behavior as dominant responses, with the feminine tasks

representing well-learned or familiar stimuli and masculine tasks representing stimuli which are not well-learned.

The second area of investigation centers around social facilitation which suggests that behavior is altered in the presence of others. Zajonc (1965) made available the concept of dominant responses to explain why the presence of others increased correct responses only some of the time. He stated that the effect of the presence of others on behavior is to enhance dominant responses. Later work in social facilitation showed that mere presence of others was insufficient to produce predicted alterations in behavior. An element of evaluation was found to be the necessary catalyst to obtain predicted changes in dominant responses in the presence of others (Henchy & Glass, 1968). Like much of the early work in social psychological investigations, sex differences were not systematically studied, leaving the question whether the relationship between an evaluative audience and dominant responses held for women. By using the material from a study of male/female differences in problem solving where dominant responses can be identified, it would be possible to investigate this question.

The third area of inquiry is the motive to avoid success in women. Matina Horner (1968) looked at the long history of women's atypical behavior on projective tests of achievement motivation and suggested it was the motive to avoid success that could account for many of women's erratic performances. The motive to avoid success is expressed via persons not displaying their capabilities in front of others for fear of negative social consequences. An example of a person exhibiting the motive to avoid success is an intelligent high school girl who plays

dumb around boys so she would be asked out for dates. There is some evidence that shows the construct of the motive to avoid success may be conceived as a fear of sex-role deviation (Monahan, Kuhn & Shaver, 1974) and its overall reliability is in question (Zuckerman & Wheeler, 1975). However, the concept of fear of success may be useful for examining the behavior of women in the presence of others, especially if the sex of the audience is varied. If the effects of evaluation and the presence of a male or female audience on dominant responses of women are to be studied, it is also logical to take into account individual differences on a measure of the motive to avoid success. Why? Since conceptually, achievement motivation is closely linked with performance and since women have been consistently inconsistent with respect to this issue, it would be helpful to ascertain if women do indeed alter their performance not only in response to audience variables but also with respect to a measure of their fear of success.

One experiment was devised to study the juncture of male/female differences in problem solving, evaluative aspects of social facilitation, sex of audience and the motive to avoid success. An overall design of Sex of Audience x Evaluation x Fear of Success x Task with repeated measures on the last factor (a 2x2x2x2 design) permitted investigation of relevant questions. Preliminary studies were necessary to establish the stability of the measure of fear of success under varying degrees of evaluation and different sexes of audiences. Also, male and female tasks were developed on which women performed differentially. Once these investigations had been concluded, the final study was undertaken in which discrete questions concerning the behaviors of women

were investigated.

THEORETICAL AND HISTORICAL PERSPECTIVES

Sex Differences in Problem Solving

Female Competence in Language

In the study of sex differences, many topics ranging from the physiological realm to abstract concepts have been explored. Of particular interest to this study are those differences in language with respect to problem solving. It has been well documented that females excel over males in a broad range of performances with respect to language. As early as 6 months, girls vocalize more than boys (Lewis, 1969). At 17 months, girls have been found to show greater language competence than boys as measured by observations in the home (Clarke-Stewart, 1973). Studies of preschool age children have shown that girls talk more frequently, make more noise and have been rated by teachers as having greater speech development than boys (Bell, Weller & Waldrop, 1971; Halverson & Waldrop, 1970; Smith & Connolly, 1972). By the age of 11, girls perform better on the vocabulary portion of the Wechsler Intelligence Scale for Children (Achenbach, 1969) and have been rated higher in language achievement as measured by the California Language Test (Circirelli, 1967). Women at the age of 18 have been found superior to men in language ability as measured by the ACT English Scales (Monday, 1966-67). Even at 84, women perform better than men on the Stanford Binet vocabulary test (Blum, Fosshage & Jarvik, 1972). Other studies have shown no sex differences with respect to language performance (DeFazio, 1973; Marks, 1968), but when differences are found, they

are in favor of women. As Maccoby and Jacklin (1974) have summarized: "Girls score higher on tasks involving both receptive and productive language, and on 'high-level' verbal tasks (analogies, comprehension of difficult written material, creative writing) as well as upon the 'lower-level' measures (fluency) (p. 351).

Sex-Role Socialization and Problem Solving

Though women have been found superior to men in terms of verbal abilities, studying the performances of women with respect to the content of the language reveals greater variability both within and across sexes due to sex-role socialization. It appears that in developmental stages, boys and girls receive differential treatment (Hoffman, 1972). Stemming from the interaction of those separate socialization processes and inherent abilities, sex differences in performances occur. In particular, while women have superior verbal ability, their socialization processes may direct how and when that ability will be displayed.

In 1957, Milton looked at the effects of sex-role identification on problem-solving skills. He hypothesized that the greater the masculine identification, the greater the problem-solving skill. Males and females were rated in terms of sex-role identification and given both restructuring and straightforward problems, only half of which were numerical. Scores on the CEEB SAT were used as controls for intelligence. Men and women with higher masculine role identification performed respectively better than men and women with lower masculine identification. Additional work by Milton (1959) showed that if the language/content of the problems to be solved were adapted to traditional sex roles, sex differences in problem-solving skills were reduced.

The findings of both of Milton's studies reflect on the influence of sex-role identification in problem solving even when intelligence (i.e., ability) is controlled for. A question remains whether the superior verbal abilities of women can be offset by using sex-role appropriate language in the content of a verbal task. If it can be demonstrated that women do excel in at least one type of verbal task only when it is sex-role appropriate, while men will excel only when the verbal task is appropriate to the male role, the overall concept of verbal abilities in problem solving may need to be recast in a framework of what might be called sex-dependent language competencies. And, if such differences in female performance can be found, it will be a means for studying the concept of dominant responses in the context of social facilitation.

Social Facilitation

History

Earliest investigations of social facilitation started with Triplett (1897) who first observed that the speed of bike riders was greater when they raced in the presence of others than when they raced alone against the clock. Meumann (1904) also noted that youngsters' performances on a finger ergograph increased in the presence of others. These findings spawned the study of social facilitation. The effects of the presence of others on behavior have been studied subsequently either in terms of coaction (two or more organisms emitting the same behaviors in one another's presence) or in terms of audience presence (one or more organisms in the presence of one organism emitting a

particular behavior).

Inconsistencies

Later studies began to find inconsistencies in behavior in front of others. Though certain aspects of behavior were increased, others were diminished. These differences were noted in coaction studies (Abel, 1937; Allport, 1924). They were also found in studies investigating audience presence (Dashiell, 1930; Pessin, 1930; Travis, 1925). In one study, Pessin and Husband (1933) found that subjects performed equally well on a finger maze when blindfolded with the experimenter present or in the presence of others. They observed ". . . the subject worried so much about appearing stupid when he made errors that his main attention was distracted away from the close concentration."

Thus, after 35 years of research in social facilitation, it was neither clear under which conditions the presence of others and/or coaction would influence behavior nor was it possible to systematically predict the direction of the behaviors to be influenced. What was unknown was the reason coaction and/or observation by others would sometimes facilitate, sometimes inhibit performance.

Zajonc' Hypothesis

Zajonc (1965) employed the Hull-Spence model of drive and the concepts of arousal and dominant response to solve the dilemma. As Cottrell (1968) summarized, "The Zajonc hypothesis states that the mere presence of others is a source of general drive (D) for the individual and therefore enhances the emission of dominant responses" (p. 204). In conditions where prior reinforcement history has "stamped in" a

response to a particular stimulus configuration, that response is dominant and will be the one most likely emitted whenever that configuration is presented. Thus, a task well learned will, when presented, produce the correct response, which is dominant. However, a task poorly learned will produce an incorrect response which, in *this* case, would be dominant. Applying this to social facilitation, Zajonc stated, ". . . the emission of well-learned responses is facilitated by the presence of spectators while the acquisition of new responses is impaired . . . performance is facilitated and learning is impaired by the presence of spectators" (p. 371).

