A STUDY OF STAGE FRIGHT

by

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Introduction

In 1935, H. L. Hollingworth wrote that, "among the numerous familiar fears of mankind none is more common than 'stage fright'" (22, p. 173). Yet, despite its ubiquitous nature, the phenomenon is only poorly understood. The broad aim of the present study is to extend this understanding in the conviction that "stage fright" is of interest in its own right and that the concept is of theoretical value for psychology, particularly that aspect of social psychology concerned with group phenomena.

As used here, the meaning of the word "stage", in the term stage fright, is not restricted to the theatre or the public speaking platform. It refers, rather, to any situation where one person is the object of attention of other human beings--in other terms, any communicational or audience situation.

The point of view is taken, furthermore, that any group situation may be regarded as an actual, potential or anticipated audience situation. In the actual audience situation, the audience-performer dichotomy is explicit. In the potential audience situation, such as the co-acting group, the group could become an audience for any member who behaves in such a way as to attract the attention of others in the group. The anticipated audience situation is one in which the performer expects to face an audience in the future. The above conceptualization is based on empirical evidence which, as will be seen, indicates that all three situations have a similar influence on behaviour.

As a research problem, stage fright may be considered as part of a more general area which was, according to one reviewer (5), the first to enter the experimental laboratory in social psychology. Research in this area was concerned with the effect of the presence of other people on individual behaviour.

The earliest investigators (2, 31, 42) compared the performance of individuals as they worked alone with their performance as they worked together in groups. Their tasks included simple motor co-ordination and "mental" tasks such as winding fishing reels, vowel cancellation, free chain associations and writing critical arguments. The work of F. H. Allport (2) was the most extensive and his results may be considered as typical of these early experiments. In general he found an increase in the quantity of output in the group situation, but a decrement in the quality of reasoning and other complex mental operations. Later studies (1, 14, 37, 40) tended to corroborate his results and also to extend and modify his conclusions. The above studies all involved co-acting groups. Allport's comment, with regard to his results, that "when working with others we respond.....in a measure as though we were reacting to them" (3, p. 274), supports the position taken here, that such a group is a potential audience situation.

Other effects of this type of group situation include: a tendency for subjects to avoid extremes in judgments (3,15); an increase in intra-individual variability in performance (36); a tendency for slower

workers to benefit more than faster ones by the "together" situation (3, 21, 31), although contradictory results have been reported (1). There is some evidence that the effects wear off as the person adapts to the social situation (1, 3, 40).

Similar interfering effects of an audience on behaviour have been demonstrated using actual or anticipated audiences. Gates (17) found the influence of a passive audience to be slightly, but consistently, detrimental on tasks similar to Allport's. In a series of motor speed and co-ordination tests performed before both a passive and a "razzing" audience, Laird (26) found that steadiness diminished before the razzing audience, and that co-ordination skill also decreased, but not so markedly nor uniformly. Burri (12) had her subjects learn pairs of words with the instructions that they would be asked to recall them either before an audience of four people or before the experimenter alone. When working under the anticipation of recall before an audience of four, the time required to learn the list was longer than when the experimenter alone was the expected audience. In spite of this, the eventual recall before the larger audience was poorer. In a study by Grace (19), subjects were told to inspect a number of articles, such as a brassiere, an athletic supporter, etc., on a table and then report them to a person in the next room.

One group had no knowledge about the "person", a second group was told that the person would be a woman and a third group received additional reminders that the person would be a woman. In all cases they reported to a woman. The results showed that knowledge about

the audience affected the order of recall: "male" items were reported earlier by subjects who had little or no knowledge about the sex of the audience than those who were reminded that it would be a woman.

More recently, Wapner and Alper (44) measured the decision time of subjects under conditions of no audience, "seen" audience and "unseen" audience. The subjects were presented two words and were required to choose the more approporiate one for a given phrase. The time to make a choice was longer in the two audience situations than in the "no audience", and longest in the "unseen" audience situation. These differences were significant for the first half of the experimental session but not for the second, indicating an adaption to the audience situation similar to that found in other studies already referred to (1, 3, 40). Wapner and Alper postulate that the audience is a threat to the self-status (need to be thought well of by others) of the individual and therefore acts as a restraining force which prevents the subject from making a decision.

The threat hypothesis is supported by a number of studies concerned witht the effects of variations in the size of a discussion group (9, 18, 39). These studies have shown that an increase in group size results in a decrease in both idea productivity and general participation, and an increase in the proportion of group members reporting feelings of threat or inhibition of their impulses to participate. Gibb (18) reports similar effects with increases in formality of the group situation which, along with Laird's (26) razzing experiment, indicates that threat is a function of audience

attitude as well as its size. While these writers do not use audience threat as an explanatory concept, the demonstrated inhibiting effect of the audience does relate their studies to that of Wapner and Alper.

Reference has already been made to two experiments (3, 15) which demonstrated the tendency for extreme judgments to be avoided in a group situation. A number of other studies (6, 11, 28, 38, 41) have shown a similar tendency for individuals in group situations to conform to majority opinions, attitudes and judgments. Because of the dramatic nature of his results the well-known experiments of Asch (6) will be considered in some detail. In his basic experiment a number of subjects, acting as accomplices of the experimenter, made unanimously wrong judgments concerning the length of a line at certain times during the experiment. Thus a naive subject introduced into this situation was confronted by a majority opinion at variance with his own perceptual judgment. The results were surprising. One-third of all judgments made by uninstructed subjects shifted in the direction of the erroneous majority judgments and a few subjects maintained that they actually saw the lines as they reported them. Control subjects, recording their estimates in writing without knowledge of the others' judgments, made virtually no errors.

Asch also found that when the naive subject was opposed by only one or two others, he remained relatively independent, while a majority of 3 produced the full effect, indicating that the size of the majority influenced the subjects' freedom to disagree with other group members. The earlier experiment of Thorndike (41) showed a similar effect. In a problem-solving discussion group, he found a definite

tendency for members to shift toward the point of view held by the majority, and this tendency appeared to vary directly with the size of the majority.

A further consideration of the experimental paradigm used by Asch highlights the importance of considering his study in the context of audience influence. In his experiment the group members reported their judgments orally; thus the naive subject had to report a deviant judgment to an "incredulous" audience, and, occasionally, to defend and justify his position in the face of criticism. The present writer suggests that, in such a situation, the person who feels most threatened or, in other terms, the person who feels most stage fright, will be most likely to abandon his own position and comply with that of the group. Although the situations were less dramatic in the other "social conformity" studies which have been considered, a similar argument applies. There are, then, both rational and empirical grounds for considering conforming behaviour as being due, at least in part, to the threatening influence of the group as an actual or potential audience.

The above studies, particularly that of Asch, indicated clearly that individuals vary greatly in the extent to which they are influenced by the group. This was consistently true of the early studies, as emphasized by Hollingworth's comment that, "The most striking fact about the influence of the audience is its great variability in the case of different performers" (22, p. 203). The basis of this variability was not adequately explored in any of the studies which have been

reviewed. Wapner and Alper imply a basis for it in terms of audience threat, but, as in the case of the other studies, there is no independent measure of threat. Unless threat can be identified on other than an ad hoc basis, the extent of its influence in the various situations remains indeterminate.

