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#### THE SEMANTIC DIFFERENTIAL AS

#### A MEASURE OF SPEECH

#### TENSION

by

Wm. R. Knowlton

B.A. Montana State University, 1962

Presented in partial fulfillment of the requirements

for the degree of

Master of Arts

MONTANA STATE UNIVERSITY

1962

Approved by:

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Date

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#### CHAPTER ONE

#### STATEMENT OF THE PROBLEM

In introducing his monograph, <u>Foundation of the Theory</u> of <u>Signs</u>, Charles Morris comments, "Men are the dominant sign-using animals."<sup>1</sup> It is apparent that men communicate with one another primarily through the use of organized sign systems called languages. Social scientists have long recognized that the sharing of a common language among a group of people is one of the dominant forces which produces and preserves civilizations. Such authors as Gray and Wise,<sup>2</sup> Miller,<sup>3</sup> and Bridgman<sup>4</sup> have stressed the role and importance of communication in making society possible; indeed, it is difficult to imagine how interaction among people would take place without the aid of communication.

A number of different definitions have been employed in investigating and theorizing about the process of communication. Among these is the behavioral definition of Stevens: "Communication is the discriminatory response of an organism

<sup>1</sup>Charles W. Morris, <u>Foundations of the Theory of Signs</u>, (Chicago: University of Chicago, 1930), p. 1.

<sup>2</sup>G.W. Gray and C.M. Wise, <u>The Bases of Speech</u>, (3rd ed., New York: Harper and Brothers, 1959), p. 2.

<sup>3</sup>George A. Miller, <u>Language and Communication</u>, (New York: McGraw-Hill, 1951) p. 1.

<sup>4</sup>P.W. Bridgman, <u>The Way Things Are</u>, (Cambridge: Harvard University, 1959), p. 12.

to a stimulus."<sup>5</sup> Although the stimulus elements involved in human communication may take many forms other than those typically regarded as linguistic, the stimulus elements of a message are usually structured out of language, and it is this type of linguistic stimulus which is the concern of this study. The response to the stimulus elements may be verbal, nonverbal, or both. The remainder of this chapter evolves from an adoption of Stevens' definition and develops a research problem consistent with it.

For Stevens, discriminatory responsiveness appears to constitute the sole criterion for communication. Other authors have stressed the view that the motivations of both transmitter and receiver are important factors in discriminatory responsiveness. From the social point of view, one of the prime motivations of people engaging in communication is the intent to influence other people's behavior; the behavior in question may be either verbal or nonverbal. For example, a transmitter may ask a receiver to open the If the requested action of opening the window is window. performed, then the receiver has successfully communicated. But the receiver may respond verbally by saying "Yes," although he still does not actually open the window. Often the nonverbal response in a communication situation is the

<sup>&</sup>lt;sup>5</sup>S.S. Stevens, "A Definition of Communication," <u>Journal</u> of the <u>Acoustical Society of America</u>, 22(1950), p. 689.

most fundamental concern; in other situations, the verbal response is the focal point of communication. Thus successful communication, socially considered, involves eliciting specified responses, either verbal or nonverbal. Berlo sums this up by saying: "Our basic purpose in communication is to become an affecting agent . . . In short, we communicate to influence -- to affect with intent."<sup>5</sup>

Communication in Berlo's sense may be conceptualized as lying on a success continuum. If an individual is able to persuade another to engage in specified behavior relative to some situation, then he has successfully communicated; the more the receiver behavior deviates from the intended mode of behavior, from this point of view, the less successful is the communication. The success of the request to open the window may be judged by a number of criteria; the length of time it takes the receiver to open the window upon hearing the message, or the degree to which the window is raised, are two possible examples of such criteria. Many communication situations, such as the case of a politician making a campaign speech, are much more complex. The politician must wait until election day to assess the adequacy of his communication. The greater number of votes

<sup>6</sup>David K. Berlo, <u>The Process of Communication</u>, (New York: Holt, Rinehart and Winston, 1960), pp. 11-12.

that he receives, the higher on the success continuum has been his communication effort. Socially considered, the transmitter's aim is to maximize the probability of obtaining the intended receiver behavior, and his success is judged by some specified criteria.

In order for a transmitter to engage in successful communication with a receiver, it is commonly accepted that they must in some measure share similar "meanings" for the language elements employed in the transmitter's message. A variety of conceptual views concerned with "meaning" have been employed in past literature. In their comprehensive review of the theories of meaning, Ogden and Richards list sixteen definitions which various schools of thought have attached to the term. The authors call meaning ". . . that pivotal term of every theory of language . . . ."7 As communication is defined by Stevens and by Berlo, the meaning of the linguistic stimulus is the same as the receiver's response to that stimulus. From this point of view, saying that two people share a similar meaning is equivalent to saying that they respond similarly to the same stimulus; the stimulus may or may not be linguistic. Thus communication and meaning are identical in the sense that both terms refer to the receiver's responsiveness.

<sup>7</sup>C.K. Ogden and I.A. Richards, <u>The Meaning of Meaning</u>, (New York: Harcourt, Brace, and Company, 1956), p. 48.

Meaning is often spoken of in the psychological sense of "connotation." This use of "connotation" deals with the associations and feelings which a verbal stimulus evokes in an individual. These associations, however, presumably are related to a person's experiences with a particular verbal sign or set of signs. For example, the word "dog" might have quite different connotations for two people. One person might have been bitten by a dog as a child, so that a dog is now a fear object for that individual. Upon hearing the word "dog," associations of fear and avoidance are aroused. On the other hand, a person who has always had pleasant experiences with dogs responds with associations of reward and approach upon hearing the word "dog." To emphasize the role of individual differences in learning experiences, Berlo writes:

... connotative meaning involves words that do not report much about the world, but they tell a great deal about the person using them, since they indicate his values, judgments, attitudes, etc. Words that we label as connotative always tell us something of the state of the organism, about the user of that word.<sup>8</sup>

The above treatment of connotative meaning appears to have important implications for communication. Differences in receiver connotations could conceivably be one of the variables which influences the effectiveness of some social communication situations. Successful communication might

<sup>8</sup>David K. Berlo, p. 210.

require that the transmitter and receiver have had similar learning experiences with respect to the linguistic terms employed, such as in the example of the politician giving a campaign speech. If the politician presents his case with words and phrases which have negative connotations for his audience, then the probability of that audience's voting for him has quite likely been reduced. In the ideal communication situation, the transmitter would have a verbal case history of an individual's past learning experiences with respect to the words, phrases, etc., which the transmitter plans to employ in his message. The speaker would then know in principle what linguistic stimuli to include in the message to insure his success (eliciting the desired behavior). Some recent research developments have been reported which may provide some considerable assistance in situations where connotative meanings might be important.

## The Semantic Differential

Osgood and his associates report that they have been concerned with just such a problem in developing the Semantic Differential,<sup>9</sup> which presumably indicates the connotative meanings an individual has for various linguistic stimuli. The Semantic Differential is a scaling technique by which

<sup>&</sup>lt;sup>9</sup>Charles E. Osgood, George J. Suci, and Perch H. Tannenbaum, <u>The Measurement of Meaning</u>, (Urbana: University of Illinois Press, 1957).

subjects rate various verbal concepts on seven-step interval scales. The scales are composed of antonyms such as:

happy \_:\_:\_:\_:\_:\_: sad Through factor-analysis, groups of scales were established on the basis of the intercorrelations among individual scales. The three general factors isolated were categorized by Osgood in the following order of purity: <u>evaluation</u>, <u>potency</u>, and <u>activity</u>. Representative examples of scales heavily loaded on the <u>evaluative</u> factor are "good-bad" and "kindcruel"; the <u>potency</u> factor included such scales as "hardsoft" and "strong-weak"; for the <u>activity</u> factor, such scales as "fast-slow" and "active-passive" appeared.<sup>10</sup> Together, these three factors accounted for about 50 per cent of the total scale variance.

Briefly, the technique involves requesting subjects to mark scales with respect to verbal concepts with which he is presented. Since numerical values are attached to the scale intervals, both the direction (plus or minus) and the intensity (plus one to three or minus one to three) are determined for each concept on every scale. Osgood et. al. hypothesized that this successive judging by subjects of concepts on a set of scales generates a "semantic space."<sup>11</sup> The connotative meaning of a concept for an in-

<sup>10</sup>Osgood, p. 50. <sup>11</sup>Osgood, p. 25.

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dividual is defined as: "... that point in the semantic space specified by a series of differentiation judgments,"<sup>12</sup> or in other words, the set of factor scores representing each concept.<sup>13</sup> Thus the Semantic Differential may be regarded as a technique for operationally quantifying connotative meaning.

Researchers in the field of speech and communication have employed the Semantic Differential in several interesting In a recent study, Nebergall defined message clarity ways. as: " . . . the degree that a speaker's intended meaning for a message agrees with the audience's obtained meaning from the same message."<sup>14</sup> The Semantic Differential was used to measure the similarity of meaning between the speaker and his audience. Each communicator was shown an abstract painting and asked to explain his meaning for it "so that anyone hearing your explanation will understand the picture just as you understand it."<sup>15</sup> The messages were recorded and later transcribed into written form. Five audiences of 20 to 25 persons each heard the recorded messages, and similar audiences read the same messages. The results indicated that individuals vary considerably in their ability

<sup>14</sup>Roger E. Nebergall, "An Experimental Investigation of Rhetorical Clarity," <u>Speech Monographs</u>, 25(1958), p. 242. <sup>15</sup>Nebergall, p. 245.

<sup>&</sup>lt;sup>12</sup>Osgood, p. 26.

<sup>13&</sup>lt;sub>0sgood</sub>, p. 87.

to convey their intended meanings, and that the written form of the message seemed to be more effective than the recorded form of the message.

Manis used a procedure similar to that of Nebergall. Five undergraduate students wrote short passages explaining their views on (a) fraternities and (b) the University of Pittsburgh; the same students rated each of the message topics on nine scales of the Semantic Differential. Next, the two sets of messages were distributed to two successive undergraduate classes. The students read each message and then predicted how the writer had rated the topic on each of the nine Semantic Differential scales. A positive correlation was found between the transmitters' and receivers' <u>evaluative</u> factors, but not for the <u>potency</u> and <u>activity</u> factors.<sup>16</sup>

Garrett, in an unpublished masters thesis, used the Semantic Differential as a measure of the effect that different speech constructions have on subjects when two speeches are identical in content. Five concepts common to both speeches were judged by subjects before and immediately after hearing one of the speeches. It was found that: "A speech employing relatively greater use of 'figures of speech' and 'vividness' in word choice will produce greater changes in factor scores *sx*. of the Semantic Differential than will a speech in which

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<sup>&</sup>lt;sup>16</sup>Melvin Manis, "Assessing Communication with the Semantic Differential," <u>American Journal of Psychology</u>, 72(1959), p. 112.

there is relatively little use of these devices."<sup>17</sup>

Garrett recognized the need for obtaining validating evidence for the Semantic Differential when he wrote:

The greatest value of the Semantic Differential as a measure of the effects of speeches will not be realized until the relationship of Semantic Differential scores and non-verbal behavior is explored and defined.<sup>18</sup>

There appears to be little evidence presented for the predictive validity of the Semantic Differential in the sense referred to by Garrett. An exception is the 1952 election study reported by Osgood et. al., which used voting behavior as the criterion.<sup>19</sup> Subjects were asked to place themselves in a "for Eisenhower," "for Stevenson," or "don't know" category. The subjects also rated ten political issue concepts and ten political person concepts which were current at that time on ten Semantic Differential scales. The voting behavior of the eighteen "don't know" subjects was predicted from the average evaluative factor score of the "very certain" subjects for both Eisenhower and Stevenson. Fourteen voted as predicted, which was significant at the five per cent level. When the potency factor was combined with the evaluative factor, seventeen of the eighteen voted as

<sup>&</sup>lt;sup>17</sup>Merrill F. Garrett, "Semantic Differential in Measuring Effects of Speeches," (Unpublished Masters Thesis, Montana State University, 1960), p. 94.

<sup>&</sup>lt;sup>18</sup>Garrett, pp. 94-95. <sup>19</sup>Osgood et.al., pp. 142-143.

predicted, which was significant at the one per cent level. Addition of the <u>activity</u> factor lowered the total prediction success. Thus to a limited extent, these results support the assumption of Osgood and his associates that there is a predictable relationship between an individual's sets of connotative meanings for certain concepts, as measured by the Semantic Differential, and certain of his overt behaviors. This relationship is essentially what is meant by predictive validity.

### Statement of the Problem

The central problem of this thesis is to explore the predictive validity of the Semantic Differential in relation to overt speech behaviors. As the basis of this study, it was assumed that if there is a relationship between connotative meaning and behavior, then there should be a predictable relationship between an individual's overt behavior in a formal speaking situation and his ratings of speech-related concepts on a series of Semantic Differential scales. For this study, two of the many variables associated with speech behavior were chosen as the validating criteria for the Semantic Differential; these behaviors were "stage=fright" and "topic-stand."

The overt behaviors referred to by the generic term "stage-fright" are among the many which have been assumed in the past to be closely associated with past learning experiences, which would presumably determine an individual's

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connotations of terms relevant to a speech situation. The term, however, is traditionally vague in its vernacular usage. Clevenger reports that the conventional use of the term signifies the complex "emotional states" normally associated with public speaking.<sup>20</sup> But for the purposes of research, Clevenger writes that a variety of definitions have been employed; each definition has been guided by the common principle of identifying "speech-fright" with specifiable internal or overt subject behavior.<sup>21</sup>

Consistent with the specificity principle cited by Clevenger, the behaviors labeled as "stage-fright" and "topic-stand" in this study were both identified through the use of constructed rating scales. The linguistic stimuli rated on the Semantic Differential scales were either words and phrases related to speech situations or the speech topics which the subjects were later asked to speak on. It might be contended, however, that some types of words and phrases would render the Semantic Differential less a measure of connotation than a self-rating instrument. If this is the case, the type of concepts rated on the Semantic Differential scales might determine the size of the validity coefficients when Semantic Differential scores are correlated with a behavioral criterion. Therefore in this study two categories

<sup>20</sup>T. Clevenger, Jr., "A Synthesis of Experimental Research in Stage Fright," <u>A Quarterly Journal of Speech</u>, 45 (1959), p. 135.
<sup>21</sup>Clevenger, pp. 134-135.

of words and phrases, which had been judged <u>a priori</u> to vary in their degree of abstraction, in the sense of "subjectinvolvement," were rated on Semantic Differential scales. This study is not designed specifically to test the differences, but to explore the possibility that different types of concepts will yield different validity coefficients with the same behavioral criteria.

It is conceivable that a person who rated himself on the Semantic Differential as being "good," "active," and "strong" in a speaking situation would be judged to exhibit few of the behaviors associated with "stage-fright"; that Semantic Differential scores from self-rating phrases would show a greater degree of relation to a person's judged speech tenseness than Semantic Differential scores from phrases of a more abstract nature; that a subject who rated a speech topic as being "good," "active," and "strong" would speak affirmatively for that topic when asked to take a stand on it. Therefore it is hypothesized that there is a positive relationship between subjects' Semantic Differential factor scores with both their judged degree of "stage-fright" and their judged "for" or "against" stand taken with respect to that topic while speaking about it. The following chapter gives a detailed account of the procedures followed to test the above hypothesis.

