The Effects of Audience Interest, Responsiveness, and Evaluation on Public Speaking Anxiety and Related Variables

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This study examines potential sources of public speaking anxiety stemming from the audience. Based on work by Buss (1980) and Motley (1991), three sources of anxiety were identified: the degree of formal evaluation, level of audience interest in the topic, and the audience’s responsiveness to the speaker. In addition to public speaking anxiety, measures were taken of willingness to speak and expected speech quality. Interest, responsiveness, and formal evaluation showed effects on all of the anxiety-related variables. Perhaps surprisingly, evaluation showed some of the weakest effects. Results are discussed in terms of Motley’s distinction between performance and communication orientations toward public speaking.

Many studies have examined the effect of anxiety on communication processes, particularly public speaking. Whereas much is known about the effects of public speaking anxiety on both the audience’s perception of the speaker and the quality of a speech (for example, Daly & McCroskey, 1984), much less is known about the properties of the audience that affect public speaking anxiety. Borrowing from McCroskey’s (1977)
definition of communication apprehension, we define public speaking anxiety as "an individual's level of fear or anxiety associated with either real or anticipated communication in front of a group of persons." This study simulates eight audience types and examines their effect on anticipated public speaking anxiety.

There is no doubt that the audience is an important part of the overall public speaking situation. In describing a speaker's approach to the situation, McCroskey (1968) proposed a distinction between self-centered speakers and audience-centered speakers. Similarly, Motley (1991) based on numerous textbooks, such as McCroskey's (1968), makes a distinction between a performance orientation and a communication orientation. On one hand, a speaker with a performance orientation would believe that success primarily depends on her/his oratorical behavior (eye-contact, vocal range, vocabulary use, etc.). Believing that s/he is being scrutinized for performance flaws, this speaker would suffer considerable anxiety about making even minor mistakes. On the other hand, a speaker with a communication orientation places emphasis on the speech content, information-gain, and attitude change, which is more similar to everyday, interpersonal communication. The communication-oriented speaker should experience less public speaking anxiety. It is our contention that expectations about the audience are likely to exert a powerful influence on the orientation adopted by a speaker.

Based on Motley's work, and qualitative data collected as part of another investigation (MacIntyre & Thivierge, 1995), we chose to isolate three audience variables that influence public speaking anxiety. The first of these influences is audience interest in the topic. Motley (1991) specifies that early classroom experiences with oral communication are often particularly anxiety-provoking, because they are often "speaking-for-the-sake-of-speaking" exercises, rather than attempts to communicate information and ideas (p. 90). Performance-style presentations may engender little interest from the audience because they are often done simply to gain experience with public speaking. Conversely, a speaker with a communication orientation would be more likely to approach the podium with the belief that the audience will be interested in the topic, and should experience less anxiety. This variable, audience interest in the speech topic, seems to have been overlooked in previous investigations of public speaking anxiety and will be included in the present study.

A second audience-related variable is audience responsiveness. When considering the audience's responsiveness it is expected that speakers, especially nervous ones, will monitor very closely the audience's nonverbal behavior. If the audience is unresponsive, the speaker essentially perceives them as saying "You may be talking but I'm not listening to you" which can be both stressful and anxiety-provoking (Bassett, Behnke, Carlile, & Rogers, 1973). Alternatively, the responsive audience implies attentive listening, more akin to a dyadic conversation, making the speaking situation less novel, more forgiving of minor mistakes, and therefore less anxiety-provoking.

A third variable often implicated in theoretical analysis (Buss, 1980) and anecdotal reports of sources of public speaking anxiety is formal evaluation of the speech. Consistent with this is Motley's (1991) suggestion that speakers with the performance orientation are speaking for some sort of external reward whereas communication-oriented speakers are more intrinsically motivated. However, results from previous research have failed to demonstrate that formal evaluation of a speech will increase public speaking anxiety (see Beatty, 1988; Beatty, Balfantz & Kuwbara, 1989; Leary, 1991). It is possible that the effects
of evaluation will be observed to interact with other variables, such as interest and responsiveness, and we have chosen to examine the influence of anticipated performance evaluation on public speaking anxiety in the present study.