An experiment by Janis (24), dealing with the personality correlates of high persuasibility, is clearly related to the conformity studies. He ascertained the opinions of male college students on three key items in an opinion questionnaire. Approximately four weeks later these same subjects were exposed to three persuasive communications designed to alter the opinions of the subjects on the key items. This was followed by a repeat of the three questionnaire items. On the basis of the number of communications influencing each subject the entire group was divided into "high", "moderate", and "low" persuasibility categories. The three groups were then compared with respect to personality characteristics using both clinical data and a personality inventory.

One aspect of the study is particularly relevant. A set of items in the inventory dealt with social inadequacy, including self-ratings concerning feelings of shyness, lack of confidence in conversational abilities, high concern about the possibility that friends may have a low opinion of one and uneasiness at social gatherings. It was found that subjects with high ratings on social inadequacy were much more influenced by the communications than were those with low ratings. Janis concludes that high persuasibility in associated with low self-

esteem as measured by his questionnaire. While there may be some question about relating social inadequacy to low self-esteem, a consideration of this is not important here. What is important is the fact that the operational definition of social inadequacy may also be regarded as defining susceptibility to audience threat, since the items in the inventory clearly refer to audience situations. The relationship is further implied in the comment, on this study, by Hovland, Janis and Kelly (23) that, ".....extensive fear of social disapproval might give rise to strong facilitating motivations with respect to acceptance of persuasive communications....." (p. 191), where "fear of social disapproval" is analagous to "audience threat". (Cf. also Janis' term "self-esteem" with Wapner and Alper's "self status".) Thus, in addition to demonstrating once more that a group influences individual behaviour, Janis includes an independent measure of personality from which predictions about such behaviour can be made.

In a recent experiment designed to demonstrate the drive properties, in the Hullian sense, of anxiety, Beam (10) used real life stress situations, such as giving an oral report, taking a doctoral examination, and appearing in a dramatic production. His subjects learned a list of nonsense syllables prior to experiencing the stress situation and an equivalent list under "neutral" conditions. A second part of his experiment involved the conditioning of the GSR to a light, using electric shock as the Us. One-half of his subjects were conditioned under stress, the other half under neutral conditions. As a measure of the level of anxiety, he used "an independent physiological indicator", the palmar sweat index (PSI). His

results indicate that: (a) stress conditions interfere with serial learning, subjects under stress making significently more errors and requiring significantly more trials to reach criterion than they did under neutral conditions; (b) the greater the increments in palmar sweating from neutral to stress conditions the greater the increments in trials to learn; (c) both level and rate of conditioning were higher under stress conditions.

Beam also included, in his tests, the Taylor Scale of Manifest Anxiety, but his results indicated no correlation between it and his other measures. He suggests that this may have been due to the fact that all his subjects fell into the middle range of the scale.

Of special relevance is the fact that Beam took advantage of anticipated audience situations and was able to correlate an independent physiological measure with the distrubing influence of the audience. Translating the operations of both Janis and Beam into the terms of this study, we can say that Janis approached a definition of potential stage fright with his social inadequacy inventory, while Beam has defined actual stage fright in terms of increments on the PSI. The stage fright concept, so defined, is useful in that it leads to specific, testable hypotheses about individual behaviour in audience situations and, in that it might serve to "explain", at least at the correlational level, the phenomena involved.

However, such correlations would not adequately explain the stage fright concept, which must ultimately be described in terms of antecedent conditions and within the context of more fundamental psychological processes. Nevertheless, a prerequisite to such a programme is an operational definition of stage fright which will distinguish it from general anxiety. The beginnings, only, of such a definition were noted in the

studies of Janis and Beam. The present research, begun prior to the publication of Beam's paper, will attempt to give further operational distinction to the concept, as well as to test, in an introductory manner, certain hypotheses concerning experiential factors in the development of stage fright.

A method which has been used effectively to investigate a number of human motives (7, 8, 32, 43) was adopted for this study. McClelland et al (32), using a TAT-type projective test, were able to codify and score fantasy stories in such a way as to obtain a measure of achievement-need, and, furthermore, to independently vary the motive using appropriate instructions. Higher scores were thus obtained under "achievement oriented" conditions than under more neutral conditions.

Underlying McClelland's paradigm is an assumption common to a number of perceptual theorists (4), that stimuli which are congruent with a drive state will be selectively perceived. Others (16, 29, 30) have suggested, further, that wish-fulfilling fantasies tend to reduce drive. In view of this, as well as the fact that fear has been treated experimentally as a drive (33, 34), the use of the projective method for the study of stage fright seemed justified.

Additional data, including questionnaires and the PSI, were obtained. Specific predictions about how stage fright will manifest itself in the verbal reports, the PSI and the projective test--as well as about the role of early experience in stage fright--will be presented following a description of procedure.

Method

Subjects

Four different groups, totalling 156 male and 121 female subjects, were used. These groups were: grade 10 high school students (group Hs), sophomores from introductory psychology courses in two universities (groups UN1 and Co), and university seniors in a social psychology course (group Un2). The last group was run under experimental conditions only, while the other three were divided into controls and experimentals. The different groups were used in order to get a large projective test and questionnaire sample, and to obtain new data to correlate with these two measure.

Materials

The projective test stimulus pictures (Appendix 1) including three drawings and one photograph, were developed specifically for this experiment because it was believed, on the basis of McClelland's experience, that the standard TAT cards do not include pictures with enough relevant clues for the purposes of this study.

The Audience Sensitivity Inventory (ASI)--the questionnaire designed to measure susceptibility to stage fright--consists of 21 items referring to reactions to some type of communicational situation. Some of these were selected from the Bernreuter Personality Inventory and the MMPI, others were developed independently. Standard personality inventories, including Taylor Scale, were not used in their complete form because they were believed to cover too broad a behavioural area for the present study. The ASI, along with the projective test, can be administered to large groups and the use of the two provides a means of

cross-validation. Two forms of the inventory (Appendix II and III) were used. The first, permitting a two-category response, was used with groups Hs, Un_1 and Un_2; the second, permitting a two-category response, was used with group Co. The split-half, odd-even reliability of the latter is .826 (N = 76).

Judgments about prior experiences in audience situations were obtained from groups Hs and Co using the seven-item Audience Experience Data Sheet (AED, Appendix IV). A third questionnaire (Appendix V), requiring a subjective estimate of the degree of anxiety felt during the experiment, was answered by one-half the subjects in group Co.

It will be noted that the questionnaire items and the pictures are all symbols for audience situations. This is in keeping with the assumption that stage fright is a situationally specific form of anxiety and any measure of it must refer to the appropriate stimulus domain.

After Beam's paper appeared, the PSI was added in order to obtain a physiological measure of autonomic activity. The materials and procedure for obtaining PSI prints are described by Mowrer (35). The prints were quantified at the University of Illinois on Mowrer's densitometer.