#### CHAPTER TWO

#### PROCEDURE

The purpose of this study was to obtain evidence with respect to the validity of the Semantic Differential in relation to certain restricted overt speech characteristics. As part of the research design, two different sets of concepts were rated by subjects on Semantic Differential scales chosen to represent the three main factors: <u>evaluation</u>, <u>potency</u>, and <u>activity</u>. The first set of concepts named specific speech situations. It was assumed that these phrases referred to situations in which the subjects had either personally participated or in which they had observed others participate. Below are the phrases:

1.	you	speaking
		participating in college debate
		introducing a speaker
4.	you	presenting an oral report before a class
5.	you	presiding over a meeting
		taking the dominant part in a group discussion
		lecturing before a large group
8.	you	giving a political speech

The eight concepts were phrased in such a way as to encourage subjects to regard themselves as personally performing in these situations.

In contrast to the first set of phrases, eight abstract speech concepts were also rated by the subjects on the same Semantic Differential scales. The concepts were chosen to represent some of the fundamentals incorporated in speech

education. Below are the concepts:

1.	organization	5.	audience	
2.	projection	б.	gestures	
3.	pronunciation	7.	posture	
4.	delivery	8.	speaking	performance

Since the data were collected near the end of Spring quarter (1962), the subjects, all members of beginning speech classes, had presumably been formally introduced to the above concepts from class lectures and reading assignments. Rather than responding from the point of view of "self=involvement," as on the first set, it is assumed that on the second set the subjects responded from more of a "conceptual" frame of reference.

Three speech-topic phrases were also rated on the scales. Since the subjects were later assigned to speak on each of the topics, topics were chosen on the basis of their current significance and student interest. The three topics chosen are listed below:

- 1. varsity sports
- 2. atom bomb testing
- 3. federal aid to education

Before considering the specific Semantic Differential scales that were used, it should be emphasized that there is no one "standard" Semantic Differential Form. An experimenter selects the scales to meet his particular experimental conditions. Osgood et. al. state that the ideal set of scales should have the following properties:

> (a) high loading on the factor they represent, (b) high correlation with the other scales representing the same factor, (c) low correlation with scales representing other factors (and hence low loadings on other factors).

and (d) a high degree of stability across the various concepts judged.<sup>22</sup>

No set of scales with these ideal properties has been isolated. Instead, as will be pointed out in more detail below, there seems to be a high degree of concept-scale interaction. The meanings of scales and their factorial loading seem to be dependent upon the specific concepts being judged.<sup>23</sup>

Two recent studies by Smith provide evidence of the concept-scale interaction phenomena. In his first study, Smith chose ten concepts which he felt represented the basic parts of a speech situation. They were: "public speeches," "pclitical speeches," "classroom speeches," "emotional speeches," "reasoning," "persuasion," "audience," "stage-fright," "gestures," and "me as a speaker."<sup>24</sup> The concepts were rated by 100 Indiana University speech students on 29 scales. The data were factor-analyzed, and five factors were identi-Smith labeled the factors as follows: optimism, seriousfied. ness, honesty, value, and poise.<sup>25</sup> Smith chose the two scales from each of the five factors which best satisfied the ideal scale criterion of being heavily loaded on the factor the scale measures and minimally loaded on all other factors.

<sup>22</sup>Osgood et. al., p. 186.

<sup>23</sup>Osgood et. al., p. 187.

<sup>24</sup>Raymond G. Smith, "Development of A Semantic Differential for Use with Speech Related Concepts," <u>speech Mono-</u> graphs, 26(1959), p. 266.

<sup>25</sup>Smith, p. 268.

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Smith concludes that the resulting ten-scale measuring instrument will be practical in judging a wide variety of speaking performances.<sup>26</sup>

In Smith's second study, ten theatre concepts were rated by 100 speech students on the same 29 scales used in his first study. Once more the data were factor-analyzed, but this time only four factors were identifiable. Smith named the four factors <u>manner (action)</u>, <u>seriousness</u>, <u>ethical</u> <u>value</u>, and <u>esthetic value</u>.<sup>27</sup> Smith again chose the purest scales from each factor in an attempt to construct a useful instrument for experimental research in drama.<sup>28</sup> It should be noted that even though the same scales were used in both studies, different factors were isolated in the two factoranalyses. This was presumably because different concepts were rated on the scales.

In an effort to identify scales which would be the most stable across classes of concepts. Osgood conducted a study in which scales were composed from 77 antonyms selected from Roget's Thesaurus.<sup>29</sup> One hundred subjects judged twenty concepts against these scales. In order to sample a wide diversity of concept types, concepts were divided into five categories: Person Concepts. Physical Objects, Abstract

26<sub>Smith, p. 272.</sub>
27<sub>Raymond G. Smith, "A Semantic Differential for Theatre
Concepts," Speech Moncgraphs, 28(1961), p. 4.
28<sub>Smith, p. 8.</sub>
29<sub>Osgood et. al., p. 47.</sub></sub>

Concepts, Event Concepts, and Institutions.<sup>30</sup> The three dominant factors of <u>evaluation</u>, <u>potency</u>, and <u>activity</u> were isolated; below are the five scales which had the heaviest loadings on their respective factors.<sup>31</sup>

Evaluative:(1) good-bad (2) harmonious-dissonant
 (3) successful-unsuccessful (4) beautiful ugly (5) wise-foolish

- <u>Potency</u>:(1) hard-soft (2) masculine-feminine (3) severelenient (4) strong-weak (5) tenacious-yielding
- <u>Activity</u>: (1) fast-slow (2) active-passive (3) excitable-calm (4) rash-cautious (5) hereticalorthodox

Because the above scales are presently the ones isolated which best satisfy the requirement of having high factor loadings over a variety of concepts, they were selected as being the most appropriate on which to rate the phrases in the present study.

The fact that different factors were isolated in the studies of Osgood and Smith indicates that further research on the varieties of scale-concept interaction is needed to determine specifically the effects it has on subjects' responses. Research of this type is a separate series of experimental studies in itself, but the data from the present study will have indirect bearing on the scale-concept interaction question. If high reliability and validity coefficients result from the data, then evidence is provided that scale-concept interaction is not a determining factor in subject performance.

<sup>30</sup>Osgood et. al., p. 49

<sup>31</sup>Osgood et. al., pp. 53-61.

If the data yield low reliability and validity coefficients, then further evidence is provided that the scales representing the three general factors are not applicable to all sets of concepts.

The Semantic Differential form was composed of the 15 scales and 19 concepts discussed above. The test booklet contained 31 pages; on every page there appeared two concepts with five scales beneath each concept. The presentation orders of both the scales and concepts in the test booklet were determined by a table of random numbers. The randomization was done in order to meet Osgood's suggestion to prevent the subjects from acquiring a stable response reference. The most accurate reflection of subjects' connotative meanings are obtained when the scale-concept pairs are presented in an unexpected or unanticipated order. The test booklet, along with the initial instructions, appears in Appendix A.

The subjects were obtained from two Montana State University introductory speech courses. This course is designed to acquaint students with the principles of speech. The classes were composed of twenty-three freshmen, seven sophomores, seven juniors, three seniors, and two students of undetermined class standing. A total of 42 subjects, 8 females and 34 males, participated in the experiment. It was assumed that the varied major fields of study of the students would increase the probability of their associating different connotations with the speech- and topic-concepts. Since the same instructor taught both classes, the course

content and type of instruction were assumed to have been similar for both sets of students.

The Semantic Differential instructions were read aloud to the subjects, who were asked to read the same instructions silently from their own copies of the Semantic Differential booklet. The subjects were then asked to rate the phrases on the scales in their test booklets as they were called out on a tape recorder on which they had previously been recorded. A copy of these instructions follows:

In order that all of you will mark the scales at the same rate, this tape recorder will call out the sequence and the space at which you are to mark the scales. It is important for you to not work ahead cr fall behind. Since there will only be a brief time for each rating, please make your judgments promptly. Remember, mark the scales only as they are called out by the tape recorder. Are there any questions? If not, let's begin. (Play the tape for 30 seconds; stop the tape and again ask if there are any questions). Then read: Now that you understand how to mark the scales, there will be no more interruptions. Remember, mark the scales only as they are called out by the tape recorder.

A copy of these instructions appears in Appendix B.

In order to insure that the subjects marked each scale in accordance with their first impressions, the phrases and scales had been taped, with a five-second interval between each phrase and scale. A graduate speech student had served as a reader. The five-second interval was regarded as sufficient time for the subjects to mark the scales, but not enough time for them to "semantically analyze" the phrase-scale combinations. The paced presentation further insured that the subjects would complete their test bocklets during the alloted fifty-minute class period. To obtain an estimate of scale reliability for the Semantic Differential, the scales and concepts on the first page were repeated, but in a different order, as the last page of the booklet. The time interval between the first and last pages represented approximately forty minutes. Since the phrases and scales were called out at the rate of every five seconds, it was assumed that there was small likelihood of the subjects' remembering their scale responses from the first page.

As part of the required course work, each student who had filled out the Semantic Differential booklet scheduled a speaking appointment with the experimenter. When the subject arrived for his time appointment, he was taken into a waiting room and given a data sheet to fill out. A copy of the data sheet appears in Appendix C. The subject was then handed the following instructions, which he was requested to read:

Your class has been chosen to help assess the effectiveness of a new technique in Speech teaching. The purpose of this session is to provide impromptu speaking experience for you on a variety of topics before an unfamiliar audience. The topics you will speak on are listed below:

- 1. Should varsity sports be part of a university system?
- 2. Should the U.S. continue atom bomb testing?
- 3. Should federal aid be provided for college students?

Please talk for one minute expressing your view on each of the topics. At the end of one minute, the chairman will signal you by raising his right hand. At that time please bring your talk to a conclusion. There will be a very brief interval between each of your talks. This procedure will be repeated for each of the three topics.

Since it will be a few minutes before you will speak, you may use this time to think about the topics.

When you are before the group, the chairman will announce the order in which you are to take up the topics. Remember, for each topic please talk until the chairman has signaled that a minute has passed, then bring your talk to a conclusion.

A copy of the subjects' instruction sheet appears in Appendix D.

Each speaker gave three one-minute impromptu talks, with a fifteen-second interval between presentations. The experimenter tape-recorded the separate talks of each subject. The only audience for the speakers consisted of the three judges and the experimenter. During the intervals between the speaker's presentations, three judges rated him independently on both a speech-tension and topic-stand scale (explained below). The three judges were graduate teaching assistants in the Speech Department; each had at least two quarters of university speech teaching experience.

The speech-tension scale instructions for the judges stressed the point that there are a variety of overt behaviors usually associated with speech tension; a sample of these behaviors were listed for the judges. Because there are an inordinate number of possible stage-fright behaviors, and because different subjects might more intensely exhibit some of these characteristics than others while speaking, the judges were instructed to regard the listed behaviors as only suggestive. They were told to provide their own "standard" of evaluation from their experience in speech education.

The speech-tension scale was composed of seven intervals, with a descriptive adjectival phrase immediately beneath

each interval. Below is a copy of the speech-tension scale and the instructions for the judges:

We are assuming that "speech tension" (or "speech fright") may be overtly manifested in a variety of ways. Please rate each speaker for the degree to which speech tension was, in your judgment, characteristic of that speaker for each of his presentations.

A speaker experiencing "speech tension" may be expected to exhibit one or more of the following behaviors: random "non-communicative" activity, such as; trembling, perspiring, hesitancy in speech, awkward postures, restless shifting of feet, nervous hand movements, weak or poor projection, poor eye contact, etc.

These behaviors are to be regarded as only suggestive of some of the observable characteristics that may be associated with "speech tension." We are relying upon you to provide a "standard" or "frame of reference" from your experience in speech education upon which to base your evaluations. Is the speaker exhibiting overt tension all out of proportion to the speaking situation? Or is the speaker markedly calm, cool and nonchalant as he speaks?

After each presentation of the speaker, please rate his <u>overall</u> speech tension by placing a check mark opposite the appropriate description. Please do this for all three topics. The "speech tension" scale is presented below:

<del>Chuld in 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 19</del> 77, 1997, 1977, 19977, 19977, 1997, 19977, 19977, 19977, 1997, 19977, 19977, 19977, 19977, 19977, 19977, 19977, 19977, 19977	š		°			°		°		°	
Virtually	A	Slight	Less	than	Average	More	than	Α	Marked	An	extreme
None	1	Amount	Avei	rage		Avei	rage		Amount	1	Amount

The judges also rated each subject on a seven-step topicstand scale immediately after each of the subjects' presentations. The extremes of the scale were defined as "for" or "against," with a descriptive word again beneath each scale interval. Below is a copy of the topic-stand scale and instructions for the judges:

Speakers may vary as to how strongly they feel "for" or "against" the topic about which they speak. After each presentation of the speaker, please rate the <u>degree</u> to which the speaker expressed a "for" or "against" with respect to the topic by placing a check mark against the appropriate description. Please do this for each of the three topics. The "topic stand" scale is presented below.

FOR AGAINST

The combined set of speech-tension and topic-stand instructions for the judges appears in Appendix E. A copy of the judges' rating scale sheet for each speaker appears in Appendix F.

Immediately upon conclusion of each subject's speaking, he was given a self-rating "speech-fright" scale on which he rated himself as to the degree of speech tension he experienced while speaking before the judges. Below is a copy of the scale and instructions for the subjects:

On the scale below, rate yourself by placing a check mark against the appropriate description indicating the <u>degree</u> of "speech fright" you experienced while speaking before this group:

None Slight Mild Moderate Consider- Marked Extreme able

A copy of the subjects' rating scale sheet and instructions appears in Appendix G.

The report of the data analysis is presented in the following chapter.

#### CHAPTER THREE

#### RESULTS

An estimate of the interjudge reliability on the speechtension scale was calculated to determine whether that data was useful. Siegel suggests that the Kendall coefficient of concordance W is an appropriate statistic to calculate interjudge reliability when more than two sets of ranks are correlated.<sup>32</sup> The interjudge <u>W</u> coefficient on the speechtension scale for 42 subjects yielded a value of .63. The W value of .63 was judged to be not sufficiently high for useful examination of the hypothesis guiding this research. This data appears in Appendix H. Inspection of the speechtension scales revealed that two of the judges were consistently using the scales in almost identical ways with respect to the same speakers. The third judge marked the scales in the same direction as the other two judges, but consistently used the lower range of scale values. Because of this fact, speakers were retained for further study only if each of the three judges had been in agreement that the speaker was either above or below each judge's median scale value of speech-tension. Twenty-five speakers met the above judge-agreement criterion, and the W interjudge reliability was calculated for those 25 subjects. The calculation resulted in a  $\underline{W}$  value of .90,

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<sup>&</sup>lt;sup>32</sup>Sidney Siegel, <u>Nonparametric Statistics</u>, (New York: McGraw-Hill, 1956), p. 229.

which was judged to be satisfactory for the purposes of this study. Data for these calculations appears in Appendix I.

The judges rated each of the speakers' three presentations on a separate topic-stand scale, and <u>W</u> interjudge reliabilities were also calculated for these ratings. The resulting <u>W</u> values were judged as satisfactory; the results are summarized in Table 1. The data for these calculations are in Appendices J, K, and L.

As a means of obtaining a reliability estimate of the Semantic Differential scales, the phrases and scales of the first page of the test booklet were repeated, but in a different order, as the last page of the booklet. The individual scale values of corresponding scales were correlated to obtain the estimates of scale reliability. The Pearson Product Moment Correlation is commonly used in Semantic Differential work, and Osgood presents some evidence that the Semantic Differential scales provide interval measurement, which would support the use of this statistic. However, since the evidence is far from conclusive,<sup>33</sup> the cosine-pi estimate of the tetrachoric correlation<sup>34</sup> was employed rather than the Pearson correlation. According to Tate and Clelland, the <u>Z</u> value is an appropriate approximation to test the significance

<sup>33</sup>Osgood et. al., p. 152.

