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In the present investigation, the effects of expectation of success, high (HES) and low (LES), and audience presence versus absence on complex task performance were examined. Sixteen male and 16 female college students were instructed to perform on a complex memory task. Following recall, subjects were told that they performed poorly or superbly and were then instructed to perform on a second similar task. Subjects were assigned to either an audience or to an alone condition. Furthermore, subjects completed effort, expectation, and arousal scales before commencing on tasks I and II.

The analysis of covariance revealed a significant expectation x audience presence interaction. Scheffe' post hoc comparisons indicated that alone condition LES subjects (AL-LES) performed significantly better than audience condition LES subjects (AUD-LES) while the performance of alone condition HES subjects (AL-HES) did not significantly differ from audience condition HES subjects (AUD-HES). Although neither of the comparisons within audience presence reached significance, the form of the interaction indicated that within the alone condition, the performance of LES subjects was superior to that of HES subjects. On the contrary, within the audience condition, the relationship was reversed. The verbal data were inconsistent with the behavioral data. The data were discussed in relation to a number of theoretical positions.

The behavioral data lent support to the contention that the presence of others results in debilitated performance only when others are stimuli for the anticipation of negative outcomes. Furthermore, the finding that within the alone condition, the performance of LES subjects was

superior to that of HES subjects, lent support to the contention that arousal and incentive motivation effect task performance.

THE EFFECTS OF EXPECTED PROBABILITY  
OF SUCCESS AND AVOIDANCE PUNISHMENT  
ON COMPLEX TASK PERFORMANCE

David David Gordon

A Thesis Submitted to  
the Faculty of the Graduate School at  
The University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

Greensboro  
1977

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OF SUCCESS AND AUDIENCE PRESENCE  
ON COMPLEX TASK PERFORMANCE

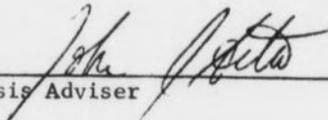
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7

APPROVAL PAGE

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I dedicate this Master of Arts thesis to my dear parents Murad and Daisy Saddick. If it was not for them, this thesis, as well as my accomplishments in graduate and undergraduate school would have never been possible. I would like to thank my thesis committee members: Drs. Robert G. Eason, Rosemary O. Nelson, and Jackie Gaebelein for their helpful remarks and valuable suggestions that made this thesis a valuable educational experience. I would especially like to thank my thesis committee chairman, Dr. John Seta, for his many hours of unflinching advice and encouragement. Furthermore, I would like to express my appreciation to Dr. Mary F. Geis for the use of her slide projector which was used in the pilot research stage of this thesis. Finally, I would like to thank my friend Skip Beck for the enjoyable discussions on the topics of coercion and audience effects in social psychology.

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## CHAPTER I

## INTRODUCTION

Past research has demonstrated that an individual's task performance can be affected by the presence of others (see Cottrell, 1972 for a review). Two paradigms have been employed in this research, audience and coaction. In the audience paradigm, individuals perform on a task in the presence of observers. The observers may or may not be actually present. That is, a subject might simply be told that others are observing through a one-way mirror while in reality no audience exists. In the coaction paradigm, a group of individuals concurrently and individually perform on an identical task. In this paradigm, an individual is sometimes told that he is working concurrently and individually on a task with other conspecifics while in reality the individual is performing on the task alone. The presence of conspecifics has been shown to increase an individual's overall level of performance. This effect has been obtained with humans (e.g., Bergum and Lehr, 1963; Meumann, 1904; Travis, 1925) as well as with infrahuman species (e.g., Chen, 1937; Harlow, 1932; James, 1953; Stamm, 1961; Tolman and Wilson, 1965).

While the above mentioned studies evidenced performance facilitation with increasing numbers of conspecifics, other studies reported performance decrements with increasing number of conspecifics (e.g., Allee and Masure, 1936; Allport, 1920; Dashiell, 1930; Klopfer, 1958; Pessin, 1933).

In attempting to reconcile these conflicting results Zajonc (1965) suggested that the mere presence of others increases an individual's general level of arousal. That is, a conspecific is an innate source of arousal induction. Using a Hull-Spence equation  $E = D \times H$ , Zajonc argues that increasing level of arousal increases the tendency to emit dominant responses. If the dominant responses are correct for the task at hand (as with well learned tasks), heightened arousal will result in improved performance by the individual; if the dominant responses are incorrect for the task at hand (as with tasks that are not well learned), arousal will result in impaired performance. Those studies finding performance decrements presumably employed tasks that were not well learned, while those resulting in performance increments presumably employed tasks that were well learned. The results of a number of experiments have lent support to this position (Aiello, Epstein and Karlin, 1975; Hunt and Hillery, 1973; Matlin and Zajonc, 1968; Zajonc and Nieuwenhuyse, 1964; Zajonc and Sales, 1966). Specifically, the results of these studies support the notion that conspecifics can increase an individual's overall level of arousal and hence the emission of dominant responses. However, a number of studies (e.g., Carment, 1970 Cottrell, 1968; Henchy and Glass, 1968; Paulus and Murdoch, 1971) have not supported Zajonc's contention that the "mere presence" of other conspecifics is sufficient to increase an individual's overall level of arousal. Given these latter data, Cottrell (1972) has modified Zajonc's (1965) conceptualization by arguing that "mere presence" is not a sufficient condition for increased arousal. He proposed that the mere presence of other conspecifics has nondirective energizing effects only if the presence of others creates anticipations

of positive or negative outcomes. Stated differently, Cottrell argues that other conspecifics are a source of arousal induction if and only if they are evaluative in nature (i.e., they serve as cues signalling positive or negative outcomes). The remainder of Cottrell's learned drive or evaluation apprehension position is identical to that proposed by Zajonc (1965). That is, increasing levels of arousal increases the probability of a dominant response. If the dominant responses are correct heightened arousal will result in improved performance; if the dominant responses are incorrect, heightened arousal will result in impaired performance. Cottrell's position has received support from a number of studies (e.g., Cottrell, Wack, Sekerak and Rittle, 1968; Gore and Taylor, 1973; Henchy and Glass, 1968; Paulus and Murdoch, 1971; Sasfy and Okun, 1964). For example, Sasfy and Okun (1964) compared the performance of subjects working either alone or in the presence of an audience. Evaluation apprehension was manipulated by varying the expertise of the audience members. Subjects observed by an expert audience performed significantly worse on complex motor tasks as compared to subjects in an alone condition. However, the performance of subjects observed by a nonexpert audience did not differ from the performance of subjects working alone. These data were interpreted as supporting Cottrell's learned drive position. Since nonexpert audience members did not serve as cues signalling positive or negative outcomes, their presence was not a source of arousal induction. On the contrary, expert audience members did signal positive or negative outcomes and hence were a source of arousal induction.