Several studies have supported Zajonc' hypothesis. Using a pseudorecognition task, Zajonc and Sales (1966) found that subjects who guessed words in the presence of others emitted more dominant responses than those alone. Zajonc and Nieuwenheyse (1964) also found that the presence of an audience increased dominant responses. Using paired associate tasks with competitional and non-competitional lists, Cottrell, Rittle and Wack (1967) found the same effect. And Matlin and Zajonc (1968) found the effect using a word association task.

Martens (1969) not only found the effect on a complex motor task, but also supported the arousal portion of the hypothesis by finding increases in palmar sweating in subjects when in the presence of others. Goldman (1967) found increases in dominant responses in female subjects who picked out favored colored pieces of paper. And Hillery and Hunt (1970) also found increased dominant responses on simple and complex mazes when coacting subjects performed.

Mere Presence

Questions were raised whether the "mere" presence of others would enhance dominant responses. Cottrell, Wack, Skerak and Rittle (1968) used a pseudorecognition task to compare performance under the effects of working alone, with the mere presence of others and with an audience present. They found that while audience presence facilitated emission of dominant responses, the mere presence of others did not. Criddle (1971) used a paired associate task and found no difference between groups on the non-competitional list, while more errors were made in both the alone and observed conditions on the competitional words. Mere presence seemed neither necessary nor sufficient for the occurrence of social facilitation. Simmel, Baker and Collier (1969) studied the effects of mere presence on exploratory behavior and also found mere presence was insufficient to increase a dominant response. Something about the nature of the audience rather than just its presence accounted for its effect on behaviors.

Learned Source of Drive versus
Drive Reduction in Others' Presence

Cottrell (1972), addressing the issue of the lack of audience effects in the mere presence conditions, argued, ". . . the drive increasing property of the presence of others is created through social experience and is not, as is implied by the Zajonc hypothesis, a biological given . . . the presence of others is a *learned source of drive*. . . .With an increasing number of . . . encounters, the stimuli from the mere presence of others gradually lose their neutral quality and become, through classical conditioning, sufficient to increase the individual's

drive level" (p. 204).

Schacter (1959) took the opposite position that the presence of others constitutes a learned source of drive reduction. In a study designed to look at tension reduction, he compared high and low anxious groups. The high-anxious group said they wanted to be with others while waiting for a noxious stimulus, whereas the low-anxious group indicated no preference to wait with others. Schacter concluded that audiences were drive-reducing as opposed to drive-increasing.

In a review of investigations into the calming effects of the presence of others, Epley (1974) noted three possible ways the presence of others could produce calming effects. Namely, the others could model calm behavior, directly interfere with attention to stimuli or by their mere presence produce calming effects. To date only one study (Wrightsman, 1960) gives support for calming effects of mere presence and results are limited to first-borns Epley hypothesized ". . . the presence of others decreases fear or anxiety but not the instrumental response to the primary aversive stimulus itself" (p. 281). Whether the presence of others is *ipso facto* drive-reducing or drive-arousing remains an unsettled issue.

Evaluation Apprehension in the Presence of Others

The evaluative aspects of the presence of others can be thought of as either distracting or facilitative. Jones and Gerard (1967) support the distraction hypothesis. Argyle, Lalljee, Cook and Latané (1967) found that subject ratings of discomfort and the number of errors in making a speech were lowest when the speaker was behind the audience

rather than in front. And Laird (1923) noted subjects' performances decreased in front of a razzing audience which he attributed to distraction. Malmo, Boag and Smith (1957) found distraction effects in measures of speech muscle tension, while Lucas (1952) found verbal performance affected by distracting failures. Kiesler (1966) attributed poor performance of high shock threat subjects on simple tasks to distraction. And, Wapner and Alper (1952) thought distraction accounted for greater decision time in front of an unseen audience. They proposed the audience threatened the subject's need to be well thought of and hence was distracting due to evaluation apprehension. As Pavio summarized, ". . . an unstructured congregate may be regarded as a potential audience situation in the sense that a person in the group may behave in such a way as to attract attention to himself. Awareness of this possibility may influence his behavior. Furthermore, any testing situation in which the individual assumes that his performance will be critically evaluated by others even though that audience is absent may be viewed as an implicit audience situation" (1965, p. 129).

The facilitative aspect of evaluation, a concept germane to this study, has also been explored. Henchy and Glass (1968) gave subjects a pseudorecognition task with and without evaluation by others and found evaluation more salient in eliciting dominant responses. Paulus and Murdoch (1971) replicated the study with the single exception that subjects responded privately in the alone condition. Dominant responses were again facilitated in conditions of anticipation of evaluation. Shipley and Veroff (1952) found subjects evaluated by peers wrote more stories with rejection themes than those not evaluated. Sugarman (1964)

noted subjects wrote longer sentences and more words when they thought the audience reading their stories was composed of language specialists rather than peers. Klinger (1969) found that when potential evaluation was made available to coactors on a vigilance task, performance improved. Sigall, Aronson and Van Hoose (1970) found that when subjects were given the opportunity either to support the hypothesis of the experimenter or look good, subjects would only confirm the hypothesis when they could also look good. Sigall et al. concluded, "These findings suggest that evaluation apprehension does occur" (p. 9). It appears evaluation apprehension plays an important role in the facilitation of dominant responses in the presence of others, but the degree to which the calming effects of an audience offset evaluation apprehension remains to be determined.

Type of Audience

The type of audience also seems to be an important aspect of social facilitation. Bergum and Lehr (1963) found signal detection performance of national guard trainees in the presence of officers was superior to performance alone or in the presence of peers. Grace (1951) found that when no information about an audience had been given, subjects called out the names of male clothing on a table first. When they believed the audience to be female, they called out feminine articles first. As Pavio (1965) states, "Any situation in which conformity or non-conformity is an issue essentially involves the presence or implied presence of observers who evaluate an individual's behavior relative to some standard" (p. 168). With respect to the size of audience, Gates

(1924) found no reliable differences existed in the performance of subjects when the size varied from one to forty.

Individual Differences

The number of studies investigating individual differences with respect to social facilitation has been a minority, but varying responses to experimental manipulations used in the study of social facilitation have been found to correlate with certain individual differences. Kohlfield and Weitzel (1969) found differences between subjects rated as valuing affiliation and those valuing achievement when performing before others. Levin, Baldwin, Gallwey and Pavio (1960) also found that children labelled exhibitionistic differed from those labelled self-conscious in speech-making before others.

The extent of anxiety in a subject seems to be a significant variable related to performance in the presence of others. Ganzer (1968) found the presence of an audience detrimental to performance of highly anxious women on nonsense syllables. Berkey and Hoppe (1972) wanted to see if the drive effects of the audience and anxiety summate. Both high and low anxious subjects performed a paired-associate task with competitional and non-competitional words in the presence of others and alone. "High anxiety and the presence of an audience hindered the learning of the competitional list, but showed only slight to insignificant help in learning the non-competitional list" (p. 352). Cox (1966) compared high and low anxious boys on marble dropping tasks and in 1968, repeated the design. In both studies, highly anxious boys decreased their performance in the presence of parents and teacher, while low-anxious boys

increased their performance in all conditions. However, one study (Quarter & Marcus, 1971) did not find anxiety an influencing factor in performance before an audience.