<sup>34</sup>J.P. Guilford, <u>Fundamental Statistics in Psychology</u> and <u>Education</u>, (New York: McGraw-Hill, 1956), p. 305.

## Table 1

The Interjudge "Topic Stand" Scale Reliability of the Three Judges for 42 Speakers

Sp	eech Topic	"W" value	"x <sup>2</sup> " value
1.	Should varsity sports be part of a university system?	<b>.</b> 85	104.55*
2.	Should the U.S. continue atom bomb testing?	•79	96.68*
3.	Should federal aid be provided for college students?	.70	86.1*

\*Indicates significance at the five per cent level. A value of " $x^2$ " = 55.76 with 40 degrees of freedom is required for significance at the five per cent level.

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of the cosine-pi tetrachoric estimate.<sup>35</sup> Out of the ten scale test-retest correlations, three were not significantly greater than zero. The mean of the test-retest correlations for the ten scales was .56; the results are summarized in Table 2. These reliability coefficients, as reported in Table 2, are clearly low, and will render marginal any inferences drawn from these data.

The sign test<sup>36</sup> was also applied to each of the testretest scales to determine whether there had been any systematic change in the subjects' markings of the scales. As shown in Table 3, only the first "active-passive" scale provided any indication of a systematic change.

Five scales comprised each of the Semantic Differential factors employed in this study. Osgood recommends that the experimenter average the scale values in order to calculate factor scores, but because of the questionable assumption of interval scale measurement, the median scale value was considered a more appropriate estimate of each factor score. The original data from the Semantic Differential scales and the resulting factor scores for the 25 subjects who had been retained are in Appendix M.

A speech-tension judgment had been made by each judge for each of the three presentations made by every speaker.

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<sup>&</sup>lt;sup>35</sup>Merle W. Tate and Richard C. Clelland, <u>Nonparametric</u> and <u>Shortcut Statistics</u>, (Danville, Illinois: Interstate Printers and Publishers, Inc., 1957), p. 77. <sup>36</sup>Siegel, p. 68.

## Table 2

# The Tetrachoric Reliability Test-Retest Coefficients for Ten Semantic Differential Scales

Scale	"r <sub>t</sub> " value	"z" value		
Yielding - Tenacious	.22	.91		
Good - Bad	•75	3.06*		
Orthodox - Heretical	•56	2.31*		
Active - Passive	• 35	1.42		
Feminine - Masculine	•74	3.05*		
Active - Passive	.60	2.44*		
Dissonant - Harmonious	<b>•</b> 57	2.32*		
Wise - Foolish	•75	3.07*		
Orthodox - Heretical	<b>.</b> 34	1.37		
Rash - Cautious	•74	3.05*		

\*Indicates significance at the five per cent level. A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

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# The Sign Test Probabilities for the Ten Test-Retest Semantic Differential Scales

Scale	Probability That No Sys- tematic Change Occurred
Yielding - Tenacious	•62
Good - Bad	•19
Orthodox - Heretical	• 57
Active - Passive	• OO1*
Feminine - Masculine	.82
Active - Passive	• 44
Dissonant - Harmonious	•69
Wise - Foolish	•17
Orthodox - Heretical	1.00
Rash - Cautious	1.00

\*Indicates significance at the five per cent level.

These three speech-tension ratings for each speaker were averaged to yield a mean judgment for each judge with respect to each speaker. The median value of the resulting three means of the judges was used as an estimate of each subjuct's speech tension. These median values are summarized in Appendix N.

Subjects' factor scores from the 19 concepts were correlated with the subjects' respective median speech-tension values. It was assumed that this data reasonably met the assumptions of the cosine-pi estimate of the tetrachoric correlation. A correction for attenuation was employed to the calculated tetrachoric values to obtain an estimate of what the correlation might have been if both variables had been perfectly reliable.

In the first set of concepts, which were the selfrating phrases, only the <u>evaluative</u> factor scores of the phrase "You presenting an oral report before a class" yielded a correlation greater than zero with the speechtension ratings. But because of questionable categorization in calculating this tetrachoric value, it is quite unlikely that this value really differs from the correlations for the other phrases. These data are summarized in Table 4. None of the <u>activity</u> or <u>potency</u> factor scores of the phrases from the first set of concepts correlated significantly greater than zero with the speech-tension ratings. The data from these correlations are reported in Table 5 and Table 6.

None of the evaluative or potency factor scores of the

The Calculated & Corrected Tetrachoric Correlations of the

Evaluative Factor Scores with the Speech Tension

Ratings for 25 Ss on the First Set of Phrases

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>1</sub>
You giving a political speech	<b>~.</b> 26	36	1.13
You presenting an oral report before a class	<b>.</b> 46	•64	2.00*
You lecturing before a large group	<b>~</b> •17	<b></b> .24	.76
You introducing a speaker	.04	• 05	.17
You presiding over a meeting	•04	•05	•17
You participating in college debate	<b>~.</b> 30	<b></b> 42	1.32
You taking the dom- inant part in a group discussion	<b>∞</b> •04	<b>∞ ₀</b> 05	•17
You speaking	<b>∝.</b> 16	22	.70

\*Indicates significance at the five per cent level. A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The Calculated & Corrected Tetrachoric Correlations of the <u>Potency</u> Factor Scores with the Speech Tension Ratings for 25 Ss on the First Set of Phrases

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r " value t	"z" value of Corrected r <sub>t</sub>
You giving a political speech	• 38	•53	1.66
You presenting an oral report before a class	<b>∞.</b> 07	<b>~</b> .10	• 31
You lecturing before a large group	.01	• 01	<b>。</b> 04
You introducing a speaker	<b>。</b> 44	<b>.</b> 62	1.95
You presiding over a meeting	•04	• 05	•17
You participating in college debate	<b>∞</b> •04	<b>-</b> .05	•17
You taking the dom- inant part in a group discussion	<b>-•3</b> 3	-•47	1.46
You speaking	•04	• 05	•17

A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The Calculated & Corrected Tetrachoric Correlations of the

Activity Factor Scores with the Speech Tension

Ratings for 25 Ss on the First Set of Phrases

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>t</sub>
You giving a political speech	.18	<b>.</b> 26	•81
You presenting an oral report before a class	•01	• O1	• 05
You lecturing before a large group	.22	• 31	<b>.</b> 96
You introducing a speaker	.28	<b>.</b> 40	î <b>.</b> 24
You presiding over a meeting	05	<b>~</b> .06	.20
You participating in college debate	<b></b> 06	<b>∞</b> • 09	•27
You taking the dom- inant part in a group discussion	.11	.16	.50
You speaking	• 36	₀50	1.56

A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

words and phrases from the second set of concepts, which were the abstract speech principles, correlated significantly greater than zero with the speech-tension ratings. The data from these correlations are reported in Tables 7 and 8. Three of the <u>activity</u> factor scores of the words and phrases from the second set of concepts correlated significantly with the speech-tension ratings. The words or phrases were: Speaking performance, Organization, and Gestures. But again, the categorization which resulted in these tetrachoric values is questionable; it is unlikely that the correlations are really significant. These data are summarized in Table 9.

Table 10 summarizes the correlations of each of the factor scores with the topic-stand ratings on each of the three speech-topic phrases. On the first speech-topic phrase, "Federal aid to education," the <u>evaluative</u> and <u>potency</u> factor scores were significantly correlated with the topic-stand ratings; on the second speech-topic, "Varsity sports," only the <u>potency</u> factor scores were significantly correlated with the topic-stand ratings; on the third speech-topic phrase, "Atom bomb testing," none of the factor scores were significantly correlated with the speech-topic phrases. The categorization which resulted in the significant correlations was again questionable.

A tetrachoric correlation was also calculated between the subjects' judged speech-tension ratings and the subjects' own ratings of their speech tension. The resulting value was .07, which was not significant.

The Calculated & Corrected Tetrachoric Correlations of the <u>Evaluative</u> Factor Scores with the Speech Tension Ratings for 25 Ss on the Second Set of Concepts

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>t</sub>
Posture	•11	<b>.1</b> 6	.50
Projection	.09	.12	• 38
Speaking Performance	<b></b> • 01	<b>-</b> •01	<b>。</b> 04
Organization	٥04	.05	.17
Gestures	•07	.10	• 31
Pronunciation	.17	<b>.</b> 24	•75
Audience	<b></b> 06	<b>~ 。</b> 09	.27
Delivery	36	51	1.58

A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The Calculated & Corrected Tetrachoric Correlations of the <u>Potency</u> Factor Scores with the Speech Tension Ratings

for 25 Ss on the Second Set of Concepts

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>t</sub>	
Posture	.01	.01	<b>。</b> 04	
Projection	.17	.24	<b>.</b> 76	
Speaking Performance	27	<b>•</b> •37	1.17	
Organization	•11	.16	•50	
Gestures	05	06	.20	
Pronunciation	.22	• 31	<b>。</b> 96	
Audience	33	<b>.</b> • 47	1.46	
Delivery	.22	• 31	•96	

A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The Calculated & Corrected Tetrachoric Correlations of the <u>Activity</u> Factor Scores with the Speech Tension Ratings for 25 Ss on the Second Set of Concepts

Phrase	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>t</sub>
Posture	.03	.04	.14
Projection	• 36	.50	1.56
Speaking Performance	<b>.</b> 46	.64	2.00*
Organization	<b></b> 46	65	2.02*
Gestures	•69	•97	3.03*
Pronunciation	•17	•24	•76
Audience	• 05	•06	.20
Delivery	<b>.</b> 04	<b>.</b> 05	.17

\*Indicates significance at the five per cent level. A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The Calculated & Corrected Tetrachoric Correlations of the Factor

Scores with the Topic Stand Ratings for the 25 Ss

on the Three Speech Topic Phrases

Phrase	Factor	Calculated "r <sub>t</sub> " value	Corrected "r <sub>t</sub> " value	"z" value of Corrected r <sub>t</sub>
Federal	Evaluative	.68	•98	3.07*
Aid To	Potency	45	65	2.03*
Education	Activity	05	07	.20
Varsity	Evaluative	. 30	. 45	1.41
Sports	Potency	.60	.90	2.81*
	Activity	.28	•43	1.33
Atom	Evaluative	.21	• 34	1.05
Bomb	Potency	• 33	•53	1.64
Testing	Activity	21	<b></b> 33	1.04

\*Indicates significance at the five per cent level. A value of "z" = 1.96 for a two tailed test is required for significance at the five per cent level.

The results of the data analysis did not support the hypothesis that a positive relationship exists between subjects' Semantic Differential factor scores and both their judged degree of "stage-fright" and their judged "for" or "against" stand taken with respect to a topic while speaking about it. Interpretations of the above results and their implications for further research will be discussed in the next chapter.

#### CHAPTER FOUR

#### DISCUSSION

The purpose of this study was to investigate the predictive validity of three Semantic Differential factors in relation to the overt speech behaviors of subjects. It was hypothesized that there would be a positive relation between subjects' factor scores and their judged speech-tension and topic-stand ratings. After the calculated correlation coefficients were corrected for attenuation, the hypothesis was not confirmed. The remainder of this chapter discusses some of the possible interpretations of these findings and some of the implications for further research.

## Semantic Differential Reliability

The low test-retest reliability coefficients of the Semantic Differential scales merit discussion. Even though there was a time period of approximately forty minutes between the two test-retest pages, one might suspect that this procedure would yield spuriously high reliabilities. It is possible that subjects would have remembered seeing those concepts on the first page and would thus tend to rate them the same way on the last page. This did not seem to be the case, for the reliabilities ranged from a high of .75 to a low of .22, with a mean value of .56. Despite the fact that these are relatively low coefficients, however, it still might

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be the case that they are spuriously high. These findings are consistent with those of Garrett<sup>37</sup> and those of Alexander and Husek,<sup>38</sup> but are in marked contrast to the reliability evidence presented by both Osgood<sup>39</sup> and Smith.<sup>40</sup>

The low reliabilities might be due to the method employed in administering the Semantic Differential to the subjects. Instead of having subjects mark the scales at their own rate, as Osgood and other investigators report having done, the phrases and scales were tape-recorded at five-second intervals. Subjects were instructed to mark the scales only as they were called out by the tape recorder. Presumably this procedure would decrease the opportunity for subjects to "rationalize" the phrase-scale relations. This procedure would be in accord with Osgood's suggestion that subjects' scale responses should be a function of their first impressions, not reflective analyses. But the five-second paced interval might have had an opposite effect; reliability might be dependent on the subjects' having time to think through the phrase-scale relations. Further research is needed to assess the relationship which varied lengths of scale-concept presentations have on reliability.

<sup>39</sup>Osgood, pp. 126-140.

"Development of a Semantic Differential for h Related Concepts," <u>Speech Monographs</u>, 26 (1959).

<sup>&</sup>lt;sup>37</sup>Garrett, pp. 31-34.

<sup>&</sup>lt;sup>38</sup>Sheldon Alexander and Theodore R. Husek, "The Anxiety Differential: Initial Steps in the Development of a Measure of Situational Anxiety,"<u>Educational and Psychological Measure-</u> <u>ment</u>, 2(1962), p. 328.

One other procedural modification was employed in this study in the administration of the Semantic Differential. The numbers "3," "2," "1," and "0," have normally been used to identify the scale intervals, with a positive sign attached to the numbers on one side of the scale and a negative sign to the numbers on the other. Subjects have been instructed previously that the words "extremely," "quite," "slightly," and "neutral," respectively, correspond with the above numbers. It is quite possible, however, that while subjects are in the process of marking a set of scales against a group of concepts, they would forget the discriminatory verbal descriptions of each interval. In this case, the resulting uncertainty of the subjects might tend to lower the reliability of the scales. To avoid this possibility, the above descriptive words, rather than numerical labels, were written beneath each scale interval for all the scales employed in the present investigation.

Garrett reported an apparent uncooperativeness on the part of his subjects, which perhaps reflected a low level of interest in the project. The uncooperativeness of Garrett's subjects might explain the low reliabilities of his study. Osgood paid his subjects for their experimental time, which presumably motivated them to cooperate more fully and could plausibly be a reason for the high reliabilities he has reported. Subject motivation did not seem to be a problem in the present study. The class instructor incorporated the experimental procedure as a regular assignment for both of

his classes, and the subjects seemed perfectly willing to cooperate with the experimenter. The subjects' cooperativeness was probably also partially due to the excellent rapport which the instructor appeared to have with his classes. It seems that low motivation for the subjects in the present study was not a contributory factor to the low reliability coefficients. Something else is needed to explain the findings of this investigation.

It was assumed that a practice page, which preceded the first page in the Semantic Differential booklet, provided a warm-up opportunity for subjects to orient themselves to the process of marking the scales. Following this practice page was the first page of the booklet. The fact that this first page was repeated in order to obtain the reliability estimate might have influenced the resulting reliability values. This page might have come too soon for the subjects to have stabilized their scale responses.

In past research with the Semantic Differential, concepts have been presented in relative contextual isolation. Yet it seems clear that connotative significance of words may be expected to vary as a function of their contextual occurrence. When the contextual occurrence of concepts remains unspecified, then no frame of reference is provided from which subjects can base their scale responses. For example, one of the concepts employed in the present study was: "You presenting an oral report before a class." If short paragraphs had been provided which explained the type of people

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who made up the class, or the subject matter of the report, or the length of the report, etc., one would predict that a subject would mark the same set of scales differently in each instance. It is possible that in this investigation a contextual shift occurred between the first and last pages of the booklet, which would account for the low reliabilities.