Due to these data, Zajonc (Note 1) has modified the "mere presence" version of his original position by arguing that conspecifics might increase another's overall level of arousal because the presence of conspecifics creates uncertainty. He states "In the presence of others, some degree of alertness or preparedness for the unexpected is generated . . . because one never knows, so to speak, what sort of responses--perhaps even novel and unique--might be required of the individual in the next few seconds (p. 23)." In a similar vein, Sanders and Baron (1975) in extending Jones and Gerard (1967) have argued that any stimulus which distracts an individual from a primary task can increase an individual's overall level of arousal. Zajonc (1965, Note 1), Cottrell (1972) and Sanders and Baron (1975) have all assumed that conspecifics can generate arousal induction even though they posit somewhat different causes for the effect. However, it should be mentioned that the above theorists have all employed the Hull-Spence equation  $E = D \times H$ , in attempting to explain the effects of arousal on task performance.

While the above mentioned theorists have concentrated on the arousal inducing properties of conspecifics, it seems that conspecifics can also be a source of arousal reduction. In certain situations, individuals may have associated the presence of others with a reduction in vulnerability to an aversive situation or outcome and consequently the presence of others serves as a source of arousal reduction. This suggestion is supported by a series of studies on affiliation (Amoroso and Walters, 1969; Schachter, 1959; Wrightsman, 1960) which have demonstrated that individuals exposed to aversive stimuli (e.g., threat of shock) are motivated to be with others who are also exposed to these same aversive

experience, they demonstrated a reduction in their level of fear or arousal compared to other individuals not given such an opportunity (Amorosso and Walters, 1969; Wrightsman, 1960). These data have prompted a number of researchers (e.g., Geen, in press; Seta, Paulus and Schkade, 1976) to argue that conspecifics can be a source of arousal reduction as well as a source of arousal induction. Geen (in press) states "When the other person or persons present have been associated in the past with either the termination or the avoidance of punishment, they should acquire the status of such CS's (e.g., Kissel, 1965). Others who are likely to evoke feelings of fear, uncertainty, embarrassment or general loss of self-esteem, however, should function as stimuli for increased arousal (Glass, Gordon and Henchy, 1970; Sarnoff and Zimbardo, 1961; Firestone, Kaplan and Russell, 1973; Teichman, 1974; Shaver and Liebling, 1976) (p. 23)." Geen in accord with Weiss and Miller (1971) further argued that the above hypothesis is consistent with the notion that the presence of others leads to increased arousal only when the others are stimuli for the anticipation of negative outcomes. This hypothesis is based on Brown and Farber's (1968) contention that only aversive primary drives serve as a basis for learned drives and has prompted Weiss and Miller (1971) to conclude that conditioned incentive is not involved in evaluation apprehension. That is, drive induced by other conspecifics is not an appetitive drive but one based on negative expectancies. A number of studies have supported this position (e.g., Clark and Fouts, 1973; Geen, 1976).

In contrast to Weiss and Miller, a study by Good (1973) attempted to demonstrate the efficacy of an incentive motivation concept within

social facilitation. In one condition, Good presumably induced a high probability of success while in a second condition, he presumably induced a low probability of success. In addition, he manipulated the immediacy of evaluation--some subjects were told that they would be immediately evaluated while others were told that their evaluation would be delayed. Subjects given a high probability of success demonstrated a social facilitation effect, while subjects given a low probability of success did not. As indicated by Geen (in press), Good's results suggest that "Anticipation of a positive outcome may produce evaluation apprehension and subsequent drive increase. However, it fails to provide evidence that expectation of a negative outcome has the same influence on behavior. At best, therefore, the study provides only equivocal support for the idea that evaluation apprehension is related to anticipation of either positive or negative outcomes (p. 21)." An analysis of possible reasons for the inconclusiveness of Good's results follows. By leading subjects to believe that they would do well (high probability of success subjects), the experimenter set a high standard or expectation for the subjects. Since subjects have an extensive past learning history before entering the laboratory, high probability of success (HPS) subjects might not have expected to meet the experimenter's demands; consequently, these subjects might have experienced apprehension or stress. Hence, a social facilitation effect was obtained because subjects that were to be immediately evaluated might have experienced a greater degree of stress relative to those subjects for whom the evaluation was delayed. On the contrary, low probability of success (LPS) subjects were not expected to do well. Hence, these subjects might have expected to meet the

experimenter's demands and consequently experienced a low degree of stress regardless of whether their evaluation was immediate or delayed.

Different results might have been obtained if the subject's expectation of success could have been manipulated without affecting the subject's perception of the performance that is expected of him by the experimenter. One possible way by which this can be done follows. First, subjects will be given a past history of either success or failure on a complex memory task and then be required to perform on a similar task either alone or in the presence of an audience. Subjects who have succeeded will presumably have higher expectations of success than those subjects who have previously failed. To minimize subjects' concern about matching their previous performance and "Living up" to the experimenter's expectations, subjects will be told that their previous performance was simply practice and is of no concern to the experimenter. If subjects are not told that their previous performance was merely practice, subjects in the high expectation group might become overly aroused during their performance since they might perceive a discrepancy between their performance on the first and second tasks. This arousal (not produced by the independent variables) might confound any arousal actually caused by the independent variables. An inconsistency might result from the fact that the high expectation subjects might be concerned about matching their previous performance while the low expectation subjects might not. The procedure just described should manipulate subjects' expectations (since subjects are told that the two tasks are similar) while keeping the demands of the experimenter and the subjects' concern about matching their previous performance constant.

A number of predictions can be derived from the above procedure. The predictions derived from three theoretical positions will be discussed. Zajonc's (1965) framework would predict a difference in the performance of individuals working in audience and alone conditions. However, it would not predict differences in the performance of high and low expectation of success subjects. High (HES) and low (LES) expectation of success subjects should not differ since Zajonc's model does not predict different levels of arousal for different levels of expectation. Thus, the performance of subjects working in front of an audience should be inferior to that of subjects working alone.

In contrast to Zajonc, Weiss and Miller (1971) would predict differences in the performance of LES and HES subjects. The performance of LES subjects working alone (AL-LES) would be superior to that of LES subjects working in front of an audience (AUD-LES). However, in the HES condition, the performance of alone (AL-HES) and audience condition (AUD-HES) subjects should not differ.

The rationale for these predictions follow. Weiss and Miller (1971) in accord with Brown and Farber (1968) argued that the presence of others leads to increased arousal only when others are stimuli for the anticipation of negative outcomes (i.e., others evoke feelings of fear, uncertainty, embarrassment, or loss of self-esteem). If an individual has a low expectation of success (negative expectancy), others might be viewed as potentially negative (e.g., socially punishing) stimuli, thus, resulting in increased arousal. Since AUD-LES individuals are presumed to be more aroused than AL-LES individuals, and since the task at hand is complex, increased arousal should result in debilitated performance.