Male/Female Differences

Sex differences have been noted in studies of social facilitation. Innes and Sambrooks (1969) looked at performances in paired-associate tasks of first and later-born male and female subjects either working alone or coacting. On the practice list, a significant interaction was found where first-born females made fewer errors than later-born females, and later-born males made fewer errors than first-born males. Also, Carment (1970) compared performances of men and women subjects on a motor task in competition or not, alone or together. Males and females responded differently when alone and when together. When coactors were present, both sexes' rate of response was almost equal, but males performing alone decreased their rate only slightly, whereas females performing alone decreased their rate significantly.

Remaining Issues

Social facilitation research has yet to answer many questions. Mere presence does not seem to be a tenable explanation of audience effects; learned source of drive is more plausible. Yet, questions remain pertaining to specific elements within social facilitation such as what are the differential, combined effects due to varying the composition and nature of the audience, the composition and nature of the subjects, and the type of tasks involved. Though enhancement of dominant responses seems for the most part a reliable finding in

facilitation, the arousing or calming characteristics of audiences still need to be explored, as do the various means of acquiring and conveying symbolic audiences as Weiss and Miller (1971) have pointed out. Of special interest are questions exploring what the effects of varying both evaluative aspects of an audience and the sex-role relatedness of the tasks are on the performances of women. However, before investigating these issues, evidence that female performances may also be due to individual differences with respect to the motive to avoid success should be taken into account.

Need Achievement and the Motive to Avoid Success

History

In 1953, McClelland noted that women got higher Need for Achievement (NAch) scores than men under neutral conditions, they did not show an increase in NAch as a result of achievement-involving instructions, and, all the same, their scores seemed as valid as men's when correlated with performance (p. 178). Seeking to find an answer to these puzzling results of past female performances on TAT measures of NAch, Matina Horner (1968) explored the concept of the Motive to Avoid Success (MAS). She posited that Atkinson's expectancy-value theory of success [the probability of a given act is a function of the product of the expectation that behavior will lead to a goal and the value of the goal (see Atkinson & Feather, 1966)] would not accurately predict female NAch since it did not take into account what achievement in the masculine sense meant for women. She argued that achievement is competitive and similar to aggression which by most standards is considered unfeminine.

Therefore, if a woman is successful in the masculine sense of the word, she can be labelled unfeminine, which produces anxiety. Horner argued that women, rather than wanting success and fearing failure, are afraid of it or at least afraid of the consequences of success.

To incorporate her view into Atkinson's model, she posited the tendency to avoid success (T-s), where (T-s) = (M-s) x (P-s) x (I-s) (M-s being the motive to avoid success, P-s the probability of not being successful, and I-s the probability of no incentive value in being successful). Horner claimed the overall tendency to achieve (Ta) was equal to the tendency to approach success (Ts) minus the fear of failure (Tf) minus the tendency to avoid success (T-s) plus the tendency to express defensive responses when for external reasons the tendency to succeed must be expressed (Text). Thus, her restatement of Atkinson's model looked like this:

$$Ta = (Ts - Tf) - T\text{-}s + Text$$

To test her hypothesis, Horner administered several items to men and women in two sessions. In the first session, she used a verbal TAT, Haber and Alpert's measure [(1960); previous research has indicated that a better indicator of NAch is one in which the subjects' anxieties have been subtracted from the overall achievement score (Atkinson & Feather, 1966)] and three tasks. In the second session, subjects were divided into non-competitional, mixed-sex competitional and same-sex competitional groups. Competitional subjects were asked to choose which of seven competitors they most and least wished to compete against, others which of seven tasks they most and least wished to compete against. Subjects also did generation anagrams and math problems and filled out a

questionnaire with key questions asking how well they knew their competitor and how important they thought it was to do well.

Horner (1968) divided subjects into high and low fear of success in response to the sentence, "After first term finals, Anne finds herself at the top of her medical school class." Fear of success was registered if negative themes or adverse consequences were projected for Anne. Women with high fear of success performed better on the verbal task in the non-competitional condition and the few women that did better in the competitional condition preferred moderate level tasks while women in the competitional condition preferred easy tasks. No significant relationship between fear of success and NAch was found, in Horner's words, raising ". . . questions with regard to the predictive validity of the TAT NAch scores for women" (p. 111).

As Zuckerman and Wheeler (1975) have summarized, "The motive to avoid success was conceptualized as a stable, latent disposition, acquired early in life probably as a part of sex-role socialization. The interference of fear of success with performance was thought to occur in situations in which this motive was aroused. . . . It should also be noted that the equation between success and masculinity and the contrast between success and femininity are socially determined. Thus, any sex differences on the motive to avoid success are culture-bound and subject to change" (p. 933). Unfortunately, subsequent research has not always confirmed Horner's findings.

Measurement Reliability and Validity

In terms of interjudge reliability of Horner's measure across studies, most correlation coefficients range between .8 and .9. Robbins

and Robbins (1973) found that female judges find more fear of success responses in women than in men. Though a study of Kennedy and Uphoff (1939) showed that judges err in the side of their attitudes, it does not explain why female judges would err in the direction of fear of success for women. In the absence of a scoring manual, the objectivity of scoring fear of success is difficult to ascertain.

As Horner designed it, there is only one item on which fear of success has been scored, so in terms of test-retest reliability, memory can affect the score. However, Moore (1974) administered that item to 41 females one year apart, 73 per cent of whom got the same fear of success scores. Zuckerman and Wheeler (1975) argue that this is unimpressive since 50 per cent of the women would have the same score by chance alone.

With only one item, test homogeneity or split-half reliability is impossible to assess. Researchers (Karabenik & Marshall, 1973; Weston & Mednick, 1970) have administered several forms to the same subjects, finding low correlation in fear of success scores between items. Entwisle (1975) has previously levied serious criticisms against the homogeneity reliability of the TAT in assessing NAch from which Zuckerman and Wheeler have extrapolated ". . . there is no reason to suggest the reliability of the fear of success measure is higher" (p. 940). However, few studies have been brought to bear directly on this issue, leaving some doubt as to the finality of this view.

Cue Variation

Tresemer (1974) argued that Horner ". . . has not yet demonstrated that fear of success is a *motive* within the tradition of motivation

research" (p. 84). Recent studies (Alper, 1973; Kimbal, 1973; Zuckerman & Wheeler, 1975) have shown inconsistent patterns for emergence of fear of success. Other studies (Feather & Raphelson, 1974; Monahan et al., 1974) have tried to ascertain whether fear of success is an intrapsychic phenomenon or merely a reflection of cultural sex-role stereotypes about female achievement in a primarily masculine field such as medicine. There seems to be a possibility that what fear of success might be measuring is a fear of deviance from sex-role stereotypes, since negative imagery does not appear as frequently when Anne's name is changed to John.

Varying the cue has produced other kinds of results. Katz (1973) varied the Anne cue so that some subjects thought Anne was the only female in the class, some thought the class was half female. More negative stories were written when Anne was an isolate. When Hoffman (1974) replicated Horner's study, 65 per cent of the women once again wrote negative imagery but even more males responded negatively to the male cue. These findings do not support the notion that varying the cue and, therefore, perhaps the amount of deviancy, produces a different fear of success response in women. It is unclear, however, whether the male response is due to cue variance or a change of male attitudes toward achievement.

Sex Roles

Changes in fear of success imagery written by males could be due to changing sex roles. Schwenn (1970) and Alper (1974) found scores of females classified as traditional were high on fear of success. However,

Wellens (1973) could not find a positive correlation between sex-role identification and fear of success in women.

It is unclear to what degree the fear of success measure is culture bound or related. Heilbrun (1974) found women scoring high in perceived similarity to their fathers also scored high in fear of success and performed worst on tasks when coacting with other females. And Ellis (1973) found that females who were rated opposite of the sex-role stereotype also perceived males and females as similar on several dimensions.