Use of the Semantic Differential assumes that subjects have had some prior meanings associated with the terms employed. There is doubt about this assumption with respect to some of the scales employed in this investigation. It is quite probable that scales like "dissonant-harmonicus," "yielding-tenacious," and "heretical-orthodox" included words that were not in the recognition vocabulary of some of the subjects. If this is the case, then one would expect subjects to mark scales heterogeneously at different times.

Although the test-retest reliability values were low, it is possible that the changes in the subjects' markings of the scales from first to last page would reflect a consistent shift in one direction. They might have consistently tended to mark either the higher or the lower scale values from the test to the retest page. The results of the sign test, however, showed that for nine out of the ten testretest scales, there was no systematic change in the subjects' markings of the scales. They were just as likely to mark a higher scale interval on the second page as they were to mark a lower scale interval.

# Interjudge Reliability

The initial speech-tension scale interjudge reliability of .63 indicated only fair agreement among the judges. The judges were graduate students in the Speech Department, and had approximately equivalent amounts of speech teaching experience. One often assumes that individuals in the same profession attach similar significances to the terms employed in that field, but the .63 value suggests that these three individuals tended not to use the term "speech-tension" in the same way. This may be regarded as another example of the need for continued research in the measurement of factors which affect the process of communication. The judges also tended to avoid marking the extremes of the scale, which reduced it to something less than a seven-point instrument. The resulting restricted range of the speech-tension scale would contribute to the low interjudge reliability.

Although incidental to the main purpose of the study, the lack of a significant correlation (.07) between subjects' judged degree of speech-tension and their own ratings of their experienced speech tension is of interest. Assuming the validity of the subjects' ratings, the insignificant correlation suggests that speech teachers might employ a different standard in rating students on speech-tension than the students themselves; students might not be as fearful in a speaking situation as instructors scmetimes assume them to be. It might be the case, however, that the subjects tended to err

in the direction of under-rating themselves. Perhaps they did not care to admit publicly the tension which they experienced in a speaking situation. Or it might be the case that alternative forms of objectively measuring speechtension might be in closer agreement with the subjects' own ratings of their speech-tension.

# Basic Correlations

As was pointed out in the Results Chapter, the relationship between speech-tension and topic-stand judgments with factor scores was not essentially different from zero.

The questionable procedure of assigning scale polarities might be one of the reasons that would account for the lack of significant relationship. Scale polarities have typically been assigned on the basis of the experimenter's judgment. A factor score is the mean of the scale values which comprise that factor, and the individual scale values are determined by which of the scale extremes is the "plus end" and which is the "minus end." If subjects' polarity judgments failed to correspond with the preassigned scale polarities, then the resulting factor scores would not be based on scales having homogeneity of polarity. It is doubtful that the resulting factor scores would be accurate reflections on subjects' connotative meanings for the concepts judged on those scales. Until an independent operation of assigning polarities is available, the interpretation of the factor scores from any Semantic Differential study would appear to be in

some doubt.

The evidence so far presented by Osgood et. al. for regarding the Semantic Differential scales as equal interval scales was judged not sufficient to justify the use of a parametric correlation in this study. 41 Instead, the nonparametric tetrachoric r was employed to calculate the basic correlations between the judgments and factor scores. According to Guilford, 42 when both variables are continuous, normally distributed, and linearly related, then the cosine-pi estimate of the tetrachoric r may be appropriately applied It may be reasonably assumed that the Semantic to the data. Differential, speech-tension, and topic-stand scales do each lie along a continuum, with one extreme representing a strong positive judgment and the other extreme representing a strong negative judgment. In relation to the normality assumption, Guilford states:

If a continuum is granted, the general law of unimodal distribution approaching normality in psychological traits may be cited in defense of the other requirement.43

No supporting evidence can be cited in defense of the linearity assumption; nor is there any indication of its failure. Another of the requirements of the tetrachoric r is that the two variables are to be dichotomized at the medians, or at least within the limits of the 40th and the 60th per-

<sup>41</sup>Osgood et.al., p. 152. <sup>42</sup>Guilford, p. 305. <sup>43</sup>Guilford, p. 306.

centiles. If the variables do not fall within these limits, then the tetrachoric r value is over-estimated. The seven out of 57 correlations which were significant did not meet this categorization requirement, but several of these seven coefficients failed to meet it by only a small margin. Interpreting these coefficients as significant, however, would be highly questionable.

A comment concerning an inconsistency in statistical operations is relevant to the nonparametric techniques employed in this study. A mean speech-tension value was calculated for each judge with respect to each speaker, and then the median value of the resulting three means of the judges was used as an estimate of each speaker's speech-tension. To have been consistent with the previous nonparametric operations, a median speech-tension value for each judge with respect to each speaker would have been calculated, and then the median value of the resulting three medians of the judges would have been used as an estimate of each speaker's speech-tension. The rationale which supported the initial use of the mean was the assumption that each judge was making his evaluations from a constant subjective frame of reference, but that the judges' frames of reference were not necessarily similar, nor were the differentiating steps of each judge's ratings equal in size to those of the other judges. But the judges tended to use only the mid-range of the speech-tension scales, and therefore the use of the mean probably resulted in little if any difference to the result-

ing speech-tension scores.

The fact that the speech-tension judgments tended to fall within the mid-range of the scale intervals deserves further comment. According to Guilford, it is often the case that judges use only the middle range of rating scales. 44 It might be the case in this investigation, however, that extremes of speech-tension were not present; none of the subjects displayed high speech-tension, but some speech-tension was observable and thus the judges avoided the low end of the scale. The initial instructions handed to the speakers might be related to this lack in extremes of speech-tension. The instructions informed the subjects of the nature and purpose of the speaking situation, and gave them a few minutes to think about the topics they were to speak on. The subjects' ability to predict the coming events might therefore have made them less tense outwardly while speaking before the judges. If the subjects had been brought into the speaking room without any prior information and abruptly given the topics they were to speak about, their visible speech-tension might have been more apparent.

It was suggested in Chapter One that the wording of concepts which dealt in one way or another with the act of public speaking might be a determining factor in how subjects respond to the Semantic Differential scales. To explore this possibility, two categories of speech concepts were employed

<sup>&</sup>lt;sup>44</sup>J.P. Guilford, <u>Psychometric Methods</u>, (New York: Mc-Graw-Hill, 1954), p. 278.

in the present study. Concepts in the first category were phrased in a manner that described subjects in various speaking situations, and for this reason were regarded as selfrating concepts. Concepts in the second category, because they were comprised of single words which dealt with some of the fundamentals of public speaking, were regarded to be of a relatively abstract nature. Although none of the correlations from either of the two categories of concepts were significant, a distinguishable trend was suggested by the data. Assuming that a more reliable technique could be devised for measuring connotative meaning than was employed in the present investigation, and further assuming that the correlation coefficients were significantly different from zero, there is a suggestion that the self-rating phrases might tend to yield the higher correlation values.

In Chapter Two, mention was made of a possible conceptscale interaction phenomena. According to Osgood, this phenomena refers to the fact that scales do not always maintain the same intercorrelations with other scales when they are judged against different sets of concepts.<sup>45</sup> Osgood et. al. have consistently identified the same three general factors in their research, but these factors have not always been represented by the same scales. In Smith's two factor-analytic studies, he identified essentially the same factors as Osgood had, although in both of Smith's studies, the factors were represented by different sets of scales. Because

<sup>45</sup>Osgood et. al., p. 176.

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of this fact, Smith concluded that a separate factor-analysis is required to select the scales most suited for a particular class of concepts. It might be the case that if a different set of scales had been employed in the present study, a higher degree of relationship would have been indicated between the judgments and factor scores.

Assuming that the Semantic Differential is an accurate measure of the sense of connotative meaning as developed in Chapter One, then an obvious possible explanation for the insignificant validity coefficients is that the hypothesis derived from the line of speculation in Chapter One is not true. The assertion that there is a predictable relationship between an individual's connotative meanings and his overt behavior may have no factual foundation. It is the opinion of this experimenter, however, that the procedure employed to test the hypothesis is presently inadequate. Only a continuing research effort will provide the evidence to answer this question.

#### CHAPTER FIVE

#### SUMMARY AND CONCLUSIONS

The recently developed Semantic Differential was reviewed as a possible technique for measuring the connotative meanings which individuals have for various verbal stimuli. It was hypothesized that there is a relationship between individuals' connotative meanings as measured by the Semantic Differential and their nonverbal behavior, specifically, manifest speech-tension. The central problem of this thesis was to test this hypothesis.

Students from two beginning speech classes were administered a Semantic Differential form composed of scales representing the three factors: evaluation, potency and activ-The concepts rated on these scales were selected to ity. represent three general categories. The first category was regarded to be of a self-rating nature; the second category dealt with some of the principles of public speaking; the third category consisted of speech topics, about which subjects were later required to speak. Subjects' factor scores for the concepts were calculated. The same subjects later gave three one-minute impromptu talks which were judged by three independent judges on both a seven-step speech-tension scale and a seven-step topic-stand scale. A median speechtension and topic-stand score for each subject was obtained. The cosine-pi estimate of the tetrachoric r was employed to

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assess the relationship between subjects' Semantic Differential factor scores and their judged speech-tension and topic-stand ratings. The following tenative conclusions are suggested by the data:

- Under the conditions of this study, the hypothesized relation between connotative meanings for speech related concepts and speech-tension was not confirmed.
- (2) As employed in this investigation, the Semantic Differential failed to provide suitable scale reliabilities.

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APPENDICES

.

# APPENDIX A

# The Initial Semantic Differential Instructions and Test Booklet

INSTRUCTIONS

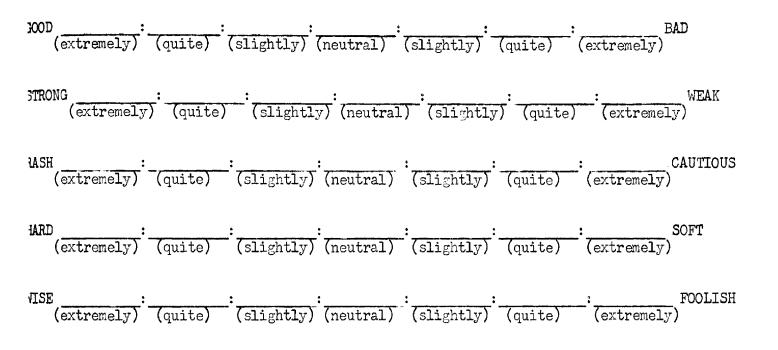
The purpose of this study is to investigate the meanings which people have for various words and phrases. We would particularly like to know what meanings you feel these words and phrases have for you; so in marking the following scales, its is important to make your judgments solely on the basis of what these things mean to you.

On each page of this booklet you will find a different word or phrase and beneath it several scales. You are to rate the word or phrase on each of the scales in order. For example, consider the word <u>AUTOMOBILE</u> and the scale WISE-FOOLISH. If you feel the word automobile is EXTREMELY RELATED to the wise end or EXTREMELY RELATED to the <u>foolish</u> end of the scale, place your check mark as follows,

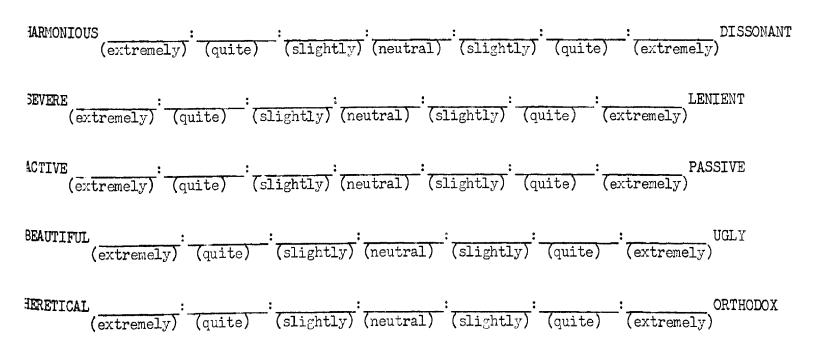
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		he word <u>AUTC</u> RELATED to t	he foolish	end of the	scale, pla	ce your chec	k mark as
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IISE	:		: :	<u> </u>	::	;	FOOLISH
		the directi the scale se					
	equally as IRRELEVAN	nsider the m ssociated wi I (unrelated G mark in th	th the word to your fe	or phrases elings for	) or if th	e scale is c	ompletely
IISE			: <u>X</u> (neutr	::	::	:	FOOLISH

		Place your check mark the boundaries;		spaces, <u>not</u> on
th X		• •	not this	•
		······································	A	<u> </u>
	(2)	Be sure to check ever	y scale for each word	or phrase.
	(3)	Never check more that	n <u>once</u> for each scale.	
	Here is a shor	t example to work. Th	e phrase to be rate is	;
		ECONOMIC AID TO	FOREIGN COUNTRIES	
	The first	scale is: LARGE - SM	ALL	
LARGE (extrem	ely) (quite)	: (slightly): (neutral)	: (slightly) (quite)	:SMALL (extremely)
		check mark according t EXTREMELY RELATED, Q cale?		
	The secon	d scale for the same p	hrase is: GOOD - BAD	
GOOD (extreme	ly) <sup>:</sup> (quite)	(slightly)	(slightly) (quite)	BAD (extremely)
	The third	scale for the same ph	rase is:	
STATIC (extre	mely) <sup>:</sup> (quite)	(slightly) (neutral	) (slightly) (quite)	DYNAMIC (extremely)
	Make your	check according to yo	ur <u>meaning</u> for this ph	rase on this scale.
	Before you beg	in there are some addi	tional things you shou	ld know.
	for various wo meanings you fe	this study is to inve rds and phrases. We w el these words and phr nt to make your judgme you.	ould particularly like ases have <u>for</u> you; so	to know what in marking the scales
	It is your <u>fir</u> want. On the vour use of th	r puzzle over individu st impressions, the im other hand, we ask you e points on each scale ture of these meanings	<u>mediate</u> "feelings" abo to be as <u>careful</u> and as you can, since we	ut the items that we as discriminative in