Therefore, the performance of AL-LES individuals should be superior to the performance of AUD-LES individuals. However, if an individual has a high expectation of success (minimal negative expectancy), the presence of others should lead to a small increase in arousal. Therefore, the performance of AUD-HES individuals should not differ significantly from the performance of AL-HES subjects. In sum, Weiss and Miller (1971) predict an expectation x audience size interaction. Within the LES condition, a pronounced audience effect is expected while within the HES condition, a relatively weak audience effect should be obtained.

Predictions can also be derived from a synthesis and extension of the positions advocated by Seta, Paulus and Schkade, 1976, and Seta, Paulus and Risner, 1977. According to this framework, an individual's ultimate level of performance depends upon the combined effects of incentive motivation and arousal. Increased effort expenditure tends to improve task performance, while increasing levels of stress tend to result in performance decrements. In addition, the more complex the task, the greater the debilitating effects of stress. Within the present paradigm, a HES individual would be expected to be superior in an audience rather than in an alone condition. On the contrary, the performance of a LES individual would be expected to be superior in an alone rather than in an audience condition. The rationale for the above follows. Other conspecifics can be either a source of positive and/or a source of negative outcomes (Seta, Paulus and Schkade, 1976). If an individual has a high expectation of success (HES), other conspecifics might be viewed as potentially positive (e.g., socially rewarding) stimuli. Since the individual has a high probability of succeeding, the individual might be

expected to concentrate on the reward properties of other conspecifics. Hence, the greater the number of conspecifics viewing a HES subject's performance, the greater is the potential magnitude of social reward. Consequently, for HES subjects, increasing the number of audience members might signal a potential increase in reward magnitude and a corresponding increase in an effort leading to improved performance. In addition, a HES individual may become more stressed with an increase in audience size. However, if the individual is sufficiently confident (i.e., high expectation of success), he/she should not be concerned about incurring negative consequences from others and consequently, should experience little stress. If the above reasoning is correct, the performance of a HES individual might be expected to be superior in an audience rather than in an alone condition. The audience condition supplies the HES subject with greater incentive motivation, a greater expenditure of effort, and consequently a superior performance. However, if an individual has a low expectation of success (LES), other conspecifics might be viewed as potentially negative (e.g., socially punishing) stimuli. Since the individual has a low probability of succeeding, the individual might be expected to concentrate on the potential punishing aspects of other conspecifics. Hence, the greater the number of conspecifics viewing a LES subject's performance, the greater is the potential magnitude of social punishment. Consequently for LES subjects, increasing the number of audience members might signal a potential increase in the magnitude of social punishment and a corresponding increase in stress. In addition, a LES individual should expend greater amounts of effort with increases in the size of the audience. To avoid potential punishment, a LES

individual could be expected to expend a great deal of effort as long as the LES individual has some minimal expectation of success. Due to the above, it is difficult to predict a LES subject's ultimate level of performance, since an increase in effort presumably results in improved performance, while an increase in stress presumably results in impaired performance. Yet it seems that predictions can be derived if one considers the combined effects of stress and incentive motivation. The effects of stress are presumably more debilitating the more complex the task. Hence, on a complex task, the increased effect of stress derived from increasing the number of conspecifics might outweigh the increased effect of incentive motivation also derived from increasing the number of conspecifics. Consequently, one might expect that the performance of AUD-LES subjects would be inferior to that of AL-LES subjects.

In summary, different theoretical frameworks predict different results. Zajonc (1965) would predict a main effect for audience presence. The performance of individuals working alone should be superior to the performance of individuals working in front of an audience. Weiss and Miller (1971) would predict an expectation x audience interaction. The performance of AL-LES individuals should be superior to the performance of AUD-LES individuals; however, the performance of AL-HES and AUD-HES individuals should not differ. Finally an arousal incentive motivation view would seem to predict an expectation x audience interaction. The performance of AUD-HES subjects should be superior to the performance of AL-HES subjects. On the contrary, the performance of AUD-LES subjects should be inferior to the performance of AL-LES subjects.

## CHAPTER II

## METHOD

Subjects. Thirty-two (16 male and 16 female) undergraduate introductory psychology students attending the University of North Carolina at Greensboro were randomly assigned to 4 experimental conditions.

Apparatus and Stimuli. All stimuli consisted of English words selected from Kucera and Francis' (1967) normative data on the frequency of appearance of words in the English language. The word frequency for tasks I and II ranged from 64-68 (See Appendix B). The stimuli were low frequency words appearing 64-68 times out of a total possible of 1,014,232 times. A total of forty words was selected. Task I employed a list consisting of twenty English words. Across the top of the list were names of four color categories (red, green, blue, and yellow), while beneath each color category were five English words. Task II employed a different list consisting of twenty English words. Across the top of the list were the names of four suits of cards (diamonds, spades, hearts, and clubs), while beneath each of the suits were five English words. A 5' x 1' mirror was attached to the wall perpendicular to the subject's chair. The mirror was purportedly a one-way mirror through which imaginary people observed the subject's performance. The experimenter devised questionnaires assessing the subject's expectation of success, the amount of effort expended, and a Mehrabian and Russell scale (1974) assessing the subject's perception of arousal (See Appendices C,

D, and E). Finally a 4' x 3' wooden screen was utilized to prevent any visual contact between the experimenter and the subject during the latter's performance.

Experimental Design. A 2 x 2 (two factors between) factorial design manipulating two levels of expectation (high and low) and two levels of audience (presence and absence) was employed.

Procedure. Upon entering the psychology laboratory, subjects were seated in a chair adjacent to a wall. The experimenter introduced himself as a student at UNC-G and explained that his sole function was to give instructions and to give subjects the list of words necessary for the memory experiment. The experimenter then described task I to subjects (See Appendix A). Task I employed a list of twenty English words. Across the top of the list were names of four color categories (red, green, blue, and yellow), while beneath each color category were five English words. Subjects were told to try and memorize as many of the words under their respective color categories as possible. Furthermore, the experimenter told subjects that they could recall the words in any order as long as they put the correct words under the correct color category. Subjects were then requested to sign a consent form. Prior to beginning on task I, subjects were asked to fill out the expectation and effort questionnaires, and the Mehrabian and Russell (1974) arousal scale. Subjects were given one minute to memorize the list followed by two minutes to recall as many of the words as they could remember. The experimenter was seated behind a wooden screen during both memorization and recall periods. Following completion of recall, subjects were told that they performed poorly (low expectation of success) or superbly (high expectation of success).