When examining the combined influence of interest, responsiveness, and evaluation, Motley’s (1991) orientations seem to define two ends of a continuum. At one end, the performance orientation can be seen in a speaking context with low audience interest in the topic, low audience responsiveness to the speaker, and high evaluation. At the other end of the continuum is the communication orientation wherein a speaker can expect an audience to be high in interest, highly responsive, and non-evaluative. There are, however, several possible variations between these two extremes.

The present study will ask research participants to imagine speaking to various combinations of audience types. This is consistent with the definition of public speaking anxiety offered above. There is no doubt that the mere anticipation of public speaking can be anxiety provoking (Buss, 1980; Jackson & Latané, 1981). The process of anticipating public speaking, and the anxiety that can accompany it, are interesting topics in their own right (MacIntyre & Thivierge, 1995). Given this, our focus in this research is the anxiety that a speaker brings to the presentation and how variations in the audience can affect the anxiety anticipated before public speaking.

H1: A three-way interaction of evaluation, responsiveness, and interest on public speaking anxiety is expected.

Research has described a host of emotional and cognitive reactions that accompany the anxiety response (see Buss, 1980; Daly & Buss, 1984; McCroskey, 1984; Beatty, 1988). Among other things, anxious communicators often feel that they are going to give very poor speeches. Given this, early withdrawal from the speaking situation is often planned. This leads to the following research question concerning correlations among the ratings:

RQ1: Does public speaking anxiety correlate negatively with ratings of expected speech quality and length of time one is willing to speak?

Anticipating the possibility that these correlations will be significant, the following research question will also be addressed:

RQ2: Do audience evaluation, responsiveness, and interest affect ratings of speech quality and length of time one is willing to speak?

METHOD

Participants

One hundred and twenty-one students from second-year university psychology classes participated in the study (missing data reduced the sample size to a minimum of 98 for some analyses). Testing lasted approximately 20 minutes and was conducted immediately following regular classes.

Materials

Descriptions of eight types of audiences were presented in the form of vignettes. To
enhance the generalizability of the results, each vignette was presented in one of the two speaking contexts, academic or professional (based on MacIntyre & Thivierge, 1995). Each vignette was rated for all of the dependent variables shown below. A manipulation check also was included to test for experience with similar situations and the difficulty of imagining each of the situations described in the vignettes.

Vignettes. Each participant received a questionnaire containing eight vignettes. The vignettes asked the respondents to imagine speaking to audiences with varied interest in the topic (high/low), nonverbal responsiveness to the speaker (high/low), and whether or not the speech was being evaluated. The participant was asked to consider all eight types of audiences in either the academic (n = 63) or professional speaking context (n = 58). The academic context asked that students imagine making a presentation to classmates as part of a course. The professional context asked subjects to visualize giving a speech at a training session to a group of co-workers. Shown below is the academic context with the audience of high interest, high responsiveness, and high evaluation. Also shown is the professional context where the audience interest is low, responsiveness is low, and evaluation is low.

1. You are giving a class presentation. It is an audience of approximately 20 individuals who are very interested in your topic - they ask questions and want to learn more about the issues. As well, most of the audience members are rather responsive to you personally - they smile or nod and maintain pleasant eye contact. This group will be evaluating your presentation and it will affect your final grade.

2. You are giving a training seminar presentation at work. It is an audience of approximately 20 individuals who are not very interested in your topic - they ask no questions and don’t want to learn more about the issues. As well, most of the audience members are rather unresponsive to you personally - they do not smile or nod and do not maintain pleasant eye contact. This group will not be evaluating your presentation and it will not affect your job performance ratings.

The rest of the vignettes were formed by mixing the sentences shown above. Each vignette was presented on a separate page. These pages were randomly ordered before being stapled together to form a questionnaire. This ensured that no two raters were given the same order of vignettes.