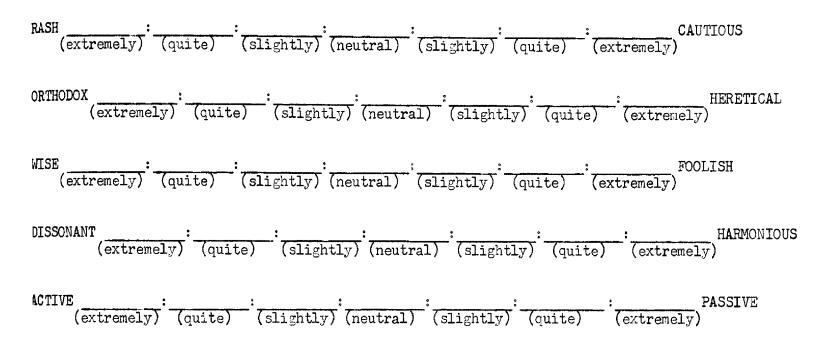
### THE UNITED NATIONS



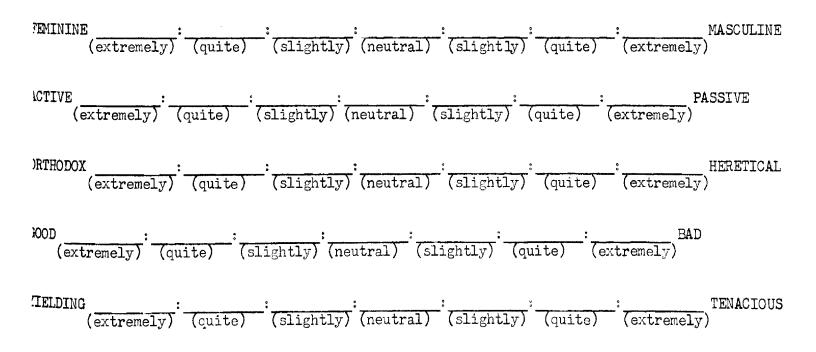
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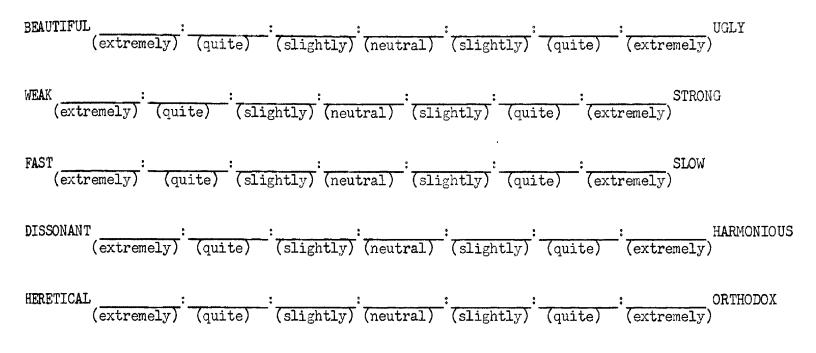
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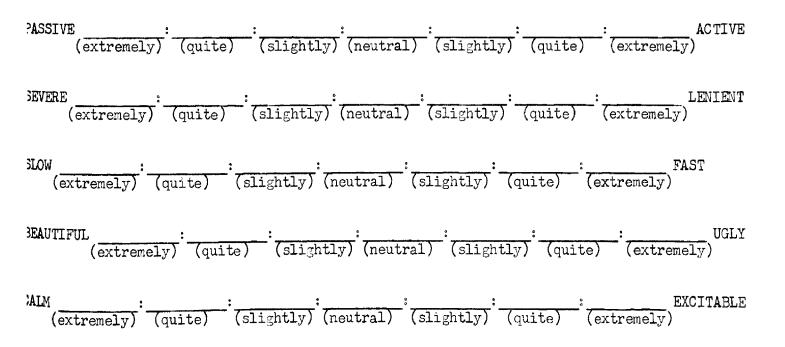
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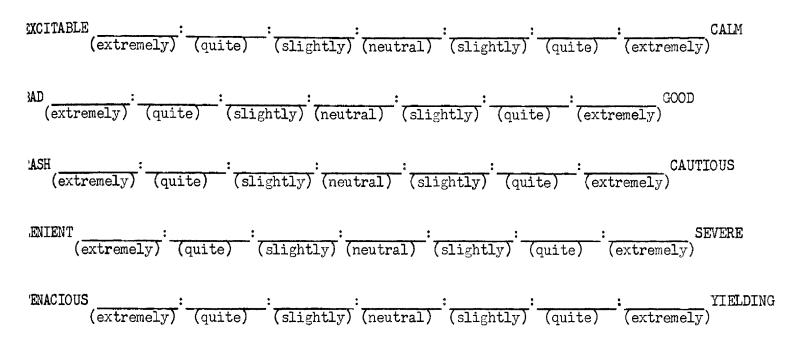
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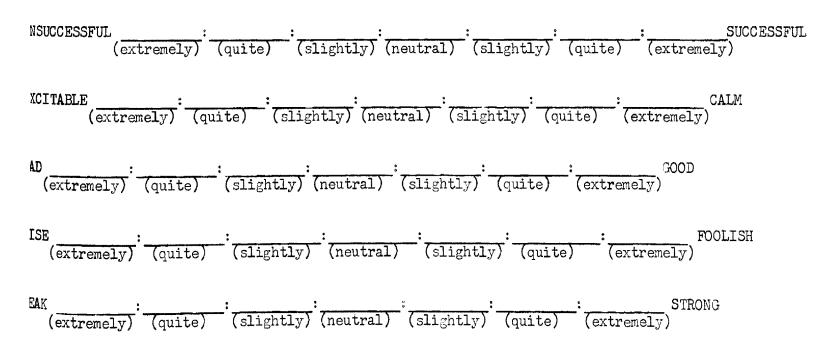
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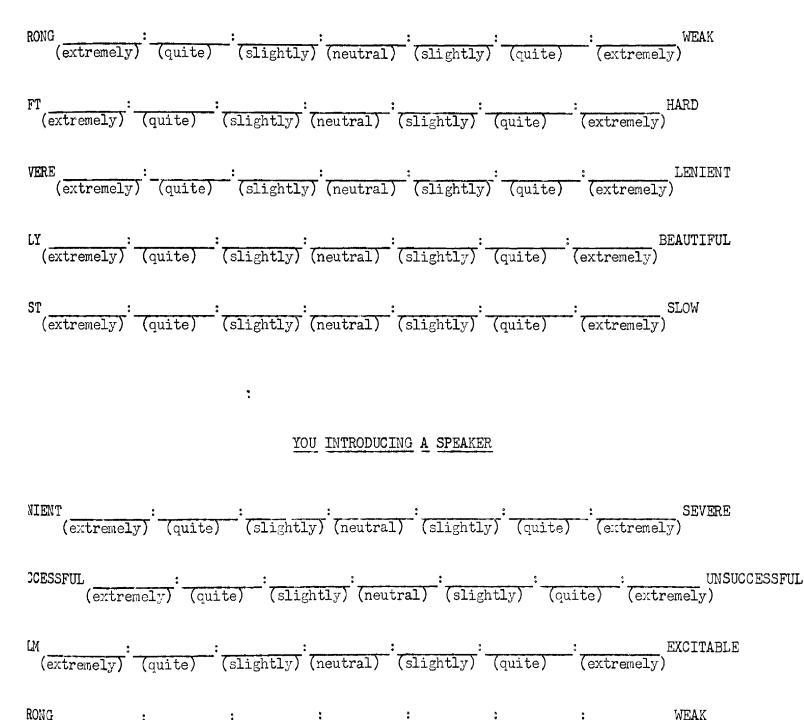
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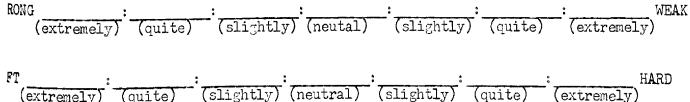


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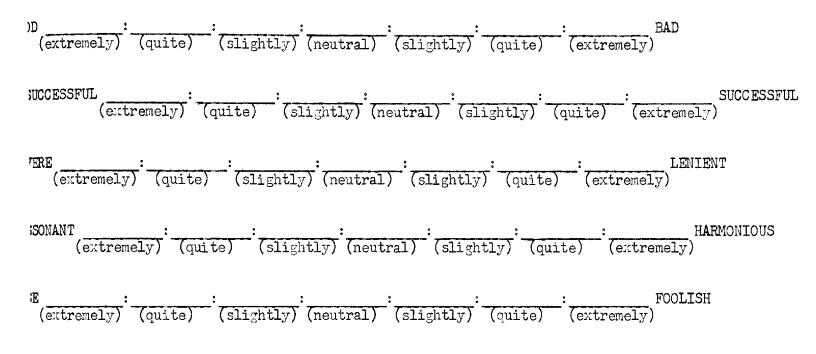


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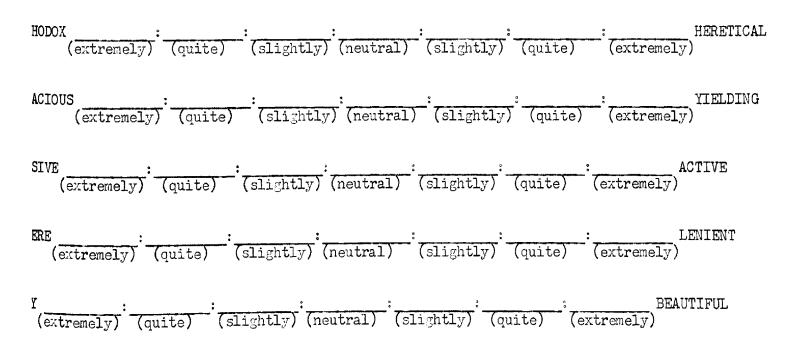




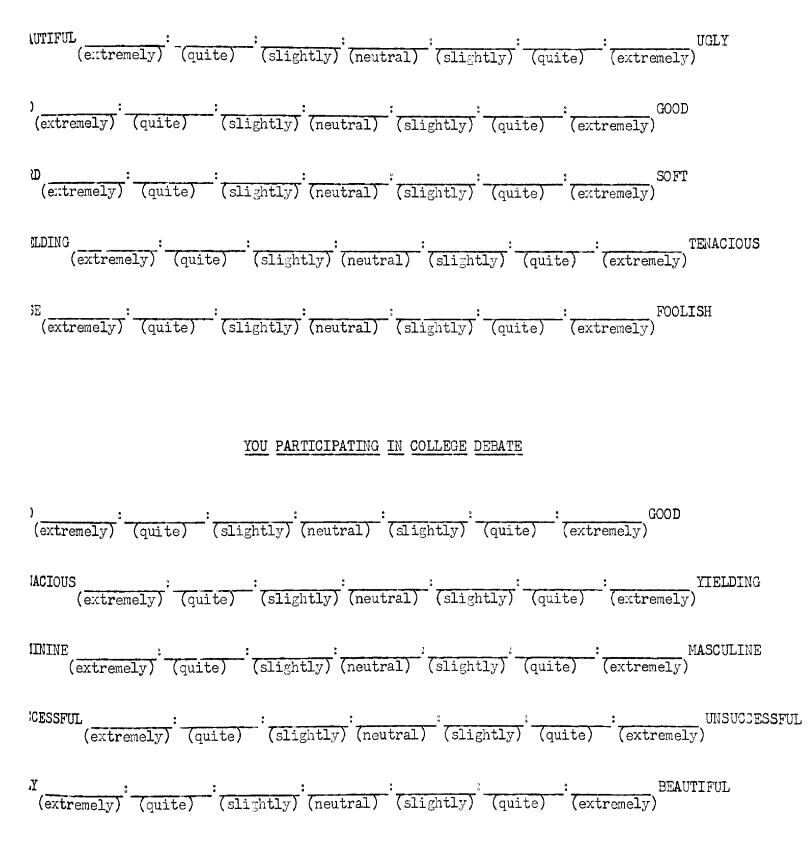
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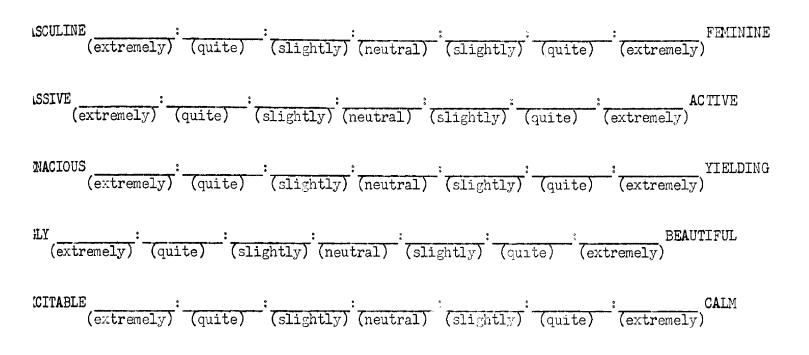
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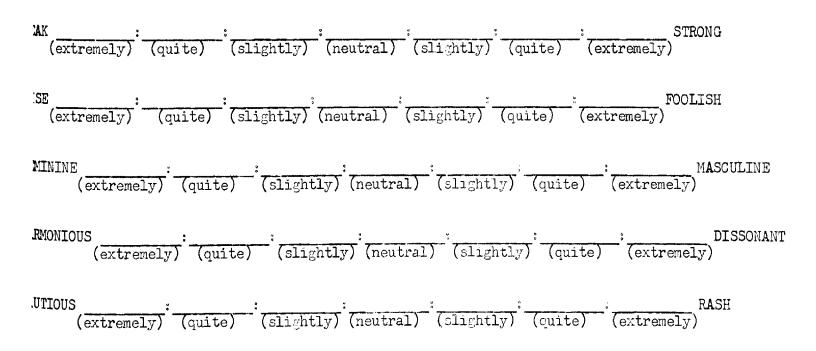
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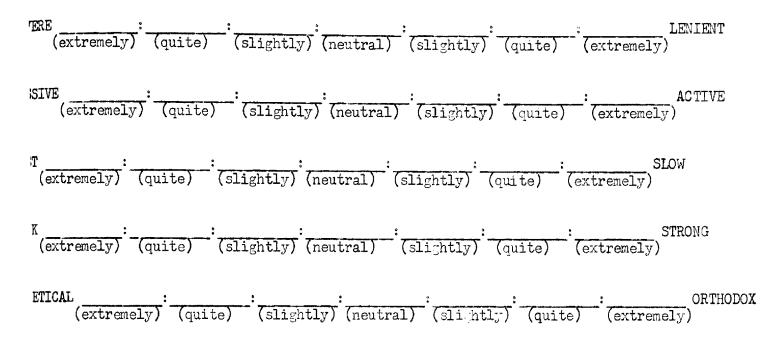
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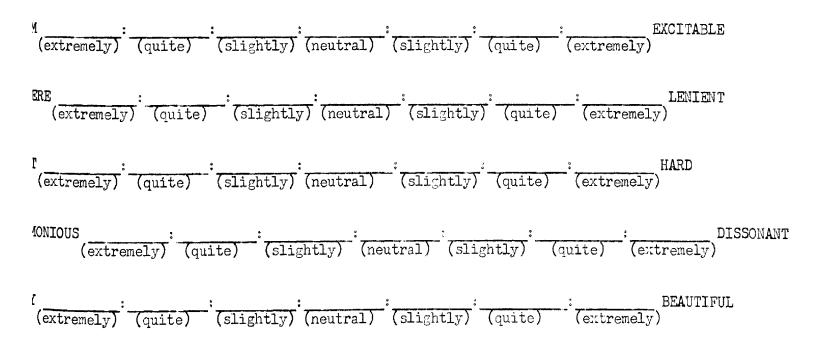
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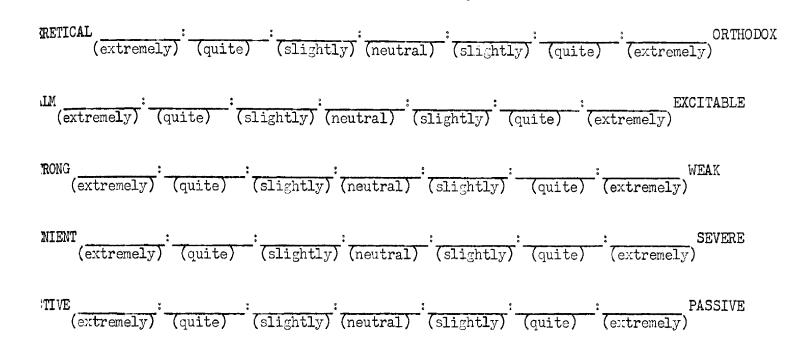
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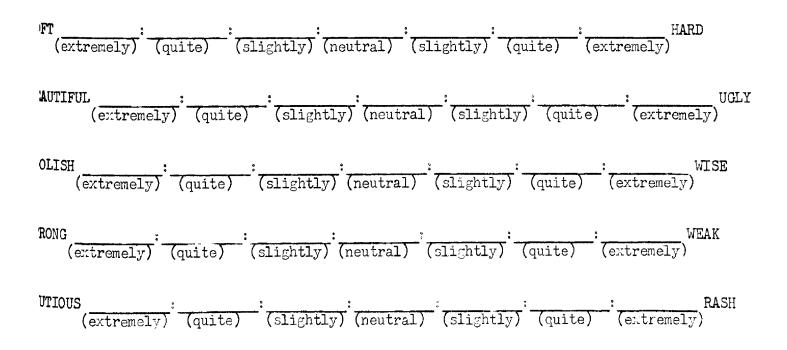
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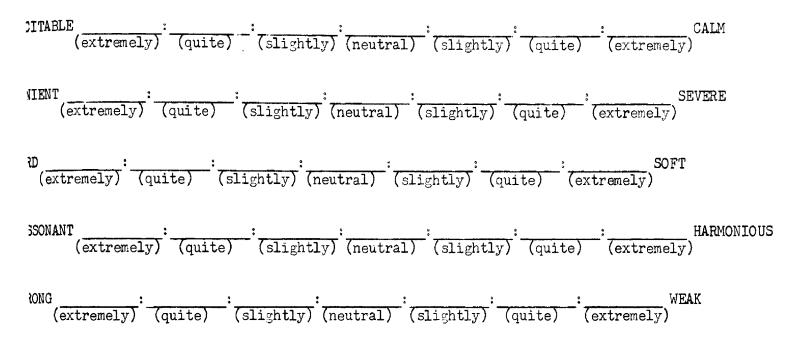
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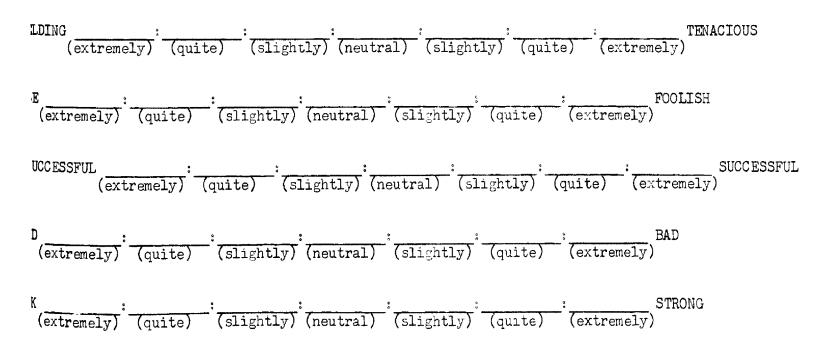
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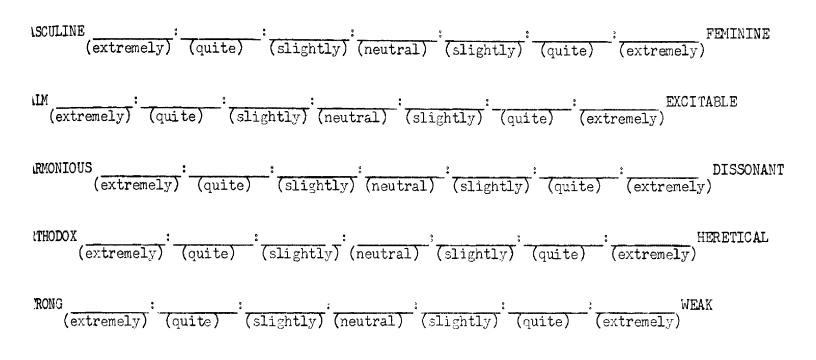