Procedure

The basic experimental design involved the writing of the fantasy stories under either neutral or stress conditions, stress being the anticipation of giving a talk before the group. This was a deception and was achieved by appropriate instructions. The neutral and stress subjects of group Un_1 met in separate lecture rooms and were given these instructions orally by different experimenters. In order to control

for these variations the procedure was modified for groups Hs and Co. All the subjects met in one hall and were separated, by written instructions, into neutral and stress conditions subjects. An additional advantage over the procedure with group Un1 was the fact that Hs and Co could respond anonymously to the questionnaires, since all data were collected at one time. The following description of the procedure used with groups Hs and Co will make the basic design of the experiment clear.

Each subject was handed a set of mimeographed pages. The first page contained the following instructions:

> "Do not turn to the next page until instructed to.
>
> You are going to take part in two experiments. The first of these is a test of creative imagination (the procedure will be explained to you in detail by the experimenter).
>
> The second experiment, immediately following the first, is a speech study for which you will be either a speaker or a listener--which you are to be is indicated at the bottom of this page.
>
> If you are to be a listener you will be part of a passive audience listening to some short speeches.
>
> If you are to be a speaker, you will be asked to give a short (3 to 4 minute) talk to the rest of the group. You may choose your theme from the following list of general topics--or you may choose one of your own if you prefer. (You will have time to refer to the list later, so do not be concerned with your topic at this time; concentrate, instead, on the first experiment.)"

Five general topics were listed. At the bottom of the page appeared the words "speaker" and listener", one of which was checked off in each

set. The printed materials were distributed in such a manner that both male and female subjects were divided approximately equally into "speakers", or stress subjects, and "listeners", or neutral subjects.

The experimenter read these instructions aloud before the group briefly reemphasized the essentials, then moved on to the next page which contained the instructions for the projective test (Appendix V1). The instructions and the procedure following the method outlined in McClelland et al (32). Following the projective test, all subjects filled out the ASI and AED. Since PSI prints were not obtained from group Hs, this completed the experiment for them and they were given an explanation of the purpose of the tests.

After group Co had completed the questionnaires, PSI prints were obtained while the subjects were still under the stress condition. While these were being taken it was "suggested" that they take the opportunity to think about their "talks", inasmuch as these would commence in a few minutes. After the prints were obtained the deception was revealed and the nature of the experiment explained in a casual manner in order to create as relaxed an atmosphere as possible. After approximately five minutes, a second (neutral condition) set of prints was taken.

A third ("normal day") set of PSI prints was obtained about four weeks later from those subjects who were present that day and had also served as subjects during the regular lecture hour when the original experiment was conducted. They also responded to the third questionnaire which asked them to judge how anxious they had felt during the experiment and what they had thought the purpose of it was.

In the procedure for obtaining PSI prints the subject is required

to press his fingers to the PSI paper for a specified length of time. When the prints were obtained from the entire group at one time there was no exact control over the amount of pressure exerted by the subjects. A better controlled set, in this respect, had previously been obtained from 25 subjects from group Un_1 and Un_2. The subjects came into a room individually, were given "set provoking" instructions, including suggested speech topics, then the PSI prints were taken using a postage scale so that each subject exerted a one pound pressure on the PSI paper. The experiment was then explained and after a wait of a few minutes a second set was taken. The prints obtained in this manner are not comparable with those from group Co because a different grade of paper was used.

Scoring of the Fantasy Stories

The scoring system follows the pattern set by McClelland but is less elaborate in that fewer response categories are scored. The maximum projective score that any subject can receive is 12, three for each of the four stories.

A story is assigned a score of zero if it is not somehow concerned with an audience situation and, furthermore, concerned in more than a neutral way. Thus a story must include a reference to the thoughts, actions or emotions of one of the characters in the pictures as affected by the implied or actual presence of other individuals. If the reference is positive, for example "he is the life-of-the-party type" or "he is a very confident speaker", the story receives a score of one. This takes into account the possibility of stage fright arousing wish-fulfilling fantasies. However, since the story might reflect actual confidence,

rather than fear, it is not weighted as heavily as one with a negative theme.

If a story has a negative communicational reference, that is, a statement of difficulty or implied difficulty in an audience situation (for example "the girl has forgotten her words", or, "he has never been in front of an audience before" or, "he is not a very sociable person"), it is scored one. If, in addition, there is affect in connection with the difficulty, e. g. "the girl has forgotten her words and feels embarrassed", it is scored two. A statement such as "he is very nervous while waiting for his turn to speak" or, "in the past he has been nervous at such parties" is considered as having both a negative communicational reference and negative affect, so it is scored two. Finally, if the difficulty or affect becomes the theme for the entire story, it is scored three.

A story might also be scored one when there is no direct reference to communicational difficulty, but one can be inferred from the story as a whole.

A sample of 104 stories was scored by a person other than the experimenter. The inter-scorer reliability coefficient was .948. All stories were scored by the experimenter without knowledge of ASI scores and, in the case of groups Hs, Co and Un_1, without knowledge of the conditions under which the stories were written.

Predictions

The following speculations are implicit in the use of the three behavioural measures in this study:

1. Projective scores should be higher under stress conditions than under neutral.

2. Stress PSI scores should be higher than neutral scores.

3. ASI scores should correlate positively with projective scores. Since the latter are expected to be a function of stage fright, the correlation should be higher for the stress group than for the neutral.

4. Increments in PSI from neutral to stress conditions should correlate with both projective and ASI scores.

A further prediction considered the possible correlations between stage fright and experiential factors, assuming that stage fright is a learned phenomenon. In this study it refers specifically to the AED items and the other operational measures used but, stated in a general form, the prediction is:

5. Operational measures of stage fright will correlate negatively with operational measures of the frequency of rewarded past experience in communicational situations.

Results

1. Projective Test Data

The mean projective scores for the four groups are presented in Table 1. Since the differences in means are in the same direction in groups Hs, Un1 and Co, the data were combined and tests of significance applied to the combined-group data (Table 2).

The results shown in Table2, and summarized below, reveal a surprising sex difference in responses:

(a) The non-parametric H-test indicates that the four group means differ significantly ($H=9.0$; $p<.05$; $df. = 3$).

(b) The male stress condition projective score mean is significantly higher than the male neutral mean ($H=2.77$; $p=.05$; $df.=1$). A one-tailed test was used since the difference is in the predicted direction.

(c) Contrary to prediction, the female stess projective score mean is lower than the female neutral mean. A one-tailed test is not justified, so the difference does not reach the 5% level of significance ($H=3.50$; $p=.065$).

(d) The female neutral mean is significantly higher than the male neutral mean ($H=11.70$; $p < .001$).

(e) The male and female stress scores do not differ significantly.

Thus audience sensitivity, as manifested in the fantasy stories, is higher for the male stress group than for the male neutral, but this is reversed for the females, with female neutrals showing the highest sensitivity of any group. Confidence in the significance of these differences is increased by the fact that they appear in three independently tested groups, despite variations in procedure, such as neutral and stess subjects being run separately in groups Un1 but together in groups Hs and Co.

2. Projective Test and ASI Correlations

Spearman rank-order correlation coefficients were computed between projective scores and ASI scores for each sub-group. It will be noted in Table 3 that five out of 14 groups show positive correlations, indicating a trend in the predicted direction. The two significant correlations both involve stress groups and, therefore, support the expectation that higher correlations would be found under stress conditions.