Ratings. The vignettes were rated on the following scales:

1. Anxiety. This six-item measure (MacIntyre & Thivierge, 1995) incorporates a semantic differential response format to evaluate the amount of anxiety that a subject anticipates feeling when speaking. All items were presented as bipolar pairs with a nine-point rating scale, and all items were coded such that higher scores on each item indicate greater anxiety.

2. Willingness to Speak. This measure (MacIntyre & Thivierge, 1995) assessed the number of minutes for which a subject was willing to communicate to each type of audience. The item was phrased as follows: “For how many minutes would you be willing to speak to this group (from 0 min. to 30 min.)?”

3. Quality of Presentation. To assess the degree to which the respondents felt that they could give a high quality presentation to each type of audience, the following item was presented:

Do you think that the quality of your presentation will be: Extremely Poor 1 -- 2 -- 3 -- 4 -- 5 -- 6 -- 7 -- 8 -- 9 Excellent
Manipulation checks. A two-step procedure was undertaken to test whether the speaking contexts presented were reasonable. First, respondents were asked to indicate if they had ever been in a situation like the one described. If so, they were asked "How similar is this situation to the one that you encountered." If they had not been in such a situation, they were asked, "How difficult is it to imagine such a situation?" Responses were made on a five-point Likert scale (1="not at all difficult", 5= “very difficult”). The data are shown in Table 1. Many of the situations were encountered with high frequency; of those that were not, all of the means for the 18 ratings of difficulty to imagine the situation were less than the theoretical mid-point of 3.0. This suggests that the contexts were either familiar or were not difficult to imagine.

**Table 1**
Results of Manipulation Check for Each Audience Type

<table>
<thead>
<tr>
<th></th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
<th>Low Int.</th>
</tr>
</thead>
<tbody>
<tr>
<td>% similar</td>
<td>45.1</td>
<td>44.8</td>
<td>57.3</td>
<td>56.5</td>
<td>44.4</td>
<td>50.0</td>
<td>70.4</td>
<td>66.1</td>
<td></td>
</tr>
<tr>
<td>Similarity</td>
<td>3.80</td>
<td>3.44</td>
<td>3.84</td>
<td>3.79</td>
<td>3.58</td>
<td>3.77</td>
<td>4.14</td>
<td>3.97</td>
<td></td>
</tr>
<tr>
<td>Difficulty</td>
<td>2.50</td>
<td>2.41</td>
<td>2.32</td>
<td>2.19</td>
<td>2.45</td>
<td>2.45</td>
<td>2.03</td>
<td>2.01</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
Int. = Interest
Res. = Responsiveness
Eval. = Evaluation
%similar - percentage of respondents who indicated that the described audience was similar to one that they had encountered before.
Similarity - mean rating of similarity among those indicating that the situation was similar to one previously encountered
Difficulty - mean rating of difficulty to imagine each type of audience among those who indicated that they had not encountered a similar situation

Procedure
Following a regularly scheduled class period, students were given a presentation describing the research project and their voluntary co-operation was requested. Questionnaires containing the two speaking contexts were mixed at random before being distributed to the participants.

Before reporting the results, it is important to note that our procedure is based heavily on repeated measures. The advantage of this methodology is that it allows the variance due to individual differences among subjects to be partitioned out of the error terms in the analyses of variance (Kirk, 1982). We are unable to specify the source of these individual differences in this study because measures of individual differences were not taken. Past research clearly implicates speaker traits (e.g., McCroskey & Sorensen, 1976) and consistent
perceptions of speaking situations (e.g., Beatty et al., 1989). In fact, this research leads us to believe that it might be difficult to take actual speaking situations, systematically vary the attributes of a live audience, and have those variations accurately perceived by the speaker. As Beatty et al. (1989) suggest, a speaker’s perception of the situation may tell more about the speaker than it does about the audience. Therefore, simulating the speaking situations offers the potential for better control over the speaker’s perceptions of the audience and statistically accounts for individual differences among the speakers.