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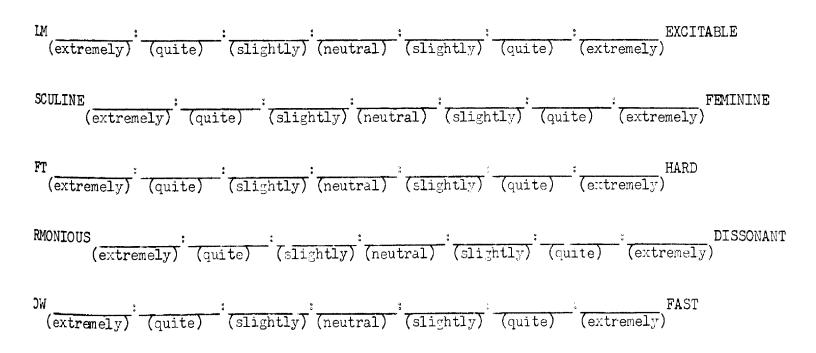
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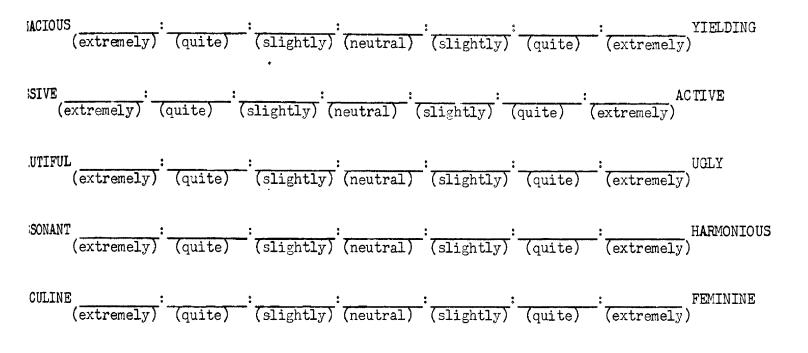