Subjects in the LES condition were told that their performance score was equivalent to the 10th percentile while subjects in the HES condition were told that their performance score was equivalent to the 90th percentile. Subjects were then told that task I was only a practice task and that they should not be concerned with their performance on it. Furthermore, the experimenter told subjects that the task they were about to perform (task II) was not a practice task and that how well they performed on task I should be a good indicator of how well they may perform on task II. Prior to commencing on task II, subjects in the audience condition were told that their performance would be observed by four people in the adjacent room through a one-way mirror. The experimenter proceeded to uncover the mirror which was previously covered by a curtain. Alone condition subjects were not told about the one-way mirror which was covered with a curtain during the entire experimental session. Prior to commencing on task II, subjects were again asked to fill out the expectation and effort questionnaires, and the Mehrabian and Russell arousal scale. Task II employed a list consisting of twenty English words. Across the top of the list were names of four suits of cards (diamonds, spades, hearts, and clubs) while beneath each of the suits were five English words. Subjects were given one minute to memorize the list followed by two minutes to recall as many of the words as they could remember. Following recall, subjects were debriefed and thanked for their participation.

Scoring of Verbal Questionnaires. The subjects' responses on the expectation of success and effort questionnaires were scored on a 10-50 point scale. A score of 10, 30, and 50 on the expectation of success

questionnaire indicated a very low, moderate, and a very high expectation of success respectively. Similarly, a score of 10, 30, and 50 on the effort questionnaire indicated minimal, moderate, and high amounts of effort expended respectively. Subjects' responses on the Mehrabian and Russell arousal scale were scored on a 1-9 point scale. A score of 1 indicated that subjects were relaxed, while a score of 9 indicated that subjects were highly aroused (e.g., crowded, nervous). Values between 4 and 7 indicated that subjects were moderately aroused (See Appendices C, D, and E).

## CHAPTER III

## RESULTS

The means (behavioral data) of the four experimental conditions are shown in Table 1A (Appendix F). An analysis of covariance employing scores on task I as covariate and scores on task II as variate, revealed a significant expectation x audience presence interaction,  $F(1,27) = 5.37, p < .05$ . The analysis also revealed a significant main effect for audience presence,  $F(1,27) = 16.00, p < .01$  (See Table 1B, Appendix F). The main effect for expectation did not reach significance ( $F < 1$ ). Scheffe' post hoc comparisons among means revealed that within the low expectation condition, subjects working alone recalled significantly more words than subjects working in front of an audience ( $p < .01$ ), while within the high expectation condition, alone and audience condition subjects did not significantly differ ( $F < 1$ ). Although neither of the comparisons within audience presence reached significance, one can see from Table 1A (Appendix F), that the form of the interaction indicates that within the alone condition, low expectation subjects recalled more words than high expectation subjects ( $p < .12$ ); on the contrary, within the audience condition, high expectation subjects recalled more words than low expectation subjects ( $p < .10$ ). Furthermore, utility indices (between factors, fixed effects design) for significant effects indicated that the main effect for audience presence, and the expectation x audience presence interaction accounted for 31% and 9% of the total variance respectively.

The means of the verbal questionnaire assessing expected probability of success for the four experimental conditions are given in Table 2A (Appendix F). An analysis of covariance utilizing scores on questionnaire I as covariate and scores on questionnaire II as variate, revealed a significant main effect for expectation,  $F(1,27) = 14.45$ ,  $p < .01$ , while the main effect for audience presence and the expectation x audience presence interaction did not reach significance (See Table 2B, Appendix F). Thus, high expectation subjects reported that they were significantly more likely to succeed on task II than low expectation subjects. Utility indices for significant effects revealed that the main effect for expectation accounted for 29% of the total variance.

The means of the Mehrabian and Russell verbal scale assessing the degree of arousal felt by subjects for the four experimental conditions are given in Table 3A. An analysis of covariance employing scores of scale I as covariate and scores of scale II as variate, revealed a significant main effect for expectation,  $F(1,27) = 4.76$ ,  $p < .05$ . Thus, high expectation subjects reported that they were significantly less aroused than low expectation subjects (See Table 3B, Appendix F). Although the main effect for audience presence was not significant, one can see from Table 3A (Appendix F) that subjects in the alone condition reported that they were less aroused than subjects in the audience condition,  $F(1,27) = 3.12$ ,  $p < .10$ . Furthermore, the expectation x audience presence interaction did not reach significance ( $F < 1$ ). Utility indices for significant effects indicated that the main effect for expectation accounted for 11% of the total variance.

The means of verbal questionnaire assessing amount of effort expended by subjects for the four experimental conditions are given in Table 4A (Appendix F). An analysis of covariance employing scores on questionnaire I as covariate and scores on questionnaire II as variate, revealed that the main effects for expectation and audience presence, and the expectation x audience presence interaction did not reach significance ( $F < 1$ ) (See Table 4B, Appendix F). Therefore, the amount of effort subjects reported that they expended did not vary significantly across the four experimental conditions.

## CHAPTER IV

## DISCUSSION

The results of the present study lend support to the hypotheses of Weiss and Miller (1971) and to the arousal-incentive motivation framework derived from Seta, Paulus and Risner (1977). However, the results do not support the hypotheses derived from Zajonc's (1965) theoretical conceptualization.

The statistical analysis revealed that within the low expectation condition, subjects working alone performed significantly better than subjects working in front of an audience, while within the high expectation condition, the performance of subjects working alone did not differ significantly from that of subjects working in front of an audience. This significant expectation x audience presence interaction can not be accounted for by Zajonc's (1965) framework since his framework would not predict differences in the performance of high and low expectation of success subjects. The expectation x audience presence interaction supports Weiss and Miller's contention that on a complex task, the presence of conspecifics results in performance decrements only when conspecifics are stimuli for the anticipation of negative outcomes (i.e., others evoke feelings of fear, embarrassment, or loss of self-esteem). A marked audience effect was obtained for LES condition subjects since they anticipated negative outcomes, while no audience effect was obtained for HES condition subjects since these subjects presumably had a minimal anticipation of negative outcomes. As can be seen from Table 1A

(Appendix F), the performance of LES subjects was superior to that of HES subjects within the alone condition, while within the audience condition, the performance of LES subjects was inferior to that of HES subjects. The finding that AUD-HES subjects performed better than AUD-LES subjects lends support to the theoretical framework of Weiss and Miller (1971). Weiss and Miller contend that the presence of conspecifics results in debilitated performance on a complex task only when conspecifics are stimuli for the anticipation of negative consequences. Thus, if an individual has a negative expectancy, conspecifics might be viewed as potentially negative stimuli, resulting in a high level of arousal. However, if an individual has a positive expectancy (high expectation of success), the presence of conspecifics should result in a relatively low level of arousal.

However, Weiss and Miller (1971) would have difficulty in accounting for the performance of LES and HES subjects within the alone condition. Since a negative expectancy (low expectation of success) induces arousal (Weiss and Miller, 1971), it can be argued that LES individuals should be generally more aroused than HES individuals. Furthermore, since the task is complex, increments in arousal should result in debilitated performance. Therefore, within the alone condition, the performance of HES subjects should be superior to the performance of LES subjects. Since this was not the case, it may be argued that a second process (incentive motivation) must be interacting with arousal. Seta et al. (1977) contend that AL-LES subjects should be more aroused and should exert greater amounts of effort than AL-HES subjects. The former should exert a greater amount of effort in an attempt to avoid negative consequences (e.g., embarrassment). Hence,

it may be the increase in the amount of effort expended that resulted in the AL-LES subjects' superior performance.