Fear of Success/Task Performance/ Sex of Others Present

Of interest is the relationship between fear of success, task performance and the presence of males or females. Morgan and Mausner (1973) found that in fantasy, males can show more fear of success than females, but in mixed-sex interactions, women suppress evidence of competence in areas they had mastered. Karabenik and Marshall (1974) also found that women high in fear of success did not improve on a digit symbol task with feedback when competing against men. Martin (1973) found that in mixed-sex competition in a bean bag toss, males became slightly more conservative whereas females became considerably more conservative. Horner (1974) has said, "A complex relationship of interaction appears to exist between women's internal personal disposition or motives and certain situational factors determine the nature of the expectancy a girl has about consequences of her actions and the value of this consequence to her in that situation" (p. 142).

In Horner's dissertation (1968), verbal and spatial tasks were given to subjects with others present. Perhaps the presence of others may have been construed by subjects in her study not as competition but as evaluation, or, in Pavio's sense, as a symbolic audience representing a range of possible consequences. From this perspective the joint issues of the effects of audience presence on performance of subjects and prediction of performance of subjects in different situations based on their levels of fear of success can be addressed. Zuckerman and Wheeler (1975) pointed out, ". . . the situation in which the motive to avoid success is supposed to be aroused has never been defined" (p. 941). By applying concepts from social facilitation in concert with fear of success data, a step may be taken to address this definition. Of particular interest in this study will be investigating aspects of the effects that varying both the sex of the audience and the degree of evaluation of an audience will have on women divided on the basis of high and low scores in fear of success when they perform two tasks: one that is sex-role appropriate for females, one that is sex-role appropriate for males. However, before delineating specific hypotheses within this framework, it will be necessary to make preliminary studies relevant to the variables of interest.

CHAPTER II

PRELIMINARY INVESTIGATIONS

First it is necessary to address the stability of the measure of fear of success. Two pilot studies, Study One and Study Two, were conducted to assess fear of success variability in a 2x2 design, comparing scores in the presence of a male or a female in either an evaluative or unstructured setting. To convey evaluation, either a male or female sat in front of the female subject, held a clip board and made periodic check marks while the subject performed. The subjects had been instructed that their non-verbal behaviors were being evaluated. In the unstructured condition, the male or female sat quietly and read a book while the subject performed. Subjects in this condition were advised the person was present to take care of the tape recorder.

To replicate part of Horner's original study, the six cues she used were given to subjects (see Appendix A) as was Haber and Alpert's AAT (see Appendix B). Instructions were presented via tape recorder, with a female voice for the female condition and a male voice for the male condition.

Pilot Study One

Subjects. Twelve undergraduate females participated.

Procedure. Three different subjects completed Horner's verbal TAT and the AAT in each of the four conditions: female evaluative, female unstructured, male evaluative, male unstructured.

Results. Analysis of variance on fear of success scores found no significant differences between male and female audiences. However, analysis of variance on evaluative and unstructured conditions indicated a possibly significant difference on fear of success scores [$F(1, 8) = 4.96$, $p = .056$; interjudge reliability = .91]. Women in the unstructured situation had higher scores than in the evaluative condition. With so few subjects per cell, question was raised concerning the reliability of such a finding. Hence another pilot study ensued.

Pilot Study Two

Subjects. Forty undergraduate females participated.

Procedure. Ten different subjects completed the verbal TAT and AAT in one of the four conditions identical to Study One.

Results. Analysis of variance showed no significant difference in fear of success scores between evaluative and unstructured conditions [$F(1, 36) = .27$, $p > .68$]. Women in the unstructured condition had lower scores when in the presence of males, higher in the presence of females, the differences being not significant. In conjunction with Moore's (1974) finding, the stability between conditions can be considered reliable.

Overall Conclusions

No significant differences between measures of anxiety appeared, though the scores were consistently high for all conditions. NAch as scored using McClelland's (1951) system was found significantly different between the evaluative and non-evaluative conditions (Study One:

$p = .025$; Study Two: $p = .028$), with NAch scores higher in the evaluative condition. However, there was no relationship between fear of success and NAch in either study. And, referring to the earlier-mentioned overall unreliability of the measure of NAch, assessment of the need for achievement will not need to be made in order to test hypotheses relevant to the major focus of this paper.

Inasmuch as the measure of fear of success did not vary significantly between the conditions, it seems acceptable to use the measure under similar conditions. However, since the overall reliability of the measure remains in question, results from investigating hypotheses about the relationship of fear of success and kind of audience, kind of task should not be generalized beyond the parameters of the study.

Also to be borne in mind is that if differences cannot be found with respect to fear of success but can be found with respect to the type of audience, then the measure of fear of success will be cast into further doubt in terms of construct validity while the social facilitation literature will be supported.

Study Three

In order to provide tasks in which women's dominant responses could be demonstrated, the third study was done to show the existence of such tasks.

Subjects. Thirteen college males and 13 college females from summer session at the university participated in the study.

Instrument. Three hidden word puzzles were used (see Appendix C). The first puzzle contained 48 hidden words listed on the page preceding

the puzzle, the second and third puzzles contained 47 hidden words, each listed on the respective page preceding the other puzzles. The first puzzle, using last names, provided a practice task. The next puzzle was comprised of names of workshop tools and the third puzzle was comprised of names of kitchen tools. Puzzles 1 and 2 were obtained from *Official Crossword Puzzles* (New York: Dell Publishing Co., 1976). The third puzzle was constructed to match the second in number of words used, length of words, placement in the puzzle and frequency of use, when known.

Procedure. All 26 subjects were tested simultaneously in a large room by a female experimenter. Four males and three females did the workshop puzzle before the kitchen puzzle; the remaining subjects did them in the reverse order. One page of instructions (see Appendix D) preceded the three puzzles. Subjects were given one minute to study a page of words and five minutes to circle as many words from the list as they could find in the hidden word puzzle. Order of presentation for puzzles 2 and 3 was varied. Responses recorded were correct encirclement of words found on the list of the preceding page.

Results. A Sex x Task analysis of variance (2x2) was performed on tasks 2 and 3 with repeated measures on the second factor. A significant interaction showed males with more correct responses than females on the workshop puzzle and females with more correct responses than males on the kitchen puzzle [$F(1, 24) = 7.54$, $p = .001$]. Figure 1 shows the means of the Sex x Task interaction. Analysis of the simple main effects showed females performed significantly better on the kitchen puzzle than the workshop puzzle [$F(1, 24) = 4.37$, $p = .048$] whereas

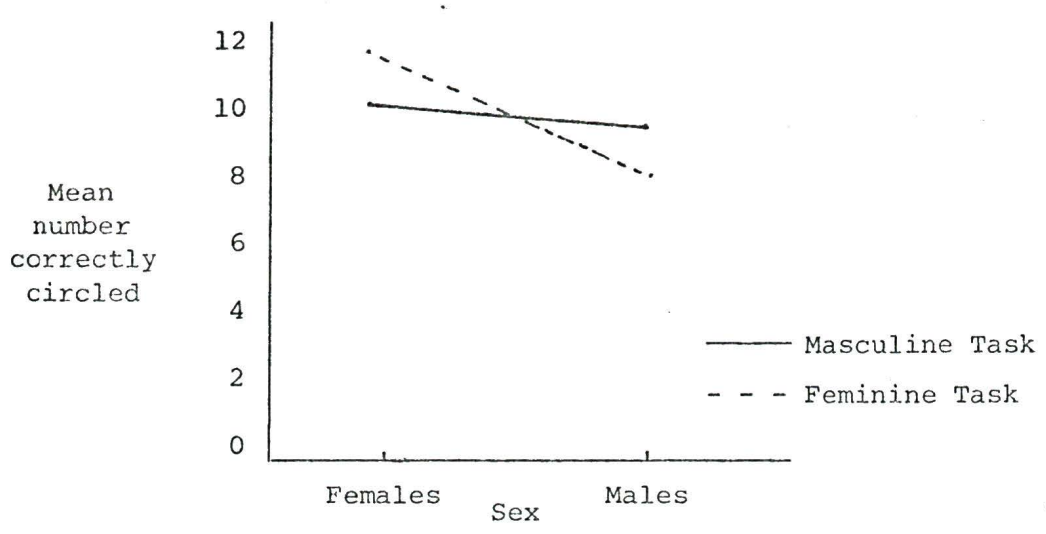

Figure 1. Means of Sex x Task Interaction

males performed significantly better on the workshop puzzle than the kitchen puzzle [$F(1, 24) = 3.21$, $p = .089$]. Overall female performances were superior to male performances on both tasks, albeit not significantly better.