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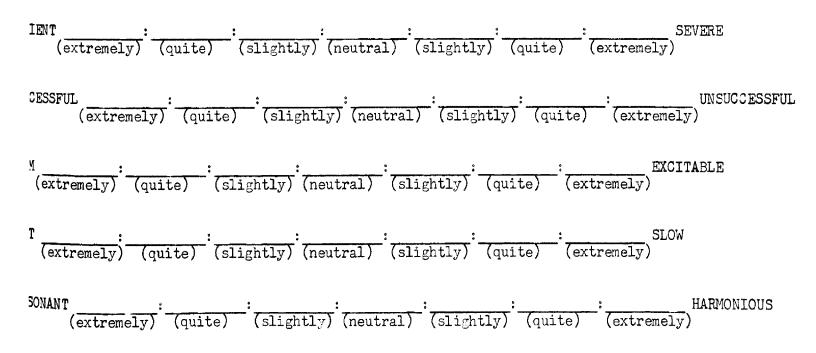
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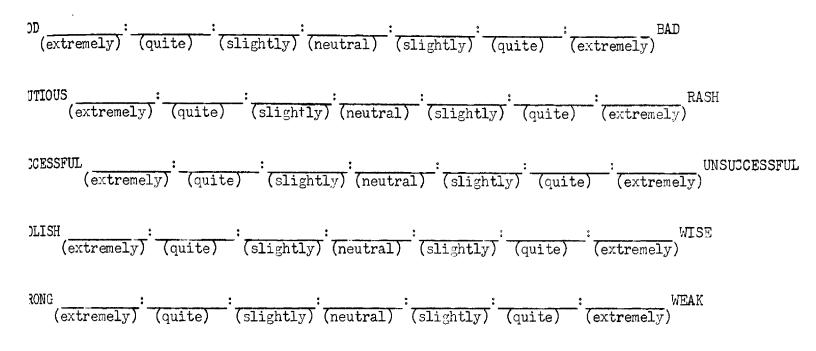
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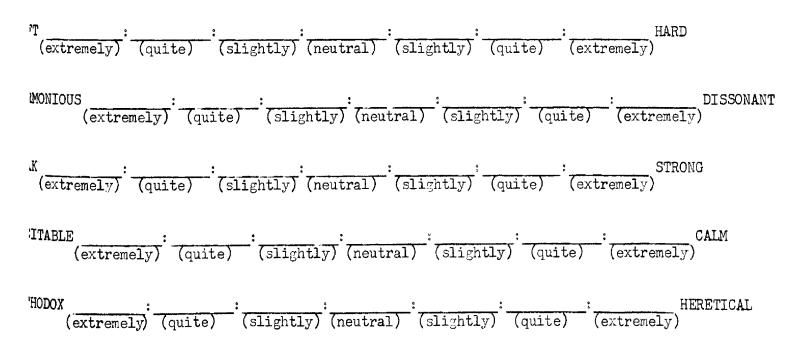
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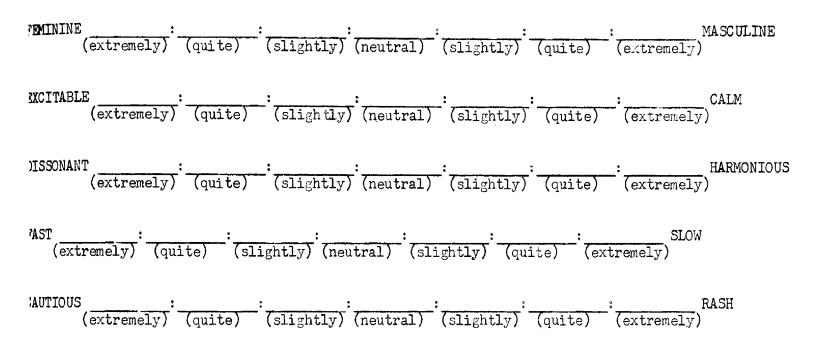
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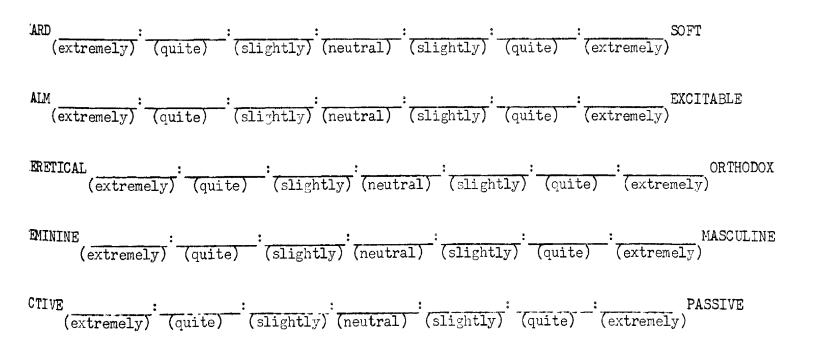
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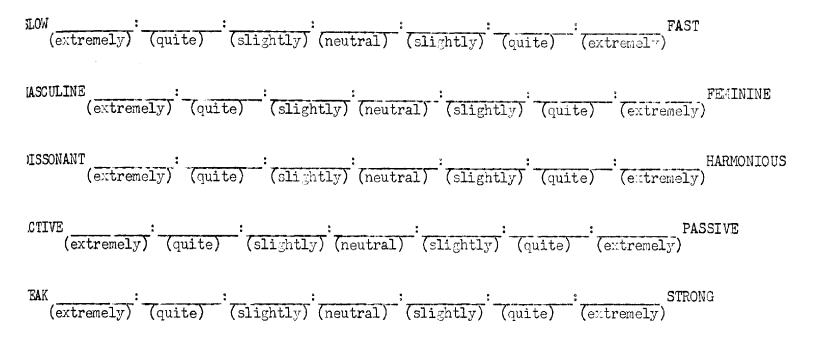
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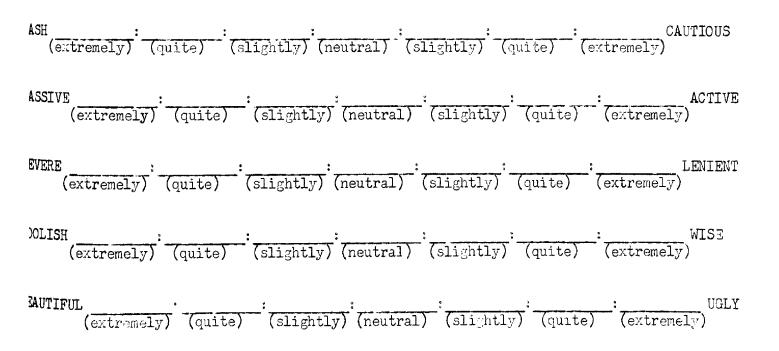
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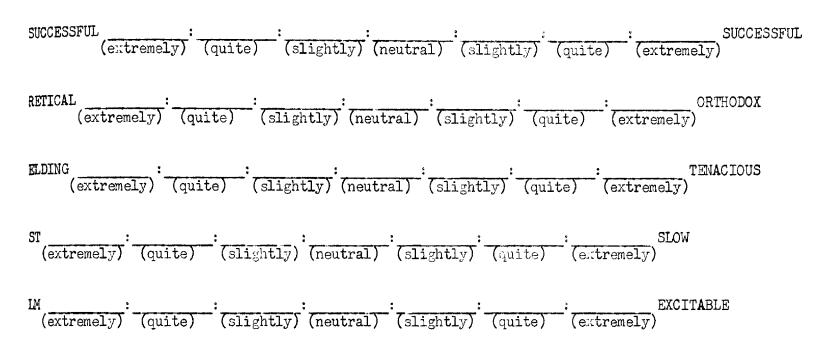
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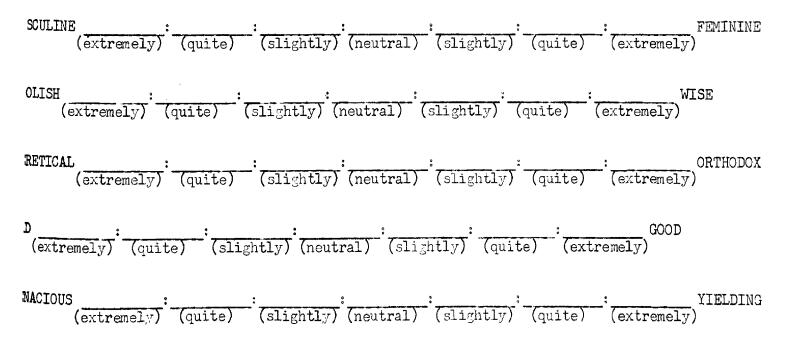
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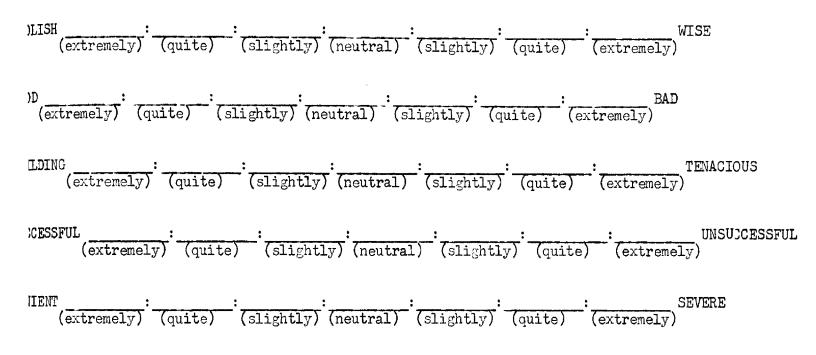
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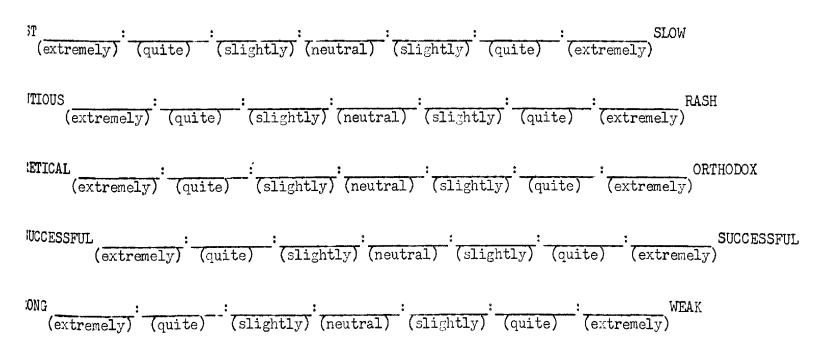
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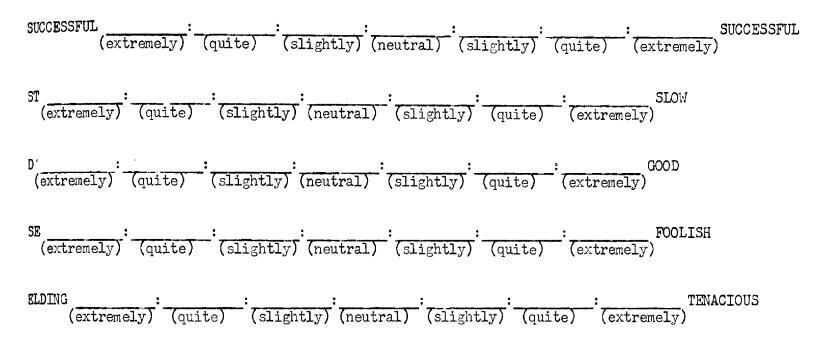
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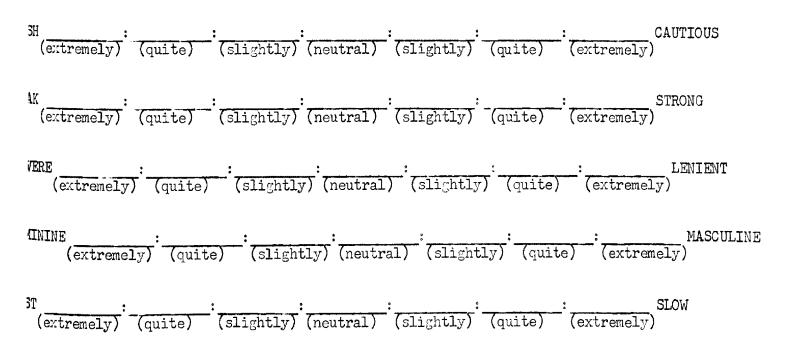
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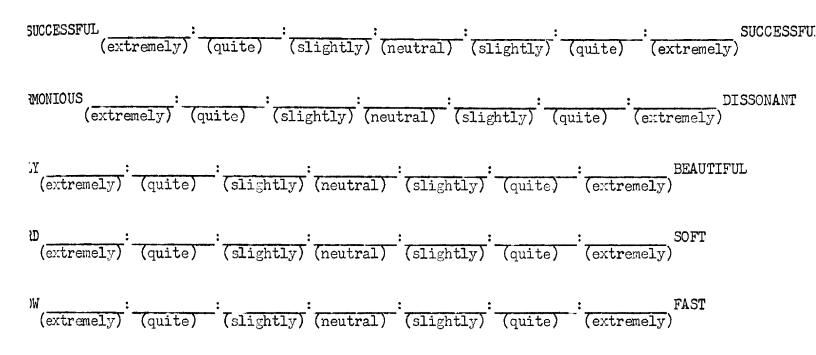
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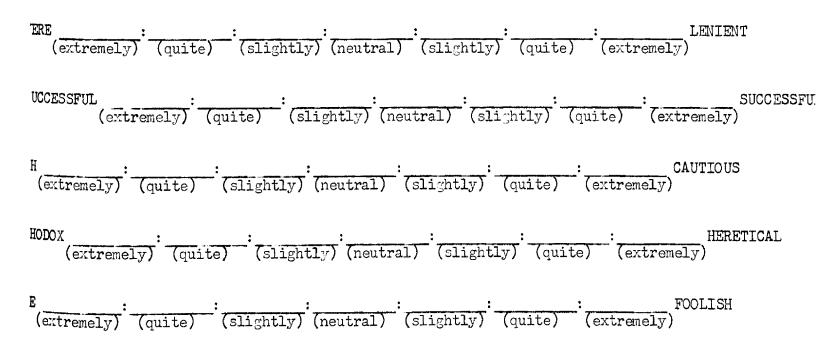
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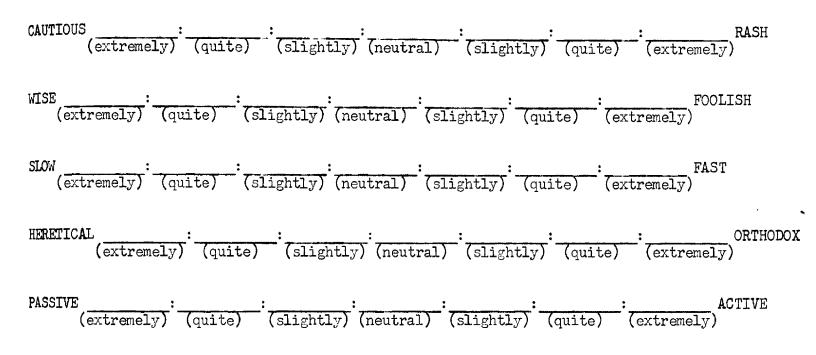
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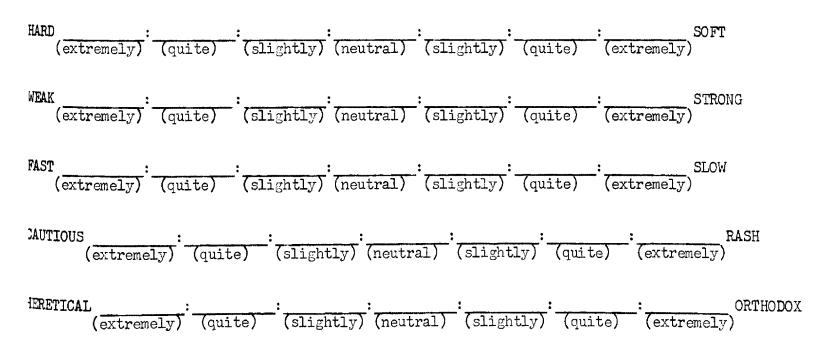
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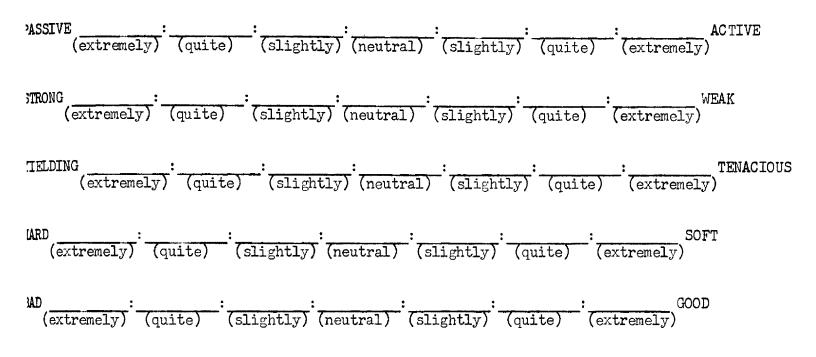
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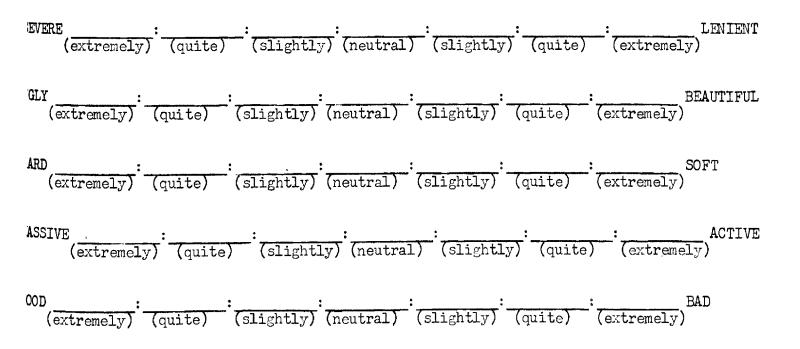
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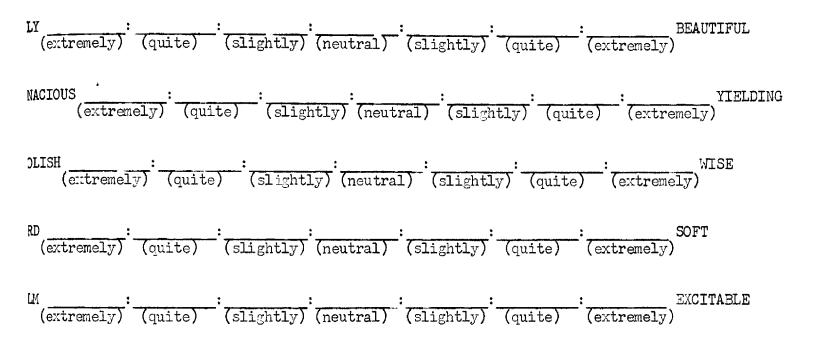
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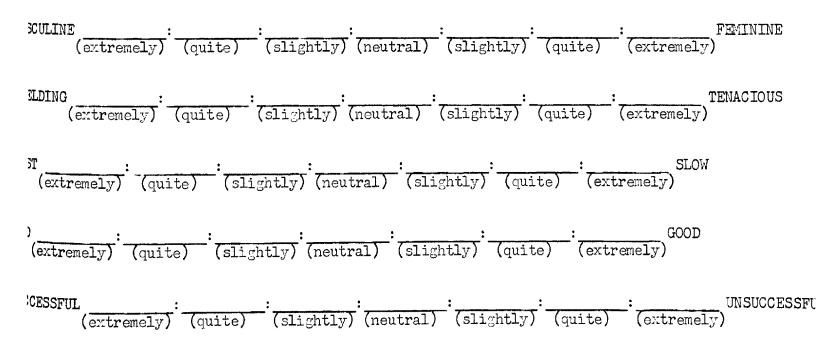
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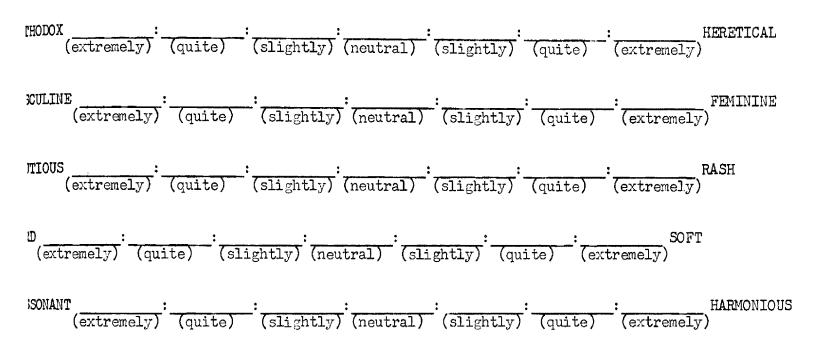
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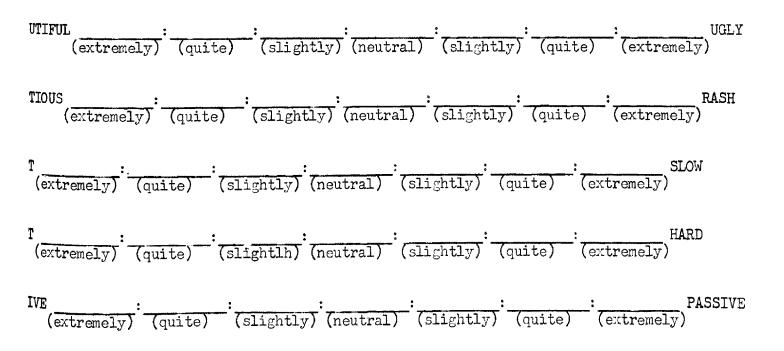
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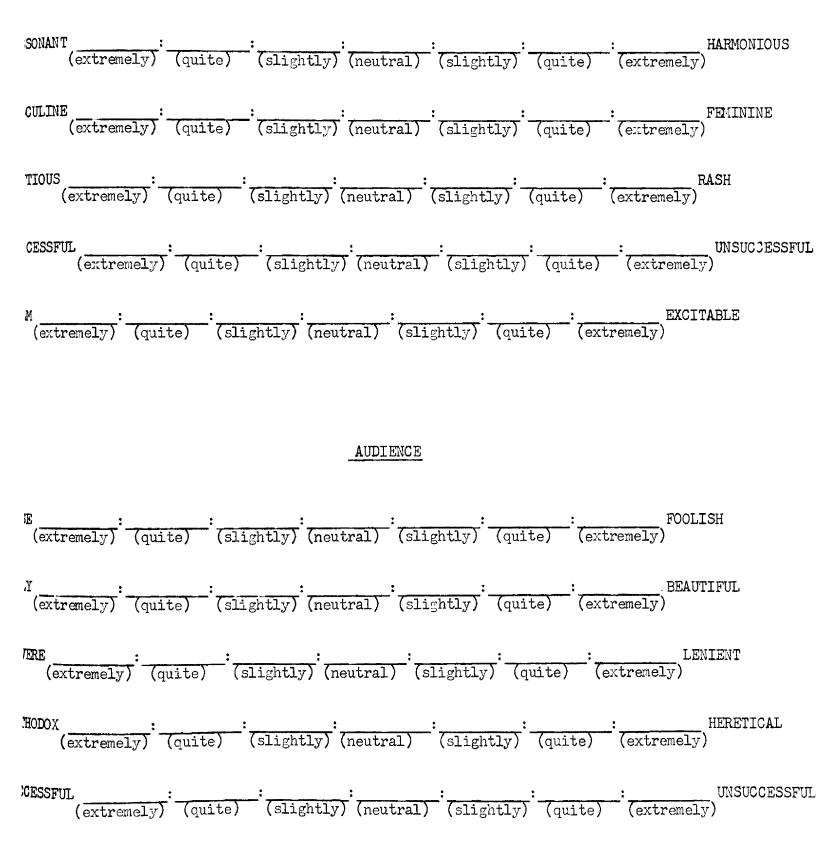
## FEDERAL AID TO EDUCATION