The form of the expectation x audience presence interaction also lends support to the arousal-incentive motivation framework if one assumes that HES condition subjects were not sufficiently confident to totally deemphasize the negative consequences that could be derived from others. If this were the case, the performance of AUD-HES subjects would not be expected to be superior to AL-HES subjects. That is, a pronounced audience effect should have been obtained within the LES condition, while a relatively weak or no audience effect should have been obtained within the HES condition. Since HES condition subjects had a minimal expectancy of incurring negative outcomes, increasing the number of conspecifics should have somewhat increased the subjects' overall level of stress. Hence, the increased amount of effort resulting from increasing the number of audience members did not outweigh the increased amount of arousal also derived from increasing the number of audience members. Consequently, the performance of AL-HES and AUD-HES subjects did not significantly differ.

Finally, the finding that AUD-HES subjects performed better than AUD-LES subjects also supports an arousal-incentive motivation framework. A LES individual could be expected to expend more effort than a HES individual, and a LES individual should be more stressed. In addition, increasing levels of stress should produce marked decrements in performance, while increments in effort should result in improved performance. However, since the task at hand is complex, the performance of AUD-LES subjects should be inferior to the performance of AUD-HES subjects. Relative to HES subjects, the LES subjects' high level of arousal should produce

decrements in performance and these decrements should outweigh the effects of increased effort.

In sum, the behavioral results of the present experiment lend support to Weiss and Miller's (1971) position as well as the arousal-incentive motivation position. However, the results do not support Zajonc's (1965) conceptual framework.

The verbal data reported by subjects on the effort questionnaire are inconclusive. Statistical analyses revealed that the amount of expended effort subjects reported did not vary significantly across the four experimental conditions (See Tables 4A and 4B). The majority of the subjects reported that they would expend a great deal of effort on tasks I and II. The effort verbal data do not support Seta et al's. (1977) theoretical framework. Seta et al. would predict a significant expectation x audience presence interaction. Thus, AUD-HES subjects should have reported that they expended significantly more effort than AL-HES subjects. In addition, AL-LES subjects should have reported that they expended significantly more effort than AL-HES subjects. Possible reasons for the inconclusive findings follow. In an academic environment (e.g., university setting), verbal behaviors reflecting large amounts of effort expended usually result in positive consequences (e.g., social reward), while verbal behaviors reflecting minimal amounts of effort expended usually result in negative consequences (e.g., social punishment or embarrassment). Even though the experimenter told subjects that he would have no input into the evaluation process, it is highly probable that subjects reported they would expend a great deal of effort in an attempt to avoid negative consequences. The subjects' introductory

psychology professor would probably be the most likely source of the negative consequences, since the professor was the agent who granted the subjects extra credit for participating in the experiment. Furthermore, verbal behavior may not necessarily correlate highly with motor behavior and psycho-physiological responses (Lang, 1968). Perhaps if a behavioral index of amount of effort expended had been employed, different results would have been obtained.

The verbal data reported by subjects on the Mehrabian and Russell (1974) arousal scale are also inconclusive. Statistical analyses revealed a significant main effect for expectation (See Tables 3A and 3B, Appendix F). Thus, low expectation subjects reported that they were significantly more aroused than high expectation subjects. Furthermore, although the main effect for audience presence was not significant, Table 3A (Appendix F), indicates that subjects in the audience condition reported that they were more aroused than subjects in the alone condition. The arousal verbal data do not support Weiss and Miller (1971) or Seta et al's. (1977) theoretical frameworks. Both theoretical frameworks would predict a significant expectation x audience presence interaction. That is, they would predict that the discrepancy in arousal between the AL-LES and AUD-LES subjects should have been greater than the discrepancy between the AL-HES and AUD-HES subjects. This may not have been the case since the AUD-LES subjects were asked to respond to the arousal scale in front of an audience. Due to the audience, LES subjects may not have responded to the scale accurately in an attempt to avoid the negative consequences (e.g., embarrassment) that may be associated with one's self



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## REFERENCE NOTES

1. Zajonc, R. B. Comprehension. Paper read at the Annual Convention of Midwest Psychological Association, Cleveland, 1972.

"Hello. My name is \_\_\_\_\_. I am a student here at UNL and my job is to give you instructions and to give you the list of words that is needed for this memory experiment. If you have any questions before the experiment begins feel free to ask me."

- II. I give S the task and words.

"Here is a task I'd like for you to work on. Very shortly I am going to present you with a stack of paper. Across the top of the paper, you will see written four color categories: red, green, blue and yellow. Belowneath each color category you will observe five English words. Your job is to try and associate as many of these English words under their respective categories as possible. This means that any word appearing under the category red has to be recalled under the category red in order for it to be counted as correct. Any word appearing under green has to be recalled under green, etc. The order in which the words are recalled within each category is not important. Do you have any questions? You will have exactly one minute to study the list, when the one minute is over I will take the list away and will provide you with a sheet of paper and pen. You will then have ten minutes to recall as many words as you possibly can. In addition, I will be giving you a questionnaire several times during the experiment. The questionnaire will require you to report how you are feeling about yourself and about the task at hand. Please do not write your name on the questionnaire so that its contents will remain anonymous. I will not look at your questionnaire for my job here is only to give instructions, and to give you the list of words. Please read this document very carefully and sign it if you wish."

- III. I give S questionnaire.

- IV. I give S task I and give behind screen. After 2 minute has lapsed, he will provide S with a paper and pen and will say:

"You have exactly 2 minutes to recall as many words as you possibly can."

## APPENDIX A

Instructions - #1. High expectation/Alone.I. E sits S in chair facing wall. E says:

"Hello. My name is \_\_\_\_\_. I am a student here at UNC-G and my job is to give you instructions and to give you the list of words that is needed for this memory experiment. If you have any questions before the experiment begins feel free to ask me."

II. E gives S the task and says:

"Here is a task I'd like for you to work on. Very shortly I am going to present you with a piece of paper. Across the top of the page, you will see written four color categories: red, green, blue and yellow. Underneath each color category you will observe five English words. Your job is to try and memorize as many of these English words under their respective categories as possible. This means that any word appearing under the category red has to be recalled under the category red in order for it to be counted as correct. Any word appearing under green has to be recalled under green, etc. The order in which the words are recalled within each category is not important. Do you have any questions? You will have exactly one minute to study the list, when the one minute is over I will take the list away and will provide you with a sheet of paper and pen. You will then have two minutes to recall as many words as you possibly can. In addition, I will be giving you a questionnaire several times during the experiment. The questionnaire will require you to report how you are feeling about yourself and about the task at hand. Please do not write your name on the questionnaire so that its contents will remain anonymous. I will not look at your questionnaire for my job here is only to give instructions, and to give you the lists of words. Please read this consent form carefully and sign it if you wish."