3. AED and ASI Data

The correlations reported in Table 4 are Pearson product-moment

correlations, including point-biserial r, between ASI scores and responses to AED items. The response were weighted so that positive or rewarded experience with respect to an item received a higher score than negative experience.

The following general statements can be made regarding these correlations.

(a) Stated frequency of public speaking experience (Item 1) correlates negatively with ASI scores, 3 of the 4 correlations being significant ($p=.01$, $.01$ and $<.001$).

(b) Parental encouragement of conversation (Item 2) correlates negatively with ASI scores, i.e. subjects who report favourable parental attitudes towards children's conversation have lower ASI scores than those reporting unfavourable parental attitudes. 3 out of 4 r's are significant ($p=<.05$, $<.05$ and $<.001$).

(c) Parental insistence on children performing before others (Item 3) is associated with low ASI scores. Two of the correlations are significant, $p=.05$ for both.

(d) There is no correlation between having taken a public speaking course (Item 4) and ASI scores.

(e) Subjects who report being active in discussion groups (Item 5) have lower ASI scores than subjects who state that they are passive. 3 out of 4 r's are significant ($p=.01$, $<.01$ and $<.001$).

(f) Confidence in the interest-value of what one has to say (Item 6) is associated with low ASI scores. 3 out of 4 r's are significant ($p=.05$, $<.05$ and $.01$).

(g) Instrumental importance of talking ability, as children (Item 7), correlates negatively with ASI, all 4 r's being significant ($p = .05$, .05, .05 and $< .001$).

In general, the data for items 1, 2, 3, and 7, support the fifth hypothesis. Item 4 does not support it, and items 5 and 6 denote attitudes towards the self, rather than audience experience.

It will be recalled that the questionnaires were answered immediately after the projective test and before the subjects were informed that no one would be required to speak. This fact suggests that the response pattern may differ for the stress, as compared to the neutral group. Inspection of the patterns indicates that this is not generally true for the ASI, but there is evidence for such an effect on the AED. There are instances, shown in Table 5, of a neutral-stress difference in the proportion of subjects responding in a particular way to an AED item. Thus, more subjects under the stress, than under the neutral condition, indicate that they have never spoken in public (group Hs female), and that their parents never encouraged performance before others (group Hs male). Relatively fewer indicate, under stress, that what they have to say is usually of interest to others (group Co male). It is to be noted, further, that in each of these instances the negative correlation between the AED item and the ASI is higher for the stress, than for the neutral group, indicating that the neutral-stress differences in proportions are not randomly determined. The data suggest that the stress condition influences the high scores on the ASI, that is, the more susceptible to stage fright, to choose a negative response to an AED item. One implication of these infrequent cases will be considered in the discussion section.

There are also some indications of sex differences in experience in audience situations. In the case of group Hs, Item 2, there is a significant difference, $p<.05$, between the male stress group ASI-Item 2 correlation of +.282 and the female group correlation of -.304. That is, male subjects who are highly susceptible to stage fright, according to ASI scores, under stress, tend to say that their parents encouraged conversation. The female high scorers do not indicate encouragement. This suggests that "encouragement", with reference to conversation, may have a negative connotation for high school boys, but not for girls. Also, more females than males indicate that they were encouraged in conversation: 66.67% as compared to 38.36% in group Hs, and 55.56% as compared to 34.48% in group Co. While only the former difference is significant ($p=.01$), the data suggest that reward for conversation may have differed for the sexes. This will be referred to further in the discussion of the data.

4. PSI Data

Table 6 shows the PSI means for groups Un_1 and Un_2 subjects under stress and non-stress conditions. The same data, plus a "normal" day means, for group Co neutral and Co stress subjects are presented in Table 7. The PSI means do not significantly differ between conditions, but the stress means are consistently higher than either non-stress or normal day means, thus supporting, to some extent, the prediction that the PSI would reflect the experimental variable.

Table 8 gives the product-moment correlations between ASI scores and three forms of PSI data: absolute scores, difference scores (increments

in PSI from non-stress to stress), and "lability scores".[1] The lability score is offered by Lacy (27) as a superior measure of autonomic activity which takes into account the pre-stimulus or baseline level of autonomic functioning, the baseline level being, in this case, the non-stress score.

None of the correlations between ASI scores and either PSI difference scores or lability scores is significant. However, four of the correlations involving PSI absolute scores are significantly, three at the .05, one at the .01, level (one-tailed), indicating that there is a positive relationship between ASI scores and absolute level of autonomic functioning. The implications of these results for the use of the PSI will be discussed.

There was no correlations between PSI scores and projective scores, thus none of the hypotheses regarding PSI is clearly confirmed in this study. However, the unexpected correlations between PSI absolute scores and the ASI do tend to validate the ASI as a predictor of stage fright.

5. Subjective Reports of Anxiety

The subjective reports from the subjects in group Co reveal that, as expected, most of the stress group experienced "nervousness" during the experiment. The only exceptions were one male and one female. The male subject stated that he was not nervous because he "knew" the experiment; the girl wrote that she wasn't nervous because she had

[1] The correlations between ASI and lability scores were calculated without actually transforming the PSI scores, using the formula

$$r_{ASI.\,PSI\,(lability)} = \frac{r_{23} - r_{12}r_{13}}{1 - r^2_{12}}$$

where subscript 1 = PSI scores at neutral level, 2 = PSI scores at stress level and 3 = ASI scores.

decided at once to say that she had lost her voice! This girl, incidentally, had the highest ASI score in the female stress group.

The reports of the stress group were ranked independently by 3 judges for degree of anxiety on the basis of the subjects' statements. The rank order correlations between ASI and reported anxiety for the male subjects, as rated by these judges, were .359, .455 and .536. Only the last value is significant ($p < .05$, two-tailed test). For the females, the rankings yielded non-significant correlations of .286, .357 and .420.

The responses of the neutral group indicate that the conditions were not neutral. The five subjects in the female neutral group reported anxiety, while 7 of the 13 male neutrals made similar statements. The impression is not that of nervousness with reference to the speeches specifically, except in a few cases, but with respect to either story writing or the experimental proceedings in general. The mean ASI scores of the male subjects who reported anxiety is 44.57 and of those who did not, 33.83. This difference is not significant ($t=1.76$) but it is in the direction one might expect on the basis of the assumption that any group situation is an audience situation in which those highly susceptible to stage fright would feel uneasy. The "nervous" subjects also have a somewhat higher PSI mean, under each condition, than those reporting no nervousness, as shown in Table 9. In summary, then, the subjective report data tend to support the validity of the ASI and also suggest that significant differences between neutral and stress condition PSI prints were not obtained because the neutral condition was not sufficiently stress-free.

Discussion

The most striking result, and the most difficult to interpret, is the sex difference in the projective data. The male neutral-stress difference is interpretable in accordance with the assumptions underlying the use of the projective test in this study, namely, that stage fright creates a set to perceive a relevant theme in the stimuli, resulting in higher projective scores for the male stress subjects. The data from the femal group clearly contradict such an interpretation, however[1]. What "theory" might account for these results?

One possible explanation involves the assumption that females have a higher general level of anxiety in group situations, and that there is a curvilinear relationship between strength of drive and frequency of drive related responses. Where drive is low, the probability of a drive related response being elicited is also low; as the drive approaches some optimal level this probability increases, then decreases as drive approaches extreme intensity. The latter assumption would be consonant with the arousal-continuum model suggested by Hebb (20).