CHAPTER III

STATEMENT OF HYPOTHESES

Pilot Studies One and Two established that measures of fear of success do not vary significantly between conditions of evaluative and unstructured audiences or a male and female audience. Study Three found tasks in which women perform significantly better on one (kitchen tools) than the other (workshop tools). For purposes of this study, such differences will be referred to as dominant responses. With these preliminary findings, it was possible to formulate three discrete hypotheses to be tested concerning the dominant responses of women scoring high and low on fear of success under evaluative and unstructured audiences, either male or female.

From the evaluative aspects of social facilitation, it was predicted that the dominant responses of women would be enhanced under an evaluative audience condition. However, based on some of the findings in fear of success, it was also logical to predict that women high in fear of success would suppress the enhancement of *correct* responses in the presence of males due to fear of social consequences. Thus, taking into account the motive to avoid success, it was logical to predict that women high in fear of success will suppress emission of correct responses in the presence of males more than in the presence of females, regardless of the nature of the task or of the evaluative component of the audience. Hence, hypothesis one states:

Women high in fear of success will have more correct responses when they perform in front of women than men. Women low in fear of success will perform equally well in front of men and women, but will have more correct responses than women high in fear of success.

Since women low in fear of success presumably do not suppress competence, consideration of social facilitation leads to the prediction that the dominant responses of women scoring low in fear of success will be enhanced more in an evaluative audience than in the presence of an unstructured audience. Hence, hypothesis two states:

Women low in fear of success will have more correct responses on the feminine task when they are evaluated than when they are not. Women low in fear of success will have more correct responses on the masculine task when they are in an unstructured audience setting than when they are evaluated.

Presented visually, the rank order of correct responses of low fear of success women should be as follows:

$$\begin{Bmatrix}\text{feminine task}\\ \text{evaluated}\end{Bmatrix} > \begin{Bmatrix}\text{feminine task}\\ \text{not evaluated}\end{Bmatrix} > \begin{Bmatrix}\text{masculine task}\\ \text{not evaluated}\end{Bmatrix} > \begin{Bmatrix}\text{masculine task}\\ \text{evaluated}\end{Bmatrix}$$

Women high in fear of success should perform equally well on the two tasks whether evaluated or not. They should have fewer correct responses than women low in fear of success.

Women low in fear of success may still conform to Milton's (1959) finding that women perform better on tasks when the task characteristics conform to the sex-role stereotypes. The dominant responses for women scoring low in fear of success would be more correct answers on tasks with feminine characteristics, whereas on tasks with masculine characteristics, the dominant response would be more incorrect answers. Hence, the third hypothesis states:

Women low in fear of success will have more correct responses when they perform the feminine task than when they perform the masculine task. Women high in fear of success should perform equally well on both tasks, with fewer correct responses than high fear of success women.

CHAPTER IV

METHOD

Subjects

The participants in the study were 64 females enrolled in summer session at the university.

Instruments

Subjects were given Horner's verbal TAT, the AAT, in order to conform with Pilot Studies One and Two and the tasks described in Pilot Study Three. A Sex x Evaluation x Fear of Success x Task design (2x2x2x2) was used with repeated measures on the last factor. As in Pilot Studies One and Two, subjects were told that their non-verbal behaviors were being evaluated. An evaluator watched subjects, held a clipboard and made check marks as well as written comments. In the unstructured condition, the audience read while the subjects worked. Tape recorded instructions were used in all sessions with a male voice for the male condition and a female voice for the female condition. The female audience was conveyed by the author, the male audience was conveyed by a male, paid research assistant. Two phases, one week apart, comprised the experiment.

Procedure

Phase I

All females were tested one at a time on Horner's measure of fear

of success in a setting comparable to the female unstructured audience condition. Females were later divided into high and low fear of success groups on the basis of scores on the Anne cue. Each group was comprised of 32 subjects. Fear of success scores were recorded by a male and a female judge (interjudge reliability, .88). Subjects were then randomly assigned to one of four conditions: female evaluative, female unstructured, male evaluative, male unstructured. Thus, each condition had 16 subjects, 8 of whom scored high in fear of success and 8 of whom scored low.

Phase II

Each subject performed tasks identical to the ones used in Study Three. All subjects completed the puzzle using last names first. Half of the subjects in each condition performed the workshop puzzle before the kitchen puzzle, the other half performed those puzzles in the reverse order. All instructions and timing of the tasks were provided via tape recorder. After reading the introductory page, the subject was given one minute to look at a list of words and then five minutes to circle the words in the puzzle that they recalled and recognized from the previous page. Responses coded as correct were only those words circled correctly that had been listed on the page previous to the puzzle worked.

CHAPTER V

RESULTS

Table I shows the means of the predicted and actual results. Significant results were not found for the hypotheses tested. However, a Sex of Audience x Evaluation x Fear of Success x Task (2x2x2x2) analysis of variance with repeated measures on the last factor was performed, and a significant four-way interaction was found [$F(1, 56) = 7.17$, $p = .009$]. Since there was no heterogeneity of variance [$F_{max}(16, 7) = 7.27$, $p > .05$], a pooled error term was used to test for the sources of the significant interaction. Table II shows the variances within each cell of the design. Analysis of the significant four-way interaction showed that on the feminine task, high and low fear of success women performed exactly opposite in the presence of men and in the unstructured setting, as seen in Figure 2.

Investigations into the sources of the four-way interaction showed that it was on the feminine tasks that performances of women could be discriminated. When holding the presence of a male constant, high and low fear of success women performed completely opposite to each other. High fear of success women had more correct responses when they were evaluated rather than when the setting was unstructured [$F(1, 56) = 6.59$, $p = .014$], whereas low fear of success women had more correct responses when the setting was unstructured than when they were evaluated [$F(1, 56) = 2.93$, $p = .096$]. When holding the unstructured setting constant, high and low fear of success women again performed completely opposite to

TABLE I

Means of Predicted and Actual Results

		Predicted		Actual	
		D1	D2	D1	D2
	B1 C1	8	8	7.25	10.5
A1	C2	12	15	7.5	9.13
	B2 C1	8	8	7.75	7.88
	C2	13	14	6.88	10.88
	B1 C1	10	10	8.25	8.88
A2	C2	12	15	8.63	10.38
	B2 C1	10	10	7.88	9.88
	C2	13	14	8.13	9.00

HYPOTHESIS I

	A1	A2	A1	A2
C1	8	10	8.35	8.72
C2	13.5	13.5	8.59	9.04

HYPOTHESIS II

	B1		B2		B1		B2	
	D1	D2	D1	D2	D1	D2	D1	D2
C2	12	15	13	14	8.07	9.76	7.51	9.94
C1	9	9	9	9	7.75	9.69	7.82	8.88

HYPOTHESIS III

	D1	D2	D1	D2
C2	12.5	14.5	7.79	9.85
C1	9	9	7.84	9.29

A: Sex of Audience; 1 = male, 2 = female.
B: Evaluation; 1 = evaluative, 2 = unstructured audience.
C: Fear of Success; 1 = high level, 2 = low level.
D: Task; 1 = masculine, 2 = feminine.