RESULTS

The public speaking anxiety ratings were analyzed using a 2 x 2 x 2 x 2 split plot ANOVA. The between groups factor was speaking context (academic or professional) and the within subjects factors were audience interest in the topic (high/low), audience responsiveness to the speaker (high/low), and the presence/absence of formal evaluation. Significant main effects were observed for interest, responsiveness, and evaluation. Also significant were the interactions of interest and responsiveness, interest and evaluation, and the three-way interaction involving interest, responsiveness and evaluation.

TABLE 2
F-values and Effect Sizes for Analyses of Variance

<table>
<thead>
<tr>
<th></th>
<th>Anxiety</th>
<th>Willingness to Speak</th>
<th>Speech Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>η²</td>
<td>F</td>
</tr>
<tr>
<td>C</td>
<td>3.00</td>
<td>.030</td>
<td>4.75 *</td>
</tr>
<tr>
<td>I</td>
<td>55.35 **</td>
<td>.363***</td>
<td>145.65 **</td>
</tr>
<tr>
<td>R</td>
<td>114.76 **</td>
<td>.542***</td>
<td>132.68 **</td>
</tr>
<tr>
<td>E</td>
<td>50.10 **</td>
<td>.341***</td>
<td>2.14</td>
</tr>
<tr>
<td>CxI</td>
<td>1.58</td>
<td>.016</td>
<td>4.34 *</td>
</tr>
<tr>
<td>CxR</td>
<td>0.13</td>
<td>.001</td>
<td>0.75</td>
</tr>
<tr>
<td>CxE</td>
<td>0.08</td>
<td>.001</td>
<td>0.18</td>
</tr>
<tr>
<td>IxR</td>
<td>4.41 *</td>
<td>.043*</td>
<td>0.37</td>
</tr>
<tr>
<td>IxE</td>
<td>4.24 *</td>
<td>.042*</td>
<td>4.02 *</td>
</tr>
<tr>
<td>RxE</td>
<td>0.23</td>
<td>.002</td>
<td>3.46</td>
</tr>
<tr>
<td>CxIxR</td>
<td>0.01</td>
<td>&lt;.001</td>
<td>0.37</td>
</tr>
<tr>
<td>CxIxE</td>
<td>0.25</td>
<td>.003</td>
<td>0.05</td>
</tr>
<tr>
<td>CxRxE</td>
<td>0.27</td>
<td>.003</td>
<td>0.86</td>
</tr>
<tr>
<td>IxRxE</td>
<td>11.40 **</td>
<td>.105**</td>
<td>1.15</td>
</tr>
<tr>
<td>CxRxIxE</td>
<td>0.03</td>
<td>&lt;.001</td>
<td>0.44</td>
</tr>
</tbody>
</table>

Legend:
***p < .001
**p < .01
*p < .05
C = context
I = interest
E = evaluation
R = responsiveness
η² = Partial Eta-Squared
The main effects show that speakers anticipate being more anxious in front of an audience with low interest \((M = 30.05)\) as compared to one with high interest \((M = 27.99)\). Also, the prospect of formal evaluation \((M = 27.24)\) is more anxiety-provoking than contexts where the speaker is not evaluated \((M = 25.75)\). Finally, an audience that is highly unresponsive to the speaker arouses much more anxiety \((M = 31.45)\) than does an audience that is responsive \((M = 24.03)\). In fact, the largest effect size is observed for responsiveness (see Table 1). It should be noted that the most anxiety-provoking audience combines low interest, low responsiveness and high evaluation, which corresponds best to Motely’s (1991) performance orientation. The least anxiety-provoking audience was high in interest, highly responsive, and was not evaluating the speaker.

The two-way interactions will not be interpreted because of the presence of a three-way interaction (see Figure 1). Further inspection reveals that the three-way interaction seems to be isolated in the low evaluation type of audience. In a low evaluation situation and when the audience is high in responsiveness, there is a significant difference in speaker anxiety ratings between low and high interest audiences \((t = 6.28, p < .01)\). A more regular pattern is observed when the speaker is being evaluated. Figure 1 also illustrates the similar differences between high and low interest audiences at both levels of responsiveness. The interpretation of this panel simply follows the above description of the main effects.

**FIGURE 1**

Three way interaction of audience interest, responsiveness, and evaluation on public speaking anxiety

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Correlations of public speaking anxiety and other ratings.