If we assume, now, that females are more susceptible to stage fright the group situation should be somewhat more stress provoking for the female neutral, than for the male neutral group. Thus females would be

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[1]The fact that the female neutral-stress difference is almost significant ($p \leq .065$) and consistent for the three groups, plus the fact that the female neutral mean is higher than the male neutral at the .001 level suggests that the difference is reliable.

more likely than males to emit drive-related responses, which is what the data show. Under stress conditions, however, females would be more likely than males to pass the optimum "arousal" level and hence, emit fewer relevant responses than males. The data show no such sex difference under the stress condition.

Neither the ASI nor PSI data suggest that females are higher in anxiety than males. In the two university groups the females score slightly higher than males on the ASI but not significantly so, while the high school group shows no sex difference. Neither absolute PSI scores nor increments under stress are higher for females. One bit of ancedotal evidence is suggestive: four subjects in all attempted overtly to escape the experimental situation and one, already referred to, stated an intention to claim loss of voice. All of these wre females. Also, in the subjective anxiety reports, 5 out of 5 females neutral subjects admitted nervousness ($p = .035$, exact test), while only 7 out of 13 males, a chance proportion, made similar statements, suggesting that females might be adversely affected by the group situation more consistently than males. These two facts may, however, only indicate that it is culturally more acceptable for a female to run when afraid, or to admit anxiety, than it is for males--or that women are craftier! The over-all evidence, then, is meager and, while better measuring instruments might reveal a true sex difference in anxiety level, the null hypothesis cannot be rejected on

the basis of data from this experiment.

If the above theory accounted for the facts there should also be a curvilinear relationship between ASI and projective scores. An examination of the mean projective scores for the lower, middle and upper thirds on the ASI reveals tendencies toward an inverted U-shaped curve in a few cases, but none is significant. Furthermore, they occur with both male and female groups, under both neutral and stress conditions so they wouldn't clarify the sex difference issue. The only significant correlations, Un_2 female and Co male stress groups, are positive without any tendency toward curvilinearity. The suggested explanation remains a possibility however, in that extreme arousal level, with a concomitant decrease in projective scores, may not have been consistently reached in any of the groups studied.

Another possibility is that the set to perceive a stage fright theme can be aroused by some other factor besides stage fright. In order to produce the observed sex difference in projective scores this factor would have to be one which females are more likely than males to display, and for whose operation the neutral condition in this experiment is more favourable than the stress condition. If we assume, for illustrative purposes, that this factor is empathic ability, we would say that females generally can identify more easily than males with the stimulus pictures and/or, with their classmates who are expected to speak before the group. The neutral group females, being relatively free from concern about themselves and their talks, are freer than stress group females to empathize. The results , then, would be explained by two factors,

concern with self, or stage fright, and concern with others, or empathy. Male neutral subjects presumably are low in both, thus the lower projective scores. Audience threat arouses the "stage fright set" in both sexes, thus the similar projective scores under stress conditions. Females have an "empathic set", thus the high female neutral group projective scores.

Some incidental support for this kind of explanation comes from the work of Witkin, et al (45). Evidence from their studies on perception suggests that "women are considerably more dependent on the structure of the outer field than are men" (p. 154). They suggest that men are better able to utilize body sensations (e.g. kinesthetic) than women. Women are less attentive to this type of bodily stimulation, but are able to utilize such cues when perception of the outer field is eliminated, as when the eyes are closed. Such "dependence on the outer field" might account for the higher female projective scores in the neutral condition, while the stress situation might be thought of as restricting the outer field, thus permitting bodily cues associated with anxiety to be utilized. This is sheer speculation as applied to the present study, but it does support an interpretation of the projective test data in terms of a sex difference in perception.

Since a significant positive correlation between projective scores and ASI scores was obtained with only two sub-groups out of a total of 14 (Table 3), it is apparent that the relationship between the two types of data is not a reliable one. This evidence, however, gives weak

support to projective test theory in general, and McClelland's application of it in particular. Why the correlations do not appear in all groups cannot be conclusively answered here, but some suggestions can be made.

A consideration of the possible differences in experimental procedure between those groups where a correlation was obtained, and those where it wasn't, does not reveal any consistent differences. If the correlations which were obtained are truly non-chance, as they appear to be, such differences in stimulus conditions must have existed, but they are not specifiable at this time.

Another possibility, related to one already suggested in connection with the mean differences in projective scores, is that talking, or writing, about stage fright augments fear and will be avoided. This prediction might follow from the theorizing of Miller (33) and Mowrer (34), who posit fear as a mediator of avoidance behaviour, as well as from the Freudian concept of repression. Such an effect has been demonstrated in connection with sexual motivation (13), but the evidence from the present study is conflicting. The female projective score mean differences (Table 2) would support it, the male would not. Furthermore, we would expect more "repression" by those highly susceptible, than by those less susceptible, to stage fright and, therefore, negative correlations between ASI and projective scores. This we do not find. Avoidance cannot be discounted as a possibility, however. Some subjects may typically avoid making responses which we regard, here, as

indicators of stage fright; others may have learned to indulge in drive-reducing fantasies which reflect the drive. Interaction of the two response tendencies may have resulted in the low ASI-projective score correlations without clearly revealing either.

It might be argued, of course, that the projective test actually provides a better measure of stage fright than either the ASI or the PSI and, therefore, that the low correlations reflect the failure of these two instruments to discriminate. This possibility is not supported by the lack of correlation between projective scores and the PSI, but there is at least some association between the ASI and PSI, as well as between the ASI and the audience-experience items.

The conclusion seems inevitable that, while the projective scores do reflect stage fright with some validity, in the manner predicted from the motivation studies, the reliability is low and one would certainly hesitate to use such scores to predict the "stage"behaviour of any particular individual in this study. Furthermore, the results with females are flatly contradictory to prediction and serve to further complicate reasonable interpretation of the data [1].

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[1]It is interesting to note, in this connection, that McClelland (32) could not demonstrate achievement-need with females in the manner demonstrated with males, suggesting that a similar factor may have been operating in his study and the present one.

The PSI data highlight certain important considerations regarding its use as a measure of stage fright. In the case of group Co, the fact that there are no significant differences between stress group and neutral group prints indicates that the level of palmar sweating was a function of the stress involved in writing the imaginative stories. Some effect from such factors was anticipated but it was felt, nevertheless, that the stress group should display greater autonomic expression of anxiety because the PSI prints were taken after the projective test was over.

Lacy (27), however, presents evidence which suggests that, as the pre-stimulus level of autonomic functioning increases, the magnitude of absolute or relative change that can occur in an intact organism decreases. That is, the magnitude of change is negatively related to the physiological level at the onset of disturbance. This results from a continuous and sensitive reflex regulation in the functioning of the autonomic nervous system so that when, for example, the sympathetic system is activated, there is immediate counterreaction of the parasympathetic. Thus, "as the prestimulus level of functioning increases, there is a disproportionately greater homeostatic restraint, both in increased magnitude and decreased latency and, as the magnitude of induced activation increases, there is a disproportionately greater increment of counterreaction" (27 p. 130).