III. E gives S questionnaires.IV. E gives S task I and sits behind screen. After 1 minute has lapsed, he will provide S with a paper and pen and will say:

"You have exactly 2 minutes to recall as many words as you possibly can."

V. Following recall E will say:

"You recalled \_\_\_\_\_ words correctly. Given the standards set up for this particular task, your performance is equivalent to the 90th percentile which means that you beat 90 percent of the people who performed on this task before you, which also means that only 10 percent of the people who performed on this task before you beat you at it."

VI. E says:

"This first task you performed on was only a practice task so do not be concerned with your performance on that task. However, the first practice task is very similar to the second task you will be working on, only this second task is not practice. Since the first practice task and the second non-practice task are highly similar, how well you performed on the practice task should give you a good idea of how well you may perform on this second task."

VII. E gives S questionnaires.

VIII. E gives S task II and sits behind screen.

IX. After 1 minute has lapsed E says:

"Here is a piece of paper. You have exactly 2 minutes to recall as many words as you possibly can."

X. S is debriefed.

Instructions - #2. High expectation/Audience.

I. E sits S in chair facing wall. E says:

"Hello. My name is \_\_\_\_\_. I am a student here at UNC-G and my job is to give you instructions and to give you the list of words that is needed for this memory experiment. If you have any questions before the experiment begins please feel free to ask me."

II. E gives S task and says:

"Here is a task I'd like for you to work on. Very shortly I am going to present you with a piece of paper. Across the top of the page, you will see written four color categories: red, green, blue, and yellow. Underneath each color category you will observe five English words. Your job is to try and memorize as many of

these English words under their respective categories as possible. This means that any word appearing under the category red has to be recalled under the category red in order for it to be counted as correct. Any word appearing under green has to be recalled under green, etc. The order in which the words are recalled within each category is not important. Do you have any questions? You will have exactly one minute to study the list, when the one minute is over I will take the list away and will provide you with a sheet of paper and pen. You will then have two minutes to recall as many words as you possibly can. In addition, I will be giving you a questionnaire several times during the experiment. The questionnaire will require you to report how you are feeling about the task at hand. Please do not write your name on the questionnaire so that its contents will remain anonymous. I will not look at your questionnaire for my job here is only to give instructions, and to give you the lists of words. Please read this consent form carefully and sign it if you wish."

III. E gives S questionnaires.

IV. E gives S task I and sits behind screen. After 1 minute has lapsed, he will provide S with a paper and pen and will say:

"You have exactly 2 minutes to recall as many words as you possibly can."

V. Following recall E will say:

"You recalled \_\_\_\_ words correctly. Given the standards set up for this particular task, your performance is equivalent to the 90th percentile which means that you beat 90 percent of the people who performed on this task before you, which also means that only 10 percent of the people who performed on this task before you beat you at it."

VI. E says:

"This first task you performed on was only a practice task so do not be concerned with your performance on that task. However, the first practice task is very similar to the second task you will be working on, only this second task is not practice. Since the first practice task and the second non-practice task are highly similar, how well you performed on the practice task should give you a good idea of how well you may perform on this second task. In addition, your performance will be observed by 4 people who are in the adjacent room through this one-way mirror which is behind this curtain. These people did not observe your performance in practice. However, they will be observing your performance as soon as I pull away the curtain. Do you have any questions? Let us begin. However, please fill out this questionnaire first."

- VII. E gives S questionnaires.
- VIII. E gives S task II and sits behind screen.

IX. After 1 minute has lapsed E says:

"Here is a piece of paper. You have exactly 2 minutes to recall as many words as you possibly can. Please write the words as large as possible so that the people observing you can see exactly what you are writing."

X. S is debriefed.

Instructions - #3. Low expectation/Alone.

I. E sits S in chair facing wall. E says:

"Hello. My name is \_\_\_\_\_. I am a student here at UNC-G and my job is to give you instructions and to give you the list of words that is needed for this memory experiment. If you have any questions before the experiment begins please feel free to ask me."

II. E gives S the task and says:

"Here is a task I'd like for you to work on. Very shortly I am going to present you with a piece of paper. Across the top of the page, you will see written four color categories: red, green, blue, and yellow. Underneath each color category you will observe five English words. Your job is to try and memorize as many of these English words under their respective categories as possible. This means that any word appearing under the category red has to be recalled under the category red in order for it to be counted as correct. Any word appearing under green has to be recalled under green, etc. The order in which the words are recalled within each category is not important. Do you have any questions? You will have exactly one minute to study the list, when one minute is over I will take the list away and will provide you with a sheet of paper and pen. You will then have two minutes to recall as many words as you possibly can. In addition, I will be giving you a questionnaire several times during the experiment. The questionnaire will require you to report how you are feeling about yourself and about the task at hand. Please do not write your name on the questionnaire so that its contents will remain anonymous. I will not look at your questionnaire for my job here is only to give instructions, and to give you the lists of words. Please read this consent form carefully and sign it if you wish."

III. E gives S questionnaires.

IV. E gives S task I and sits behind screen. After 1 minute has lapsed, he will provide S with a paper and pen and will say:

"You have exactly 2 minutes to recall as many words as you possibly can."

V. Following recall E will say:

"You recalled \_\_\_\_\_ words correctly. Given the standards set up for this particular task, your performance is equivalent to the 10th percentile which means that you beat only 10 percent of the people who performed on this task before you, which also means that 90 percent of the people who performed on this task before you beat you at it."

VI. E says:

"This first task you performed on was only a practice task so do not be concerned with your performance on that task. However, the first practice task is very similar to the second task you will be working on, only this second task is not practice. Since the first practice task and the second non-practice task are highly similar, how well you performed on the practice task should give you a good idea of how well you may perform on this second task."

VII. E gives S questionnaires.

VIII. E gives S task II and sits behind screen.

IX. After 1 minute has lapsed E says:

"Here is a piece of paper. You have exactly 2 minutes to recall as many words as you possibly can."

Instructions - #4. Low expectation/Audience

I. E sits S in chair facing wall. E says:

"Hello. My name is \_\_\_\_\_. I am a student here at UNC-G and my job is to give you instructions and to give you the list of words that is needed for this memory experiment. If you have any questions before the experiment begins please feel free to ask me."

II. E gives S the task and says:

"Here is a task I'd like for you to work on. Very shortly I am going to present you with a piece of paper. Across the top of the page, you will see written four color categories: red, green, blue, and yellow. Underneath each color category you will observe five English words. Your job is to try and memorize as many of these English words under their respective categories as possible. This means that any word appearing under the category red has to be recalled under the category red in order for it to be counted as correct. Any word appearing under green has to be recalled under green, etc. The order in which the words are recalled within each category is not important. Do you have any questions? You will have exactly one minute to study the list, when the one minute is over I will take the list away and will provide you with a sheet of paper and pen. You will then have two minutes to recall as many words as you possibly can. In addition, I will be giving you a questionnaire several times during the experiment. The questionnaire will require you to report how you are feeling about yourself and about the task at hand. Please do not write your name on the questionnaire so that its contents will remain anonymous. I will not look at your questionnaire for my job here is only to give instructions, and to give you the lists of words. Please read this consent form carefully and sign it if you wish."