TABLE II

Variances for Actual Results

		D1	D2
	B1 C1	3.69	7.75
A1	C2	5.75	4.61
	B2 C1	8.19	3.61
	C2	5.86	22.61
	B1 C1	5.44	3.11
A2	C2	5.98	5.48
	B2 C1	6.61	18.61
	C2	7.36	5.00

A: Sex of Audience; 1 = male, 2 = female.
B: Evaluation; 1 = evaluative audience, 2 = unstructured audience.
C: Fear of Success; 1 = high level, 2 = low level.
D: Task; 1 = masculine, 2 = femine.

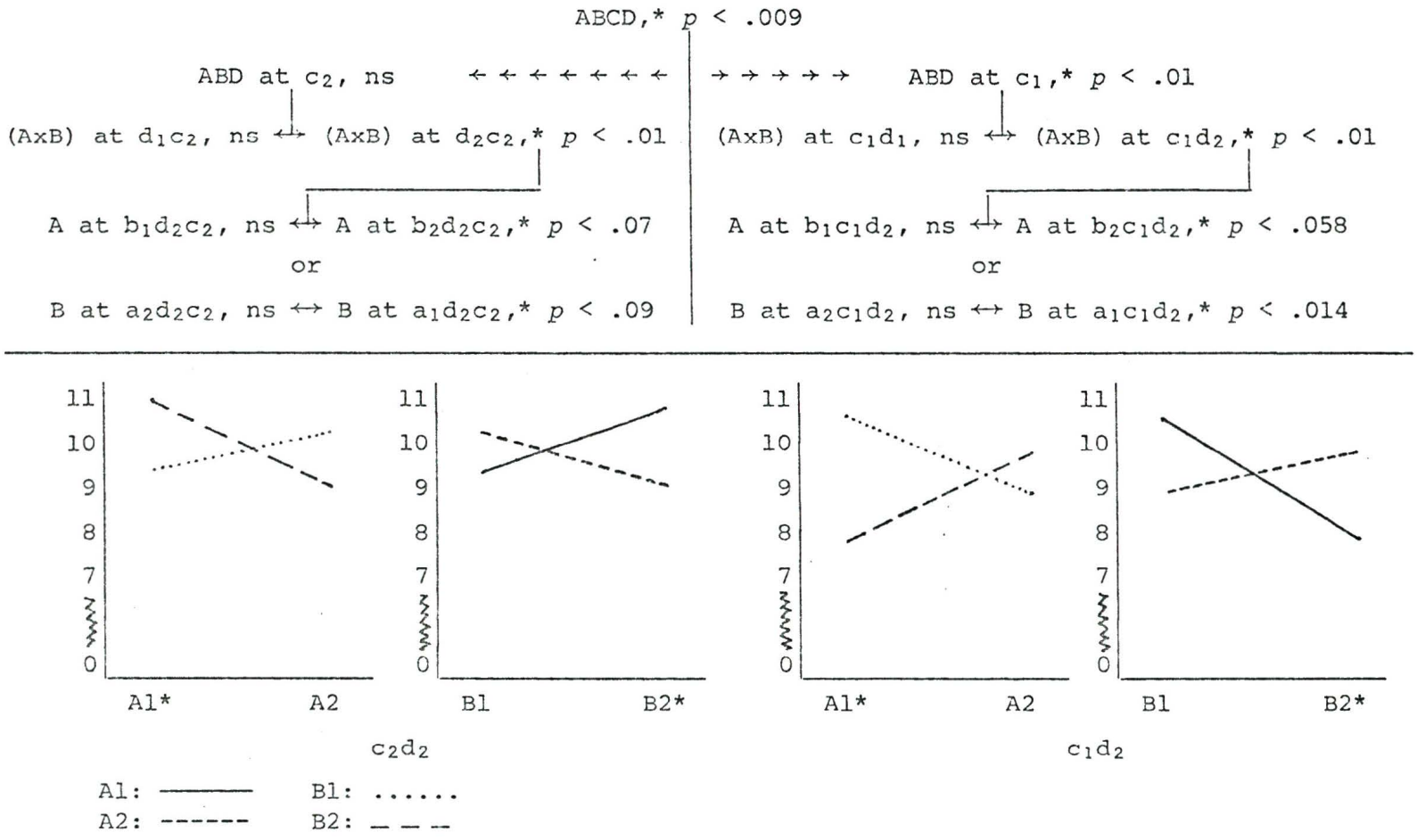

FIGURE 2. Analysis of the four-way interaction.

*Level of significance
A: Sex of Audience; 1 = male, 2 = female.
B: Evaluation; 1 = evaluative audience, 2 = unstructured audience
C: Fear of Success; 1 = high level, 2 = low level.
D: Task; 1 = masculine, 2 = feminine.

each other. High fear of success women had more correct responses in front of women than men [$F(1, 56) = 3.82$, $p = .058$], whereas low fear of success women had more correct responses in front of men than women [$F(1, 56) = 3.36$, $p = .07$].

Significant results were found for the task main effect [$F(1, 56) = 24.27$, $p = .000008$]. These results appear to contain more of the within group variance than the four-way interaction, though such a percentage cannot be actually calculated because of the non-orthogonality of the effects. The main effect results showed that females performed better on the kitchen puzzle than the workshop puzzle. A Task x Order interaction was found not significant [$F(1, 62) = .006$, $p > .93$]. The Order effect was also not significant [$F(1, 62) = .946$, $p > .334$].

CHAPTER VI

DISCUSSION

Results from probing the four-way interaction showed that it was performance on the feminine task on which high and low fear of success women could be discriminated. High fear of success women performed better on the feminine task when a man evaluated them rather than just sitting there. In an unstructured condition, high fear of success women performed better when a woman was present rather than a man. These findings raise interesting speculations about the possibility of sex-role appropriateness being a salient factor in the performances of the high fear of success women. First of all, it has already been thought that the measure of fear of success may be a measure of fear of sex-role deviance.[11] A person scoring high in fear of success may actually be a person who is closely aligned with traditional sex-role norms. If this is the case, women high in fear of success may respond best when in settings which are also closely aligned with traditional sex-role norms and when doing feminine tasks. A male evaluative audience might be construed as better fitting the traditional male sex-role norm than a male unstructured audience. Likewise, a female unstructured audience might be construed as better fitting the traditional female sex role than a female evaluative audience. The kitchen puzzle is also more consistent with a traditional female sex-role norm than a workshop puzzle. Thus it is conceivable that the superior performance of high

fear of success women on kitchen puzzles in front of evaluative male and unstructured female audiences is due to the overall consistency of these factors with sex-role norms. It just could be that women high in fear of success are those who respond best in traditional settings when doing feminine tasks. Whether this holds in settings outside of the parameters of this study needs to be investigated. Recently, Peplau (1976) found traditional women performed best on a verbal task in a traditional setting while liberal women performed best in individual competition.

The superior performances of the low fear of success women on the female appropriate tasks in front of an unstructured male audience presents a more complicated picture to explain. If having a low score on the measure of fear of success indicates a lack of fear of deviance from sex-role norms, why was it only on the feminine task that the low fear of success women were found to do better under certain audience conditions? It could be that even though women low in fear of success may not adhere philosophically to sex-role norms, they might still respond better on tasks which are sex-role appropriate, perhaps due to prior learning. Their very sex may determine the kind of words they will have most access to and proficiency in. What remains to be answered is how an unstructured male audience could possibly affect performance of women low in fear of success. Perhaps women low in fear of success can perform better on female appropriate tasks under conditions which are not particularly sex-role appropriate. If so, this implies not only that women low in fear of success lack fear of deviance from sex-role norms, but perform better in settings where sex-role norms are violated. These findings clearly need more thorough investigation in other settings.