In view of Lacy's analysis, we should expect gross differences between neutral and stress groups only if the neutral condition is truly stress-free, since this homeostatic mechanism would tend to minimize differences by greater counterreaction in the case of the stress group. To be specific,

both neutral and stress groups in this study were under sufficient stress to cause an increment in palmar sweating from a "normal" level, as suggested by the verbal reports as well as the PSI data, but the expected greater increment for the stress group does not occur because of (simultaneous) greater autonomic counterreactivity. The total evidence strongly suggests that the failure to find significant PSI mean differences between conditions, as well as the failure to find significant correlations between ASI scores and PSI difference scores, is due to the fact that representative baseline ("normal") prints could not be obtained. This may be due to the short time interval between the two sets of prints, or the group experimental situation or, more likely, both. The group influence would also have been present when the third set was obtained from the subjects in group Co.

The fact that correlations are demonstrated between ASI scores and absolute scores on the PSI indicates that there is an autonomic basis for assuming validity of the ASI. This is in contradistinction to Beam's (10) data, where there were no correlations between the Taylor Scale and the PSI. The results in the present study suggest that Beam might find a correlation between the PSI and those items of the Taylor scale which refer to audience situations.

The correlations suggest that a personality syndrome is involved in susceptibility to stage fright, manifesting itself in a general level of autonomic functioning which is higher for those easily affected by audience situations than for those not so affected.

The correlations between ASI scores and the AED items support the

hypothesis that operational measures of stage fright will correlate negatively with operational measures of the frequency of rewarded experience in communicational situations. The data may be interpreted in more than one way, however. For example, the fact that, in some instances, the response patterns to an item differed for the neutral and stress groups, suggests that the emotional state of the subject during the experiment influenced the perceived meaning of that item, resulting in more frequent choices by the stress than the neutral group of a response category denoting non-rewarded experience in the behaviour area indicated by the item. Another possibility is that the most anxious subjects were rationalizing by presenting an excuse in the form of lack of experience to explain possible poor performance in the forthcoming "speech" experiment. While such influences would support further the validity of the ASI as a predictor of stage fright, inasmuch as it was the AED responses of high, rather than low, scorers on ASI that tended to be affected by the stress conditions, they should make one pause before inferring from the data any unequivocal conclusions regarding the relationship between experience, as symbolized by the AED items, and stage fright. It could be argued, for example, that individual differences in susceptibility to stage fright are inherited and result in, rather than being caused by, the experiential differences indicated by the AED responses.

It is reasonable to assume, however, that the statements of the subjects have validity in terms of the actual experiences they refer to, and to proceed, experimentally, as if these experiences cause the differences in susceptibility to stage fright. It is the sort of relationship that would be predicted on the basis of any modern learning theory and, in fact, Hollingworth (22) sought to explain stage fright in such terms, suggesting that it represents an "emotional redintegration" in which the present audience situation has elements of a past situation which resulted in fear. If, finally, stage fright is not reasonably accounted for within the framework of learning theory, constitutional factors may be considered.

Thus, while the data from this study do not lead to any simple, immediately obvious, conclusions regarding cause-and-effect relations between stage fright and experiential factors, they are suggestive and lead to specific, empirically testable hypotheses. The relationship implied by the ASI-AED correlations, for example, could be directly investigated in a manner similar to that used by McClelland et al (32) to study the relationship between early independence training and achievement need. The sex difference in the projective data might also be accounted for in terms of differences in early experience. Evidence for such differences was referred to in the "Results" section, where it was noted that, in both younger and older groups, more females than males indicate that they were encouraged in conversation. It was also suggested that "encouragement" may be semantically different for high school boys than girls connoting to males, possibly, an "has-the-cat-got-your-tongue?" attitude, rather than positive encouragement.

This might mean that parental attitudes, regarding communicational ability in children, are partly determined by the sex of the child. A direct demonstration of such experiential differences, and their effects on later social behaviour, would be theoretically important, particularly in social and developmental psychology, and of practical importance in child rearing and early education in general.

More research is also required in order to determine the variables which influence the PSI and the projective test as they were used in this study. It may only be necessary to obtain truly representative non-stress condition prints in order to use the PSI as a valid indicator of stage fright, but much experimental research is necessary if stage fright is to be described in terms of its expression in imaginative stories. Pending further investigation, then, the phenomenon is best defined operationally by verbal report data--susceptibility to stage fright by scores on the ASI, and the immediate experience of stage fright by subjective estimates.

In considering the negative side of audience influence, this study has ignored an equally pervasive positive side emphasized by Hollingworth (22), the craving for an audience. Together, these opposing impulses of fear and attraction, vis-a-vis an audience, create an interesting paradox for psychology. It is likely that the more fundamental principle which ultimately accounts for both will also encompass such motives as the needs for achievement, affiliation, power, recognition, etc., since the concept of "audience" is implicit in each of these. Need for recognition, for example, is clearly analogous to need for an audience, and Veroff (43) recently suggested that his findings, regarding the power motive, could be accounted for theoretically, in terms of the recognition motive. Hollingworth had

suggested that "addiction to an audience.....may indeed be all that underlies the supposed 'gregarious instinct'" (22, p. 178), and, to bring this statement up to date, we need only substitute "affiliation motive" for "gregarious instinct". Achievement, too, may be considered a specific way of attaining recognition. Finally, stage fright may be the fear of losing recognition, or power, or friends--or whatever the most general concept will ultimately be. The working out of such a unifying conceptual scheme presents an imposing problem for the future.

Summary

High school and university students wrote imaginative stories about four pictures which depict audience situations. Approximately one-half the subjects wrote while under a stress condition in which they believed that they were to give talks later, before a group, the others under a neutral condition free from such anticipation. All subjects filled out the "Audience Sensitivity Inventory", a questionnaire designed to give an estimate of susceptibility to stage fright.

The stories were scored for stage fright content and the results indicate that such content is higher for males under the stress, than for males under the neutral condition, while the reverse is true for females. Some evidence was found for a positive correlation between these projective scores and audience sensitivity scores. Possible theoretical explanations were discussed.

An indicator of autonomic activity, the Palmar Sweat Index was obtained from some subjects under both conditions. No significant differences were noted in mean level of palmar sweating, but positive correlations were found between absolute scores of the Palmar Sweat Index and audience sensitivity scores. Some subjects also gave verbal estimates of the degree of anxiety experienced during the experiment and these estimates tended to correlate positively with audience sensitivity scores.

Subjects also answered a set of questions concerning past experience in audience situations. Significant negative correlations were found

between susceptibility to stage fright, as measured by the Audience Sensitivity Inventory and frequency of rewarded past experience in communicational situations, as indicated by responses to the audience-experience items. The results support a learning theory interpretation of stage fright. General suggestions for future research were proposed.

Table 1

Mean Projective Scores for Four Groups*

Group	Sex	Neutral Group Mean	N	Stress Group Mean	N
Hs	M	0.91	23	1.86	21
	F	2.31	26	1.23	22
Un_1	M	1.25	24	1.86	14
	F	2.60	23	1.93	15
Co	M	1.23	30	1.54	28
	F	1.78	9	1.44	9
Un_2	M	--	--	2.56	16
	F	--	--	3.10	17

*The means include scores for positive communicational references (see "Scoring of the Fantasy Stories"), although these occurred too infrequently to affect the results significantly.