III. E gives S questionnaires.

IV. E gives S task I and sits behind screen. After 1 minute has lapsed, he will provide S with a paper and pen and will say:

"You have exactly 2 minutes to recall as many words as you possibly can."

V. Following recall E will say:

"You recalled \_\_\_\_\_ words correctly. Given the standards set up for this particular task, your performance is equivalent to the 10th percentile which means that you beat only 10 percent of the people who performed on this task before you, which also means that 90 percent of the people who performed on this task before you beat you at it."

VI. E says:

"This first task you performed on was only a practice task so do not be concerned with your performance on that task. However, the first practice task is very similar to the second task you will be working on, only this second task is not practice. Since the

first practice task and the second non-practice task are highly similar, how well you performed on the practice task should give you a good idea of how well you may perform on this second task. In addition, your performance will be observed by 4 people who are in the adjacent room through this one-way mirror which is behind this curtain. These people did not observe your performance in practice. However, they will be observing your performance as soon as I pull the curtain. Do you have any questions? Let us begin. However, please fill out this questionnaire first."

VII. E gives S questionnaires.

VIII. E gives S task II and sits behind screen.

IX. After 1 minute has lapsed E says:

"Here is a piece of paper. You have exactly 2 minutes to recall as many words as you possibly can. Please write the words as large as possible so that the people observing you can see exactly what you are writing."

X. S is debriefed.

## APPENDIX B

Words for Tasks I and II (frequency of appearance in the English language 64-68 times out of a total possible of 1,014,232 times).

Task I

<u>Red</u>	<u>Green</u>	<u>Blue</u>	<u>Yellow</u>
Animal	Credit	Jury	Desk
Policies	Message	Experiments	Projects
Signs	Newspaper	Page	Forest
Background	Employees	Cell	Object
Site	Traffic	Yards	Matters

Task II

<u>Diamonds</u>	<u>Spades</u>	<u>Hearts</u>	<u>Clubs</u>
Resolution	Chairman	Legs	Dress
Bodies	Pictures	Career	Finger
Dream	Application	Statements	Score
Property	Headquarters	Article	Plays
Issues	Jobs	Horses	Attorney

## APPENDIX C

Expectation of Success Questionnaire

On a scale of 0-100, how well do you think you will perform on the task you are about to work on?

0	25	50	75	100
Terrible	Poor	So and So	Very Well	Excellent

## APPENDIX D

Effort Questionnaire

On a scale of 0-100, how hard do you think you will work on the task you are about to perform on?

0	25	30	75	100
Will Hardly Work	Will Work Slightly	Will Work Moderately	Will Work Hard	Will Work Extremely Hard

## APPENDIX E

Mehrabian and Russell (1974) Arousal Scale

Please rate your present feeling with the adjective pairs below. Some of the pairs might seem unusual, but you'll probably feel more one way than the other. So, for each pair, put a check mark (Example       
    ) close to the adjective which you believe to better describe your feelings right now. The more appropriate that adjective seems, the closer you put your check mark to it.

wide-awake	_____	sleepy
satisfied	_____	unsatisfied
uncomfortable	_____	comfortable
unaroused	_____	aroused
hopeful	_____	despairing
dull	_____	jittery
happy	_____	unhappy
bored	_____	relaxed
annoyed	_____	pleased
melancholic	_____	contented
calm	_____	excited
stimulated	_____	relaxed
crowded	_____	uncrowded
frenzied	_____	sluggish

## APPENDIX F

Mean Number of Words

Table I

	ALONE	ADJUNCT
HSE	7.15	6.75
LSE	7.05	6.75

Table II

	ALONE	ADJUNCT
HSE	7.75	6.00
LSE	6.37	5.00

Adapted Cell Means

	ALONE	ADJUNCT
HSE	7.00	6.37
LSE	6.30	6.00

HSE and LSE represent high and low expectation of success respectively. Each task comprises 20 words.

Table 1A

## Mean Number of Words Recalled

Task I		
	ALONE	AUDIENCE
HES	7.25	6.25
LES	7.25	7.75
Task II		
	ALONE	AUDIENCE
HES	7.75	6.00
LES	9.37	5.00
Adjusted Cell Means		
	ALONE	AUDIENCE
HES	7.68	6.47
LES	9.30	4.66

HES and LES represent high and low expectation of success respectively. Each task comprises 20 words.

Table 1B

## Analysis of Covariance for Mean Number of Words Recalled

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Expectation	0.06	1	0.06	0.01
Audience	68.37	1	68.37	16.00**
Exp x Aud	22.98	1	22.98	5.37*
Covariate (Task I)	50.01	1	50.01	11.70**
<u>S</u> (Exp x Aud)	115.36	27	4.27	--

\*  $p < .05$ \*\*  $p < .01$ 

In the above analysis, scores on Tasks I and II were utilized as covariate and variate respectively.

Table 2A

Mean Probability of Success as Reported on Expectation  
of Success Questionnaire

Task I		
	ALONE	AUDIENCE
HES	35.00	31.25
LES	37.50	33.75

Task II		
	ALONE	AUDIENCE
HES	36.25	32.50
LES	32.50	23.75

Adjusted Cell Means		
	ALONE	AUDIENCE
HES	35.82	34.63
LES	30.36	24.17

HES and LES represent high and low expectation of success respectively. The expectation of success questionnaire was scored on a scale of 10-50. A score of 10 represents a low expectation of success, while a score of 50 represents a high expectation of success. A score between 10 and 50 represents a moderate expectation of success.

Table 2B

Analysis of Covariance for Mean Probability of Success  
as Reported on Expectation of Success Questionnaire

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Expectation	477.27	1	477.27	14.45**
Audience	96.02	1	96.02	2.90
Exp x Aud	50.00	1	50.00	1.51
Covariate (Task I)	383.52	1	383.52	11.61**
S (Exp x Aud)	891.47	27	33.01	--

\*\*  $P < .01$

In the above analysis, scores on questionnaires I and II were utilized as covariate and variate respectively.

Table 3A

Mean Amount of Arousal as Reported on the Mehrabian and Russell (1974) Arousal Scale

Task I		
	ALONE	AUDIENCE
HES	3.83	4.09
LES	3.47	4.04
Task II		
	ALONE	AUDIENCE
HES	3.84	4.51
LES	3.93	4.85
Adjusted Cell Means		
	ALONE	AUDIENCE
HES	3.87	4.26
LES	4.34	4.66

HES and LES represent high and low expectation of success respectively. The Mehrabian and Russell arousal scale was scored on a scale of 1-9. A score of 1 represents a small amount of arousal, while a score of 9 represents a large amount of arousal. Scores between 4 and 7 represent a moderate amount of arousal.