To address the first research question, correlations were computed between total public speaking anxiety scores and the overall ratings of willingness to speak and speech quality (see Table 2). All of the variables were significantly intercorrelated. As expected, higher levels of public speaking anxiety were associated with lower expected speech
quality and a willingness to give shorter speeches.

TABLE 3
Correlations among public speaking anxiety and other rated variables.

<table>
<thead>
<tr>
<th></th>
<th>PSA</th>
<th>SQ</th>
<th>WTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public speaking Anxiety (PSA)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Speech Quality (SQ)</td>
<td>-.54</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Willingness to Speak (WTS)</td>
<td>-.42</td>
<td>.50</td>
<td>-</td>
</tr>
</tbody>
</table>

NOTE: All correlations are significant at $p < .01$

To examine the second research question, i.e. the effects of evaluation, audience interest, and responsiveness on the ratings of willingness to speak and expected speech quality, the data was analyzed in the same manner as the anxiety ratings. Each of the ratings was entered into a $2 \times 2 \times 2 \times 2$ split plot ANOVA with the same factors as the anxiety ratings.

**Willingness to Speak.** As shown in Table 2, significant main effects were observed for context, interest and responsiveness. Two interactions were observed, one involving context by interest (see Table 4) and the other involving interest and evaluation (see Table 5). The main effects indicate willingness to speak longer in the professional context ($M = 20.12$) than in the academic context ($M = 17.46$). Non-responsive audiences ($M = 16.65$) will receive much shorter speeches than responsive ones ($M = 21.77$). Finally, disinterested audiences ($M = 15.85$) generate considerably less willingness to speak than interested ones ($M = 21.66$). The effect sizes of responsiveness and audience interest are comparable and moderately strong.

The interaction of speaking context by audience interest indicates that the difference between the professional and the academic setting is greater when audience interest is high than when it is low (see Table 3). Respondents seem to be especially willing to speak to interested colleagues at work. The interaction of interest and evaluation shows that there is essentially no difference between evaluative and non-evaluative audiences when interest is high (see Table 4). When interest is low, a small significant difference is observed showing that respondents are willing to give longer speeches when they are being evaluated.

**Speech Quality.** Table 2 shows that significant main effects were observed for interest and responsiveness, and the interaction of interest and evaluation was significant. The main effects indicate that higher quality speeches are anticipated when the audience is perceived as interested ($M = 7.18$) as opposed to disinterested ($M = 6.21$); responsive ($M = 7.35$) as opposed to unresponsive ($M = 6.04$). As with the ratings of willingness to speak, the effect sizes for responsiveness and interest are moderately strong.
TABLE 4
Interaction of Interest and Speaking Context on Willingness to Speak (in minutes).

<table>
<thead>
<tr>
<th>Context</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Low 15.00</td>
</tr>
<tr>
<td>Professional</td>
<td>Low 16.63</td>
</tr>
</tbody>
</table>

TABLE 5
Interaction of Interest and Evaluation on Willingness to Speak (in minutes).

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Low 15.13</td>
</tr>
<tr>
<td>Formal</td>
<td>Low 16.38</td>
</tr>
</tbody>
</table>

The interaction between interest and evaluation is shown in Table 6. The pattern of means indicates that evaluation does not appear to affect speech quality ratings when audience interest is high. When interest is low, however, respondents anticipate giving a higher quality speech when they are being evaluated compared to when they are not being evaluated.

DISCUSSION

TABLE 6
Interaction of interest and evaluation on speech quality ratings (1-9 scale).

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Low 5.96</td>
</tr>
<tr>
<td>Formal</td>
<td>Low 6.34</td>
</tr>
</tbody>
</table>

Before discussing the results in detail, let us again emphasize that this is a simulation study. The request to imagine speaking to eight audiences which systematically vary along three dimensions is artificial. However, as noted in the procedure section, there are some advantages to this methodology. It is our belief that some of the most interesting effects of public speaking anxiety occur well before the public speaking situation. Many people make decisions that keep them out of anticipated speaking situations, for example, in choosing university courses, programs, or career goals that will not require public speaking. In situations where public speaking is unavoidable, anxious speakers may prepare the speech so as to minimize time spent speaking. In general, knowledge of the audience can influence
a speaker's emotional and cognitive reaction to giving a particular speech and thus help set the tone for the event itself. Let us examine in more detail how speakers approach different audience types.