Results from the major study also showed that regardless of condition tested in or score on a measure of fear of success, women consistently performed better on the kitchen tool task than the workshop task. This finding is consistent with the earlier finding of the Third Study. Having replicated this finding, it can be concluded that discrepant competencies have been found in women and ally closely with sex-role stereotypes and socialization. These findings also corroborate the earlier-mentioned works on sex-differences in problem solving. What remains to be explored are both the extent to which these discrepant competencies hold within the group of women and the extent to which the discrepant competencies are exactly opposite for men and women. Such investigations will shed light on what may be a significant indicator of within-sex socialization and provide a means to study possible differences in language use between the sexes.

Statistically significant results were not found consistent with the hypotheses being tested. However, examination of non-significant results showed that as predicted in all three hypotheses, the high fear of success women had fewer correct responses than the low fear of success women. Whereas it was predicted that only high fear of success women would have better scores in front of females than males, all of the women in the study performed better in front of females. Also, the enhancement of dominant responses in the evaluative situation was true for the high fear of success women rather than for the low fear of success women as predicted. If anything, the dominant responses of women low in fear of success appear to have been enhanced in the non-evaluative situation. And finally, though it was predicted that only

low fear of success women would do worse on the masculine task, all women performed worse on the masculine task.

Failure to find results consistent with predictions from the social facilitation or fear of success literature can be looked at from at least two perspectives. First, the operationalization of the concepts may not have been strong enough and the number of subjects per cell was not very large (8). Also, earlier considerations of the stability of the fear of success measure could have accounted for lack of significant differences between high and low fear of success groups.

The second possible reason for not finding significant hypothesized results concerns the tasks themselves. If the kitchen and workshop words are considered as a reflection on sex-role socialization, then the performance on these two tasks, regardless of audience manipulations, poses interesting questions for investigation about the strength and immutability of sex-role socialization in different situations. Blank, Staff and Shaver (1976) concluded the nature of the task and issues of conformity were more relevant to performance in the presence of others than drive theory and response dominance.

Varied avenues remain open to investigation, starting with the assumption that the tasks do reflect a part of sex-roles. Also, questions can be raised about the degree of overlap in the language with which males and females are most familiar and competent. It can be further studied whether discrepant competencies in language tasks are modifiable across situations. It would be interesting to assess the degree to which evidences of sex-role socialized behaviors could be modified across various aspects of what could be called daily living.

To determine social facilitation and fear of success findings, other manipulations of the variables employed in this study might be used.

In conclusion, to have found sex differences in problem solving once again and to note significant differences in female performances in what might be called masculine and feminine tasks adds to the literature of sex differences and presents a challenge for further investigation into sex-role socialization. Whether this finding is a statistical quirk or indicative of some major schism between and within the sexes can only be assessed by further inquiry. And, though in this study significant social facilitation effects were not found, the differences in task performance may still be viewed in terms of dominant responses.

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APPENDIX A

VERBAL TAT

Carol is looking into her microscope.

A young woman is talking about something important with an older person.

At the end of the school day, Barbara is going back to the chemistry lab.

Anne is sitting in a chair with a smile on her face.

Nancy and the boy she has been dating for over a year have both applied to the same highly selective university.

After first term finals, Anne finds herself at the top of her medical school class.

APPENDIX B

AAT

1. Nervousness while taking an exam or test hinders me from doing well.

0	1	2	3	4
ALWAYS				NEVER

2. I work most effectively under pressure, as when the task is very important.

0	1	2	3	4
ALWAYS				NEVER

3. In a course where I have been doing poorly, my fear of a bad grade cuts down my efficiency.

0	1	2	3	4
NEVER				ALWAYS

4. When I am poorly prepared for an exam or test, I get upset, and do less well than even my restricted knowledge should allow.

0	1	2	3	4
This never happens to me.				This practically always happens to me.

5. The more important the examination, the less well I seem to do.

0	1	2	3	4
ALWAYS				NEVER

6. While I may (or may not) be nervous before taking an exam, once I start, I seem to forget to be nervous.

0	1	2	3	4
I always forget.				I'm always nervous during an exam.

7. During exams or tests, I block on questions to which I know the answers, even though I might remember as soon as the exam is over.

0	1	2	3	4
This always happens to me.				I never block on questions during an exam.

8. Nervousness while taking a test helps me do better.

0	1	2	3	4
It never helps.				It often helps.

9. When I start a test, nothing is able to distract me.

0	1	2	3	4
TRUE				NOT TRUE

10. In courses in which the total grade is based mainly on ONE exam, I seem to do better than other people.

0	1	2	3	4
NEVER				ALMOST ALWAYS

11. I find that my mind goes blank at the beginning of an exam, and it takes me a few minutes before I can function.

0	1	2	3	4
I almost always blank out at first				I never blank out at first.

12. I look forward to exams.

0	1	2	3	4
NEVER				ALWAYS

13. I am so tired from worrying about an exam, that I find I almost don't care how well I do by the time I start the test.

0	1	2	3	4
I never feel this way.				I almost always feel this way.

14. Time pressure on an exam causes me to do worse than the rest of the group under similar conditions.

0	1	2	3	4
Time pressures always make me do worse.				Time pressures never make me do worse.

15. Although cramming under pre-examination tension is not effective for most people, I find that if the need arises, I can learn material immediately before an exam, even under considerable pressure, and successfully retain it to use on the exam.

0	1	2	3	4
I am always able to use the crammed material successfully.				I am never able to use the material successfully.

16. I enjoy taking a difficult exam more than an easy one.

0	1	2	3	4
ALWAYS				NEVER

17. I find myself reading exam questions without understanding them and I must go back over them so that they will make sense.

0	1	2	3	4
NEVER				ALWAYS

18. The more important the exam or test, the better I seem to do.

0	1	2	3	4
This is true of me.				This is not true of me.

19. When I don't do well on a difficult item at the beginning of the exam, it tends to upset me so that I block on even easy questions later on.

0	1	2	3	4
This never happens to me.				This always happens to me.

APPENDIX C

HIDDEN WORD PUZZLE

REMEMBER THESE WORDS

Adams
Badger
Bancroft
Bonaparte
Borie
Branch
Chandler
Crowninshield
Daniels
Denby
Dickerson
Dobbin
Edison
Forrestal
Gilmer
Goff
Graham
Hamilton
Henshaw
Herbert
Hunt
Jones
Kennedy
Knox
Long
Mason
Metcalf
Meyer
Moody
Morton
Newberry
Paulding
Preston
Robeson
Smith
Southard
Stoddert
Swanson
Thompson
Toucey
Tracy
Upshur
Welles
Whitney
Wilbur
Woodbury

STOP! DO NOT TURN THE PAGE.

FIND AS MANY OF THE WORDS THAT YOU REMEMBER FROM THE PREVIOUS PAGE AND CIRCLE THEM IN THIS PUZZLE. MAKE NO MARKS OTHER THAN TO CIRCLE THE WORDS YOU RECALL.

A T T F H E S C X R P R E S T O N
R T H O M P S O N W E L L E S E E
A R C R T S N R U B L I W I O N W
W U R R O K T F T T F O R C N A B
H H E E O E J O B N H A V Y D T E
E S I S G W P O D T R A C Y R A R
G P R T R D N T N D S M R E E N R
I U O A N A A I T E E L B D R H Y
L E B L P E S B N O S R E K C I D
M A H A R G Y O O S E E T I W S E
E C R R E E S T T H H D A A N W P
R T R W Y P Y B L E C I H R A A Y
E N R O M M E E I S P S E E U N D
A U M O O D Y N M G N O L L A S E
N H H D B E R I A E T N D D D O N
O T F B C E T B H O F I T N A N N
S H F U E H S B R A N C H A M C E
A M O R T O N O A G B I N H S E K
M T G Y B N E D N T M E T C A L F

STOP! DO NOT TURN THE PAGE.