Table 3B

Analysis of Covariance for Mean Amount of Arousal as Reported  
on the Mehrahan and Russell Arousal Scale

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Expectation	1.46	1	1.46	4.76*
Audience	0.96	1	0.96	3.12
Exp x Aud	0.01	1	0.01	0.03
Covariate (Task I)	20.90	1	20.90	67.94**
$\underline{S}$ (Exp x Aud)	8.30	27	0.30	--

\*  $p < .05$

\*\*  $p < .01$

In the above analysis, scores on scales I and II were utilized as covariate and variate respectively.

Table 4A

Mean Amount of Effort Expended as Reported  
on Effort Questionnaire

Task I		
	ALONE	AUDIENCE
HES	36.25	41.25
LES	43.75	41.25
Task II		
	ALONE	AUDIENCE
HES	36.25	41.25
LES	43.75	41.25
Adjusted Cell Means		
	ALONE	AUDIENCE
HES	40.04	40.70
LES	41.04	40.70

HES and LES represent high and low expectation of success respectively. The effort questionnaire was scored on a scale of 10-50. A score of 10 represents minimal amount of effort expended. A score of 50 represents a high amount of effort expended. Scores between 10 and 50 represent moderate amounts of effort expended.

Table 4B

Analysis of Covariance for Mean Amount of Effort  
Expended as Reported on Effort Questionnaire

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Expectation	1.73	1	1.73	0.08
Audience	0.21	1	0.21	0.01
Exp x Aud	1.73	1	1.73	0.08
Covariate (Task I)	563.33	1	563.33	25.92**
$\underline{S}$ (Exp x Aud)	586.66	27	21.72	--

\*\*  $p < .01$

In the above analysis, scores on questionnaires I and II were utilized as covariate and variate respectively.

Table 5A

Number of Words Recalled for the Four  
Experimental Conditions

<u>Condition #1. HES/Alone</u>	<u>Task I</u>	<u>Task II</u>
Subjects 1	5	7
2	6	7
3	5	7
4	8	6
5	9	12
6	10	9
7	9	8
8	6	6
<u>Condition #2. HES/Audience</u>	<u>Task I</u>	<u>Task II</u>
Subjects 1	4	3
2	6	7
3	8	6
4	6	10
5	7	7
6	5	3
7	9	8
8	5	4
<u>Condition #3. LES/Alone</u>	<u>Task I</u>	<u>Task II</u>
Subjects 1	14	11
2	9	10
3	3	6
4	5	11
5	8	6
6	6	9
7	6	10
8	7	12
<u>Condition #4. LES/Audience</u>	<u>Task I</u>	<u>Task II</u>
Subjects 1	4	4
2	11	7
3	8	6
4	12	10
5	8	2
6	6	4
7	6	1
8	7	6

HES and LES represent high and low expectation of success respectively.

Table 5B

Probability of Success Raw Scores as Reported on  
Expectation of Success Questionnaire

<u>Condition #1. HES/Alone</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	40	40
2	40	40
3	40	40
4	30	30
5	30	30
6	40	40
7	30	40
8	30	30
<u>Condition #2. HES/Audience</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	30	40
2	30	30
3	40	30
4	30	30
5	30	40
6	30	30
7	30	30
8	30	30
<u>Condition #3. LES/Alone</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	30	30
2	30	20
3	50	40
4	40	30
5	40	30
6	30	30
7	40	40
8	40	40

Table 5B (Cont.)

Condition #4.	LES/Audience	Questionnaire I	Questionnaire II
Subjects 1		30	20
2		40	20
3		40	40
4		30	10
5		30	20
6		30	20
7		30	30
8		40	30

HES and LES represent high and low expectation of success respectively. The expectation of success questionnaire was scored on a scale of 10-50. A score of 10 represents a low expectation of success, while a score of 50 represents a high expectation of success. A score between 10 and 50 represents a moderate expectation of success.

Table 5C

Raw Scores for Amount of Arousal as Reported on the Mehrabian and Russell (1974) Arousal Scale

<u>Condition #1. HES/Alone</u>	<u>Scale I</u>	<u>Scale II</u>
Subjects 1	3.50	3.64
2	4.85	4.71
3	3.50	3.85
4	4.07	3.85
5	2.21	2.42
6	3.21	3.28
7	5.07	4.64
8	4.28	4.35
<u>Condition #2. HES/Audience</u>	<u>Scale I</u>	<u>Scale II</u>
Subjects 1	4.00	4.57
2	3.42	3.28
3	3.14	3.85
4	3.50	4.64
5	5.21	5.57
6	4.35	4.85
7	4.21	3.57
8	4.92	5.78
<u>Condition #3. LES/Alone</u>	<u>Scale I</u>	<u>Scale II</u>
Subjects 1	2.57	2.78
2	4.00	4.50
3	3.42	3.42
4	4.07	5.14
5	1.78	1.78
6	4.07	5.14
7	3.28	4.21
8	4.64	4.50

Table 5C (Cont.)

Condition #4. LES/Audience	Scale I	Scale II
Subjects 1	4.71	7.07
2	3.07	3.85
3	4.00	4.71
4	3.07	3.42
5	4.35	4.35
6	4.07	4.35
7	4.57	5.21
8	4.50	5.85

HES and LES represent high and low expectation of success respectively. The Mehrabian and Russell arousal scale was scored on a scale of 1-9. A score of 1 represents a small amount of arousal, while a score of 9 represents a large amount of arousal. Scores between 4 and 7 represent a moderate amount of arousal.

Table 5D

Raw Scores for Amount of Effort Expended as  
Reported Effort Questionnaire

<u>Condition #1. HES/Alone</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	40	40
2	40	40
3	40	40
4	30	30
5	30	30
6	30	30
7	40	40
8	40	40
<u>Condition #2. HES/Audience</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	40	40
2	40	40
3	40	30
4	40	40
5	50	50
6	40	40
7	40	50
8	40	40
<u>Condition #3. LES/Alone</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1	50	50
2	40	30
3	50	50
4	50	50
5	30	40
6	50	50
7	40	40
8	40	40

Table 5D (Cont.)

<u>Condition #4.</u>	<u>LES/Audience</u>	<u>Questionnaire I</u>	<u>Questionnaire II</u>
Subjects 1		40	40
2		40	50
3		40	30
4		40	40
5		50	50
6		40	40
7		40	40
8		40	40

HES and LES represent high and low expectation of success respectively. The effort questionnaire was scored on a scale of 10-50. A score of 10 represents a minimal amount of effort expended. A score of 50 represents a high amount of effort expended. Scores between 10 and 50 represent moderate amounts of effort expended.