Table 2

Mean Projective Scores

(Combined Data of Groups Hs, Un_1 and Co)

Sex Group	Neutral	N	Stress	N	Significance* of Neutral-Stress Difference
M	1.15	77	1.71	63	$<.05$ (one-tailed hypothesis)
F	2.35	58	1.50	46	$<.065$ (two-tailed hypothesis)
Significance* of Sex Difference	$<.001$ (two-tailed)		NS		

*The non-parametric H-test was used. Over-all H for the four groups = 9.0 ($p < .05$)

Table 3

Rank Order Correlations Between AS1 and Projective Scores

Group	Sex	"Neutral" Rho	N	"Stress" Rho	N
Hs	M	--	23	.40*	21
	F	--	26	.22	22
Un_1	M	.162	24	--	14
	F	--	23	--	15
Co	M	--	30	--	28
	F	.50	9	--	9
Un_2	M	--	--	--	16
	F	--	--	.70**	17

*$p < .05$, one-tailed hypothesis

**$p < .005$, one-tailed hypothesis

Table 4

Product-moment Correlations Between AED Items and ASl Scores

(r and Point-biserial r)

AED Item	Hs-Male r N=44 (Stress N=21)	Hs-Female r N=48 (Stress N=22)	Co-Male r N=58 (Stress N=28)	Co-Female r N=18
1. Frequency of public speaking	-.394**	-.258* (-.531)**[1]	-.495***	-.278
2. Favourable parental attitude re: conversation	(+.282)	-.304*	-.296*	-.722***
3. Parental encouragement of "performing" before others	(-.338)	-.246*	-.263*	--
4. Having taken a course in public speaking	--	--	-.148	--
5. Active rather than passive in discussion group	-.199	-.503***	(-.525)**	-.594**
6. Confidence in interest-value of one's conversation	-.255*	-.153	-.283* (-.519)**	-.516*
7. Instrumental importance of talking ability as children	-.269*	-.247*	-.466***	-.464*

[1]Correlation values in parentheses are for stress group only; corresponding neutral group was approximately zero.

* $p = .05$ or $< .05$

** $p = .01$ or $< .01$

*** $p = .001$ or $< .001$

Table 5

AED Response-pattern Differences Between Neutral and Stress Groups

Group	Sex	Item	Response	Neutral Group Proportion	Neutral Group AED-ASI r	Stress Group Proportion	Stress Group AED-ASI r	Significance of Difference
Hs	F	#1. Frequency of Public Speaking	Never	.29	.006	.50	-.531*	--
Hs	M	#2. Parental Encouragement of Conversation	Encouraged	.52	0	.24	+.282	.05
Hs	M	#3. Parental Encouragement of Performance	Never encouraged	.13	.08	.48	-.338	.01
Co	M	#6. Interest-value of Conversation	Generally of interest	.30	.03	.14	-.519*	--

*Significant at .01 level.

Table 6

PSI Mean Scores for 25 Subjects from Groups Un_1 and Un_2

Under Stress and Non-stress Conditions*

Sex	N	Stress Mean	Non-stress Mean
M	10	16.68	12.03
F	15	10.29	8.10

*Prints taken individually

Table 7

PSI Mean Scores for Group Co Stress and Neutral Subjects

Measured Under Stress, Non-stress and Normal Day Conditions*

Group	Sex	N	Stress	Non-stress	Normal Day
Stress	M	28	22.70	21.32	18.84 (N=13)
	F	9	14.61	12.61	10.39 (N=7)
Neutral	M	30	23.53**	19.14	19.19 (N=13)
	F	9	20.61**	14.61	16.10 (N=5)

* Prints obtained from entire group at one time.

**There was no stress condition for the neutral group. These prints were obtained from both neutral and stress groups at a time when the stress group was under the stress condition and both are included in the same table to permit comparison.

Table 8

Product-moment Correlations Between ASI Scores and PSI Absolute, Difference[1] and Lability Scores

Group	Sex	N	Non-stress PSI	Stress PSI	Normal Day PSI	Difference Scores	Lability Scores
Un_1 & Un_2	M	10	.545*	.590*	--	.137	.31
	F	15	-.179	-.10	--	--	-.363
Co-neutral	M	30	.397*	.272	--	-.070	.02
	M[2]	13	--	.289	.417	--	--
	F	9	-.178	-.005	--	.234	-.215
	F[2]	5	--	.155	.491	-.272	.644
Co-stress	M	28	--	--	--	--	--
	F	9	.246	.453	--	.258	.384
	F[2]	7	--	.482	.972**	-.640	-.22

[1]Increments in PSI from non-stress or normal to stress.

[2]Part of sample taken on a third (normal) day.

*Significant at .05 level.

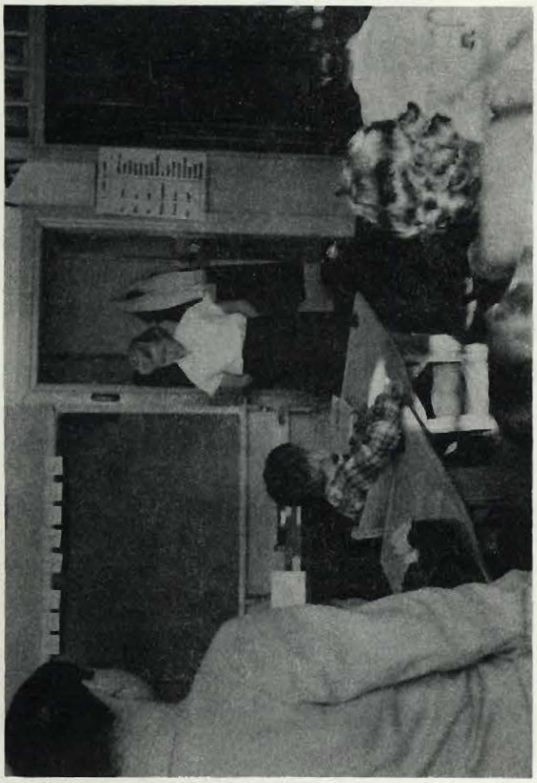
**Significant at .01 level.

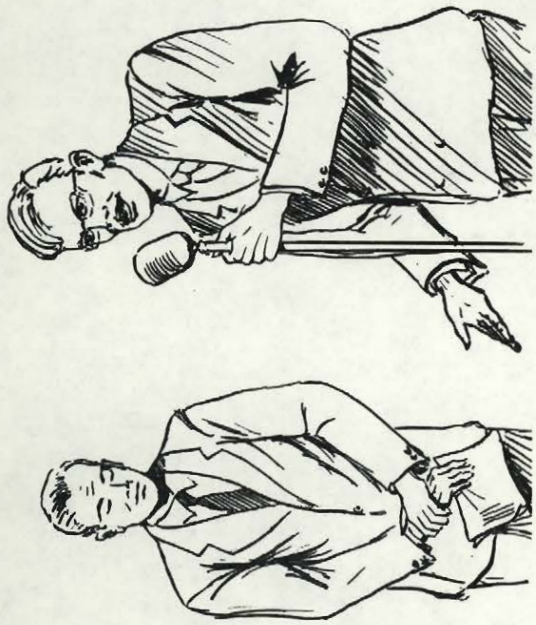
Table 9

PSI Means, Under Three Conditions, for
Group Co Male Neutral Subjects Reporting Nervousness
and Subjects Reporting No Nervousness During Experiment

Condition	Nervous (N=7)	Not Nervous (N=6)
Stress	27.21	20.83
Non-stress	22.50	18.42
Normal Day	20.87	17.22

APPENDIX I





Projective Test - Stimulus Pictures

APPENDIX II

Instructions and items for the first form of the Audience Sensitivity Inventory, which permits a two-category response choice.