REMEMBER THESE WORDS

Apple corer
Blender
Bottle opener
Bowl
Cake decorating set
Canner
Can opener
Cleaver
Colander
Corkscrew
Corn holder
Crock
Cutter
Egg beater
Egg separator
Egg slicer
Fork
Funnel
Garlic press
Grater
Green bean slicer
Ice cream scoop
Knife
Larding needle
Ladle
Measuring spoons
Meat mace
Meat thermometer
Melon ball scoop
Mixer
Oyster knife
Pepper mill
Potato peeler
Potato ricer
Rolling pin
Scoop
Scraper
Skewer
Slotted spoon
Spatula
Spoon
Strainer
Tea pot
Timer
Tongs
Trivet
Whisk

STOP! DO NOT TURN THE PAGE.

FIND AS MANY OF THE WORDS THAT YOU REMEMBER FROM THE PREVIOUS PAGE AND CIRCLE THEM IN THIS PUZZLE. MAKE NO MARKS OTHER THAN TO CIRCLE THE WORDS YOU RECALL.

R O L L I N G P I N R E N I A R T S K Y R
E L E N N U F G A R L I C P R E S S R R E
X A R E D L O H N R O C P R I T N S O E D
I L O M E L O N B A L L S C O O P G F L N
M C R N S L C O O K E R L N O C N R T E A
M E E A O W D Q P C D E G P B S K E J E L
C L N C G O U A O O A S S K L T S E E P O
A L E S R B P R L V O G P A E G M N G O C
L I P P A E E S E R N C A N N E R B G T O
A M O A T R A R D I E W S I D O E E S A R
R R E T E M O M R E H T T A E M C A E T K
D E L U R A C U S I T A A T R E I N P O S
I P T L B C S U S C R T B E D H L S A P C
N P T A L A A K T O O O O G B I S L R M R
G E O T E N N T C T M O C L E G G I A E E
N P B M Q O D E L U E L P A S J G C T A W
E M T U O P D A O X G R Y S F T E E O T E
E F I P Y E A P O T A T O R I C E R R M K
D L S A K N M O E F I N K M E V O T S A S
L F R A S E N T O Y S T E R K N I F E C K
E I C E A R E T E V I R T A S C R A P E R

STOP! DO NOT TURN THE PAGE.

REMEMBER THESE WORDS

Allen wrench
Auger
Ball-peen hammer
Band saw
Belt sander
Bits
Brace
C Clamp
Chisel
Clamps
Claw hammer
Crosscut saw
Drill
Drill press
File
Folding rule
Half-round file
Hammers
Hand rasp
Jigsaw
Jointer
Lathe
Level
Monkey wrench
Nails
Needle-nosed pliers
Open-end wrench
Plane
Pliers
Pop rivet tool
Radial arm saw
Ripsaw
Sabre saw
Sandpaper
Tacks
Saw
Screwdriver
Screws
Slip-joint pliers
Smooth plane
Soldering gun
Staple gun
Staples
Tackhammer
Try square
Vise
Wrench

STOP! DO NOT TURN THE PAGE.

FIND AS MANY OF THE WORDS THAT YOU REMEMBER FROM THE PREVIOUS PAGE AND CIRCLE THEM IN THIS PUZZLE. MAKE NO MARKS OTHER THAN TO CIRCLE THE WORDS YOU RECALL.

C L A W H A M M E R E D N A S T L E B T C
H S T D B A L L P E E N H A M M E R H W L
P A L A E Y T O A R B P U G T F E N A A A
M H L O C O R E O M S Y A A L V I S E S M
A C H F A K Y A N T O I C P I X G L S M P
L N T R R H S M T R T K S R D I A R E R S
C E A L B O Q B L E H E D S J N E D S A A
C R O S S C U T S A W W V L Q I A J O L W
O W R S R G A N M C E N B I L F S S L A A
P Y E E H S R M D R C U P P R Q A U D I S
E E S R B I E D C F H G D J T P G H E D E
N K T P E R O S O Y I E R O E S O B R A R
E N A L P H T O O M S L T I W A S P I R B
N O P L N U T Z R O E P E N T R N O N T A
D M L I H B I A N N L A X T J D G P G E S
W B E R V A W E L S A T R P O N L R G M C
R R S D T N L E Q U E S O L I A A N U R R
E A F O L D I N G R U L E I N H V I N H E
N E R F E S R E I L P V A E T N E N L U W
C N R E O A R A L L E N W R E N C H F S S
H C N E R W D R I L L X T S R E M M A H E

STOP! DO NOT TURN THE PAGE.

APPENDIX D

AGE _____

MALE _____ FEMALE _____

UNDERGRADUATE _____ GRADUATE _____

INSTRUCTIONS

The following tasks involve remembering words and solving a hidden word puzzle.

(1) You will be asked first to look at a list of words for a specified time.

(2) Then you will be asked to stop looking at the words and find as many of the words that you can remember in a hidden word puzzle.

The hidden word puzzle is similar to puzzles you may have seen in the newspaper. Words are formed forwards, backwards, up, down, or diagonally, but they are always in a straight line and are never formed by skipping over any letters. The words often overlap and letters may be used more than once. You will not use all the letters in the diagram.

There are three lists and three puzzles in all. You will be instructed when to turn each page and when to stop each activity.

Please complete the example.

EXAMPLE

(1) Remember these words: Blue

Green

(2) Find the words and circle them in this puzzle

O S T R N

B L U E A

L L E L Y

A R Y S T

G U A B E

A T M G S

STOP! LOOK UP WHEN YOU HAVE FINISHED.

VITA

Surname: WILLIS Given Names: KATHLEEN DIANE

Place of Birth: PORTLAND, OREGON, USA

Date of Birth: NOVEMBER 8, 1945

Educational Institutions Attended, with Dates of Entering & Leaving:

UNIVERSITY OF OREGON	1963 to 1964
PORTLAND STATE UNIVERSITY	1965 to 1966
	1969 to 1971
INDIANA UNIVERSITY	1973 to 1975
UNIVERSITY OF VICTORIA	1975 to 1976

Degrees, Diplomas, Etc., Awarded, with Dates & Names of Institutions:

B.A.	1971	Portland State University
M.S.W.	1975	Indiana University

Honours & Awards:

Karl Onthank Memorial Scholarship, 1963

Oregon State Scholarship, 1963

PTA Scholarship

University of Victoria Fellowship 1975/76, 1976/77

Publications:

Willis, K. *Clusters as a Planning and Coordinating Device in Human Services*. Indianapolis, Indiana: BFE Inc., April 1975.

Brashear, D., & Willis, K. "Claiming our own: A model for women's growth," *Journal of Marriage and Family Counseling*, 1976, 2, 251-258.

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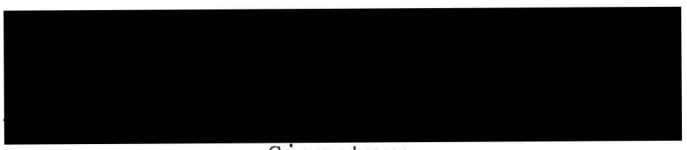
Title of Thesis/Dissertation

THE EFFECTS OF SEX OF AUDIENCE AND DEGREE OF EVALUATION ON TASK PERFORMANCE OF WOMEN ASSESSED ON FEAR OF SUCCESS

Author 

Signature

KATHLEEN DIANE WILLIS

Name

January 18, 1977

Date