The results of the present study support Motley's (1991) discussion of performance versus communication orientations. Among the audience types presented here, the closest one to a communication orientation would involve an interested, responsive, non-evaluative audience. This was certainly the most preferred audience type. It aroused the least anxiety, the greatest willingness to speak, and the highest ratings of expected speech quality. Motley's (1991) description of the performance orientation, as in classroom "speaking-for-the-sake-of-speaking" exercises, may be best represented in the disinterested, unresponsive, evaluative audience. If, as Motley suggests, this represents a speaker's early experience in the public forum, it becomes clear how a set of anxiety-related cognitions would be formed. Therefore, previous experience with an audience type will influence a speaker's emotional and cognitive reaction to giving a speech. These attributions could then act as the basis for forming, maintaining and enhancing the anxiety response in subsequent public speaking attempts (see also Behnke & Beatty, 1981).

It is very interesting, and somewhat surprising, that audience interest and responsiveness exert a stronger and more consistent influence on these data, compared to evaluation. The overall ratings of public speaking anxiety seemed to be most strongly affected by the audience responsiveness to the speaker. A more detailed examination, using Figure 1, shows that when a speech is not being formally evaluated, it matters little whether a low responsive audience is interested in the topic or not. In this case, the speaker may see the speech as primarily an opportunity for communication and expect feedback from the audience. If the audience is unresponsive, knowing that they are interested in the topic does not relieve the speaker's anxiety. On the other hand, when the speech is being evaluated, an unresponsive, interested audience generates less anxiety than an unresponsive, disinterested audience. Here, the performance orientation may eliminate some of the audience's responsibility to provide feedback because the speaker is speaking for other rewards. However, we should note that the interested and responsive audience clearly generates less anxiety.

The correlations indicate that anxious speakers expect negative evaluations of both themselves and their speech (see Buss, 1980). This expectation likely leads to the decision to withdraw from the speaking situation as quickly as possible. This early withdrawal may create a self-fulfilling prophecy as audience members tend to evaluate speakers negatively if they avoid communication (Daly & Stafford, 1984). Given this, the anticipation of public speaking anxiety can have profound effects.

The mean ratings of willingness to speak, defined as planned minutes of speaking, were more strongly influenced by changes in audience interest and responsiveness than speaking contexts or the presence/absence of formal evaluation. Both willingness to speak and anticipated speech quality ratings showed an interaction between evaluation and interest. In both cases, when interest was high, the presence or absence of evaluation had very little effect on the ratings. When interest was low, however, evaluation had a slight effect. We might interpret this to indicate that when the audience verbally expresses an interest in the speech topic, evaluation may be almost irrelevant to the expected length or quality of the speech. These results offer clear support for Motley's (1991) suggestion that a performance orientation, wherein oratorical skills are more important than the audience's
understanding of the message, is likely to engender anxiety and its corollaries (e.g., shorter, lower quality speeches). The communicative orientation, with a focus on the audience's understanding of the speech content, seems much less likely to arouse public speaking anxiety, even when the speech is being evaluated.

Some practical suggestions may be offered based on the data reported here. When students are required to do public speaking as part of a classroom exercise, the speakers should be strongly encouraged to find topics known to be interesting to the audience. This might help to encourage a communication orientation, lower anxiety before the speech, and assist the audience in providing positive nonverbal feedback because their interest will be authentic. In addition, students who comprise the audience for other students' speeches should be advised of the facilitating effects of responsive nonverbal cues, such as simple smiles and nods. It might be suggested that in the presence of these two conditions, the necessity to evaluate public speaking performance may have less of an anxiety-arousing effect. This suggestion should be tested in future research in which participants are required to give speeches.

REFERENCES