Instructions

"Print your name, sex, date of birth, and college course in the blanks provided above. Then finish reading these instructions.

The statements in this inventory represent experiences, ways of reacting to situations, which are true for some people and not for others. You read each statement and decide whether or not it is true with respect to yourself. If it is true, or mostly true, blacken the answer space in column T to the right of the statement you are answering. If the statement is not usually true, or not true at all, blacken the answer space in column F opposite the statement. You must answer the statement as carefully and honestly as you can. There are no correct or wrong answers: we are interested in how you feel and react. (This was followed by an example.)

If you have any questions, please ask them now. Otherwise, proceed to the inventory."

Items

1. I am talkative at social gatherings. *
2. I tend to feel self-conscious in the presence of people I consider my superiors.
3. I consider myself a shy person.
4. I often heckle or question a public speaker.
5. I can usually express myself better in writing than in speech.
6. I never get stage fright.
7. I make friends easily.
8. I avoid taking the responsibility of introducing people at a party.
9. If I came late to a meeting I would rather stand than take a front seat.
10. I find it difficult to speak before a group.
11. I have been the recognized leader (president, captain, chairman) of a group within the last five years.
12. I tend to keep in the background at social functions.
13. I have difficulty in starting a conversation.
14. I feel self-conscious when I have to present an idea in a discussion group.
15. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of thing.
16. I am easily discouraged when the opinions of others differ from my own.
17. I never take the lead to enliven a dull party.
18. I am more self-conscious than most people.
19. I enjoy telling stories or jokes at a party.
20. I am troubled with feelings of inferiority.
21. I hesitate to enter a room by myself when a group of people are sitting around talking together.

* Each item was followed by a space for the responses "true" and "false".

APPENDIX III

Instructions and items for the second form of the Audience Sensitivity Inventory, which permits a response to be chosen from five categories.

Instructions

"Print your sex, date of birth, and college course in the blanks provided above. Then finish reading these instructions.

The questions in this inventory refer to ways of reacting to situations which we frequently encounter. Please read each question carefully and decide which of the five possible answers suggested would be most appropriate for you personally, then encircle that answer. Be sure to give one and only one, answer to each question.

(This was followed by an example.)

Please remember that you are not required to give your name, so you may feel free to answer each question truthfully--in fact the success of this research depends on your honesty.

If you have any questions, please ask them now. Otherwise, proceed to the inventory."

Items

1. Are you talkative at social gatherings? *
2. Do you tend to feel self-conscious in the presence of people you consider your superiors?
3. Do you consider yourself a shy person?
4. Would you criticize or question a public speaker or lecturer?
5. Can you express yourself better in writing than in speech?
6. Do you get stage fright?
7. Do you make friends easily?
8. Do you avoid a taking the responsibility of introducing people at a party?
9. If you came late to a meeting, would you rather stand than take a front seat?
10. Do you find it difficult to speak before a group?
11. Have you been the recognized leader (president, captain, chairman) of a group within the last five years?
12. Do you tend to keep in the background at social functions?
13. Do you have difficulty in starting a conversation?
14. Do you feel self-conscious when you have to present an idea in a discussion group?
15. Does it make you uncomfortable to put on a stunt at a party even when others are doing the same sort of thing?
16. Are you easily discouraged when the opinions of others differ from your own?
17. Do you take the lead to enliven a dull party?
18. Are you more self-conscious than most people?
19. Do you enjoy telling stories or jokes at a party?

20. Are you troubled with feelings of inferiority?

21. Do you hesitate to enter a room by yourself when a group of people are sitting around talking together?

* Each question was followed by the five response categories:

Never; Hardly ever; Sometimes; Almost always; Always.

APPENDIX IV

The Audience Experience Data Sheet.

1. How often have you made a speech before a group during high school and college years?

_____never

_____occasionally

_____frequently

2. What were your parents' attitudes toward children speaking?

_____encouraged conversation

_____was not an issue

_____endorsed idea that "children should be seen and not heard"

3. What attitude did your parents have about you "performing" (e.g. singing, reciting, dancing) before friends or family?

4. _____never encouraged it

_____were mildly interested

_____insisted on it

4. Have you had a course in public speaking?

_____Yes

_____No

5. In discussion groups are you more often an active participator or more often a passive participator?

_____usually an active participator

_____usually a passive participator

6. In general do you feel that what you have to say is of interest to others?

_____generally yes

_____sometimes

_____usually not

7. Do you feel that as a child your ability to talk was especially important in getting you out of difficulties and generally "getting your way"?

_____ talking ability was very important

_____ talking ability was somewhat important

_____ talking ability was unimportant

APPENDIX V

Form for the Subjective Estimates of Anxiety.

Please indicate your: Sex_____

Date of birth:_____

During the class experiment were you a "speaker"_____
or "listener"_____

How did you react to the instructions given to you in the class experiment on social stress, in terms of the following questions:

1. How nervous did you feel during the experiment?

   (a) Very nervous throughout the period_____
   Somewhat nervous throughout_____
   Not nervous at all throughout_____

   (b) Nervous at first, less so later_____

   (c) More nervous as the period went along_____

2. Would you please explain, in your own words, why you felt as you did?

3. While you were writing the imaginative stories what did you think the purpose of writing the stories was (at that time)?

4.* Do you get stage fright? (Please encircle your answer).

   Never; Hardly ever; Sometimes; Almost always; Always.

* Included to assist in matching this data with the subject's ASI sheet.

APPENDIX VI

Instructions for the projective test

This is a test of creative imagination. A number of pictures will be projected on the screen before you. You will have twenty seconds to look at the pictures and then about four minutes to make up a story about it. Notice that there is one page for each picture. The same four questions are asked.* They will guide your thinking and enable you to cover all the elements of the plot in the time alloted. Plan to spend about one minute on each question. I will keep time and tell you when it is about time to go on to the next question for each story. You will have a little time to finish your story before the next picture is shown.

Obviously there are no right or wrong answers, so you may feel free to make up any kind of story about the picture that you choose. Try to make them vivid and dramatic, for this is a test of creative imagination. Do not merely describe the picture you see. Tell a story about it. Work as fast as you can in order to finish in time. Make them interesting. Are there any questions? If you need more space for any questions use the reverse side.

*The questions included on the writing sheets were:

What is happening? Who are the persons?

What has led up to this situation? That is, what has happened in the past?

What is being said and thought? By whom? What are their feelings?

What will happen?

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