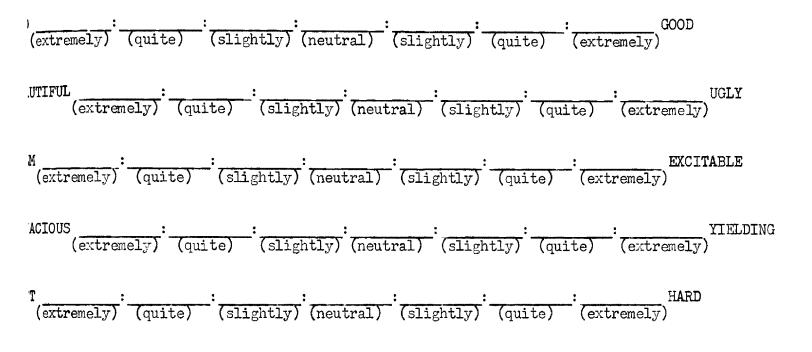
#### YOU TAKING THE DOMINANT PART IN A GROUP DISCUSSION



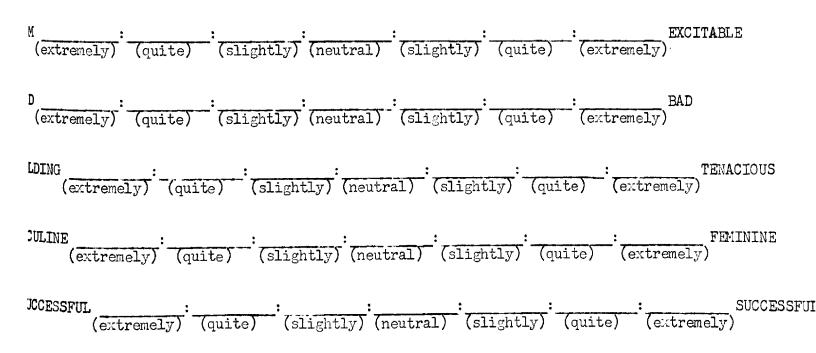
#### PROJECTION



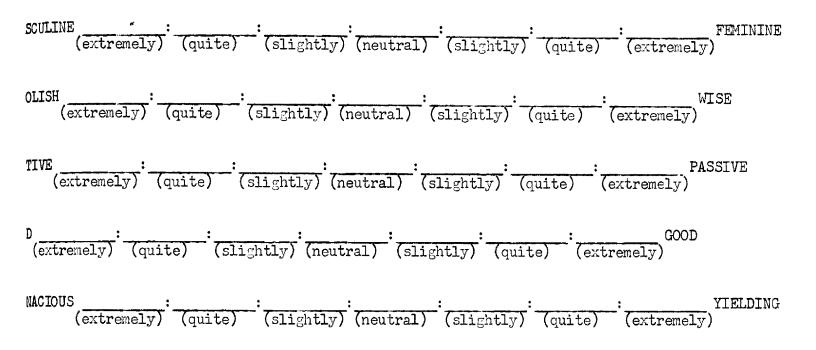
#### YOU SPEAKING



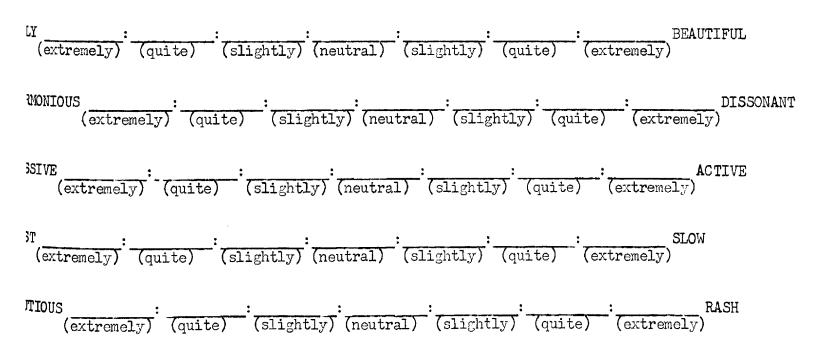
## YOU GIVING A POLITICAL SPEECH



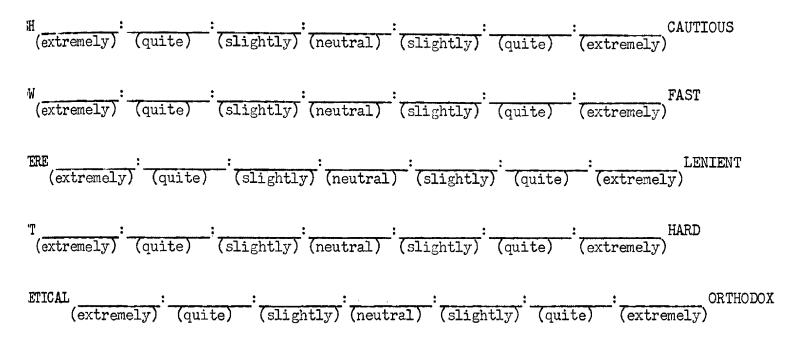
#### ORGANIZATION



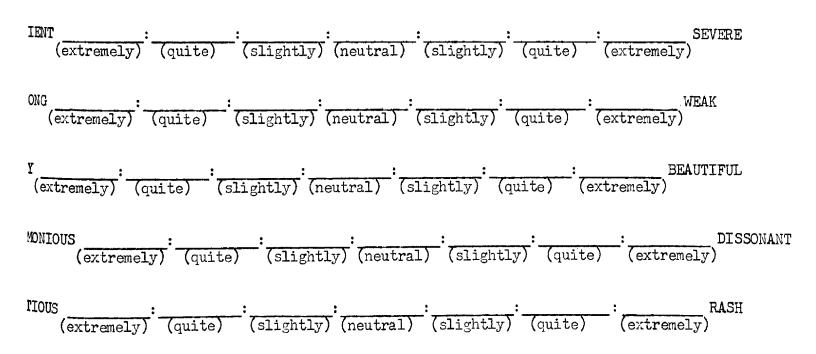
## YOU INTRODUCTING A SPEAKER



#### POSTURE

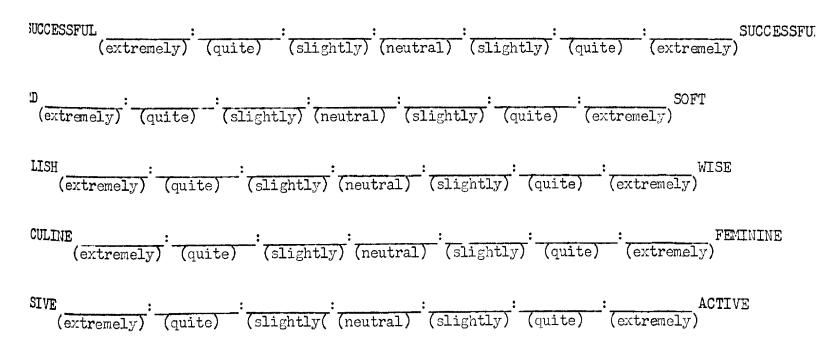


#### DELIVERY

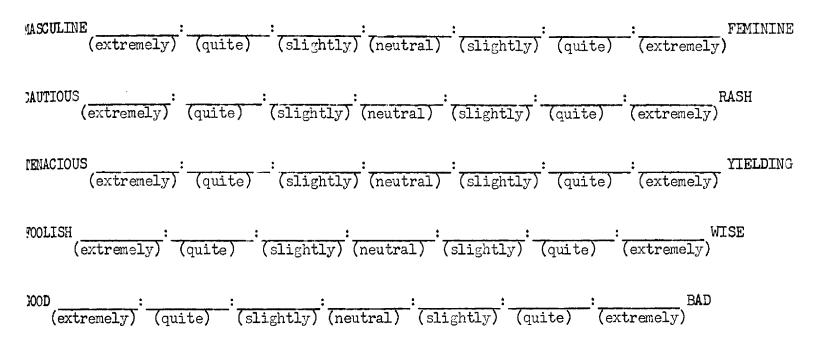


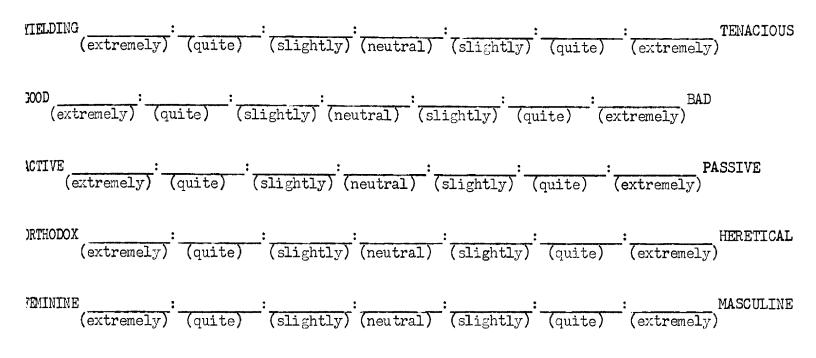
#### ATOM BOMB TESTING

#### YOU LECTURING BEFORE A LARGE GROUP



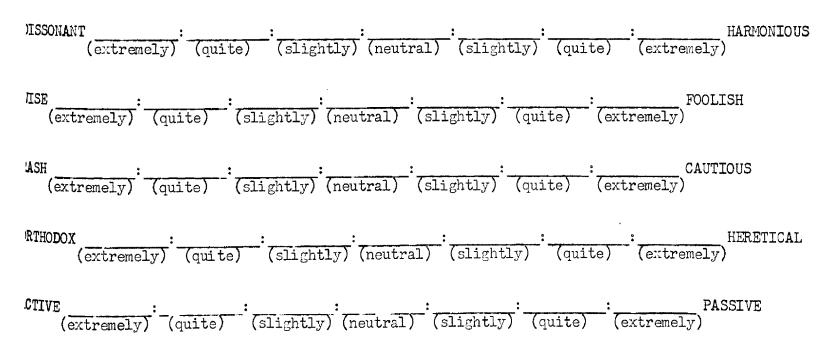
#### GESTURES





## YOU PRESENTING AN ORAL REPORT BEFORE A CLASS

## YOU GIVING A POLITICAL SPEECH



## APPENDIX B

The Second Semantic Differential Instructions (Tape-Recorder) Read by the Experimenter (To be Read By the Experimenter)

In order that all of you will mark the scales at the same rate, this tape recorder will call out the sequence and the pace at which you are to mark the scales. It is important for you to not work ahead or fall behind. Since there will only be a brief time for each rating please make your judgments promptly. Remember, mark the scales <u>only</u> as they are called out by the tape recorder. Are there any questions? If not, let's begin.

(Play the tape for 30 seconds; stop the tape and again ask if there are any questions). Then read:

Now that you understand how to mark the scales. there will be no more interruptions. Remember, mark the scales only as they are called out by the tape recorder.

## APPENDIX C

Subjects' Data Sheet

## DATA SHEET

Name
University Telephone (and Room Number If Living in a Residence Hall)
University Address
Age
Check one, Male Female
Do you have any problems with your Speech? If so describe.
Do you have any problems with Hearing? If so describe.
Year and Major in College
Check one: U.S. citizen Canadian citizen Foreign student
Comments

## APPENDIX D

# Speaking Instructions Handed to Speakers

#### Instructions To Speakers

Your class has been chosen to help assess the effectiveness of a new technique in Speech teaching. The purpose of this session is to provide impromptu speaking experience for you on a variety of topics before an unfamilar audience. The topics you will speak on are listed below:

1. Should varsity sports be part of a university system?

- 2. Should the U. S. continue atom bomb testing?
- 3. Should federal aid be provided for college students?

Please talk for one minute expressing your view on each of the topics. At the end of one minute, the chairman will signal you by raising his right hand. At that time please bring your talk to a conclusion. There will be a very brief interval between each of your talks. This procedure will be repeated for each of the three topics.

Since it will be a few minutes before you will speak, you may use this time to think about the topics. When you are before the group, the chairman will announce the order in which you are to take up the topics.

Remember, for each topic please talk until the chairman has signaled that a minute has passed, then bring your talk to a conclusion.

## APPENDIX E

Speech-Tension and Topic-Stand Scale Instructions for the Judges

#### INSTRUCTIONS FOR JUDGES

We are asking you as judges to rate each speaker on two separate scales. The first is a "speech tension" rating and the second is a "topic stand" rating (both explained below). Each speaker will give three one minute improptu talks, with a fifteen second interval between presentations. At the conclusion of each of the speaker's presentations you will have fifteen seconds to rate him on <u>both</u> the "speech tension" and "topic stand" scales. When making your judgments, please do not consult with the other judges. Rate the speakers only on the basis of your own observations.

## "Speech Tension" Scale Instructions.

We are assuming that "speech tension" (or "speech fright") may be overtly manisfested in a variety of ways. Please rate each speaker for the degree to which speech tension was, in your judment, characteristic of that speaker for each of his presentations.

A speaker experiencing "speech tension" may be expected to exhibit one or more of the following behaviors: random "non-communicative" activity, such as; trembling, perspiring, hesitancy in speech, awkward postures, restless shifting of feet, nervous hand movements, weak or poor projection, poor eye contact, etc.

These behaviors are to be regarded as only suggestive of some of the observable characteristics that may be associated with "speech tension." We are relying upon you to provide a "standard" or "frame of reference" from your experience in speech education upon which to base your evaluations. Is the speaker exhibiting overt tension all out of proportion to the speaking situation? Or is the speaker markedly calm, cool and nonchalant as he speaks?

After each presentation of the speaker, please rate his <u>overall</u> speech tension by placing a check mark opposite the appropriate description. Please do this for all three topics. The "speech tension" scale is presented below:

Virtually A Slight Less than Average More than A Marked An Extreme None Amount Average (Moderate) Average Amount Amount

"Topic Stand" Scale Instructions.

Speakers may vary as to how strongly they feel "for" or "against" the topic about which they speak. After each presentation of the speaker, please rate the <u>degree</u> to which the speaker expressed a "for" or an "against" with respect to the topic by placing a check mark opposite the appropriate description. Please do this for each of the three topics. The "topic stand" scale is presented below.

There are a few other things you should know. Print each speaker's name and number at the top of the rating sheet along with your name and the number which has been assigned you as a judge. Rate the speaker only after he has completed each presentation. Remember, please make your judments independent of the other judges.

#### APPENDIX F

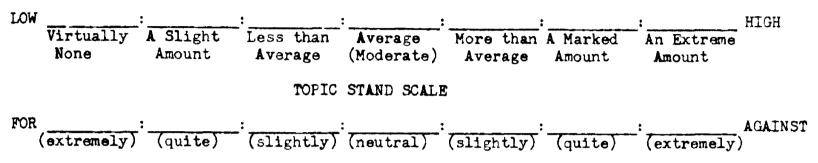
Speech-Tension and Topic-Stand Scales Employed by the Judges

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Speaker	s Name	Judge's Name
Speaker	No	Judge No.

Sp	<b>ee</b>	ch	One

#### SPEECH TENSION SCALE



Speech Two SPEACH TENSION SCALE LOW Virtually A Slight Less than Average More than A Marked An Extreme None Amount Average (Moderate) Average Amount Amount TOPIC STAND SCALE FOR (extremely): (quite): (slightly) (neutral): (slightly): (quite): (extremely) Speech Three Speech Three SPEECH TENSION SCALE LOW Virtually: A Slight Less than Average More than A Marked An Extreme None Amount Average (Moderate) Average Amount Amount TOPIC STAND SCALE LOW Virtually: A Slight Less than Average More than A Marked An Extreme None Amount Average (Moderate) Average Amount Amount TOPIC STAND SCALE LOW (extremely): (quite): (slightly) (neutral): (slightly): (quite): (extremely)

## APPENDIX G

## Speakers' Self-Rating Speech-Fright Scales

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Speaker's Name

Speaker No.

On the scale below, rate yourself by placing a check mark against the appropriate description indicating the <u>degree</u> of "speech fright" you experienced while speaking before this group:

• •	•		•	0	o (	8
		•	•	ð	a 1	
None	Slight	Mild	Moderate	Considerable	Marked	Extreme

#### APPENDIX H

Judged Speech Tension for 42 Speakers Ranks Assigned by Three Judges

Speaker		Judge		- Speaker	J	udge	
-	X	Y	Z	-	X	Y	Z
1	24	1	4	22	39.5	41	41.5
2	9.5	10	11	23	9.5	36	5.5
3	28.5	2.5	7.5	24	2	5	1.5
4	14	11.5	20	25	32.5	18	20
5	39.5	32.5	25	26	9.5	25	5.5
б	24	18	40	27	18.5	11.5	29
7	18.5	2.5	1.5	28	32.5	36	25
8	39.5	41	33	29	28.5	11.5	11
9	9.5	32.5	37.5	30	28.5	29.5	29
10	5	32.5	11	31	2	18	29
11	2	18	20	32	18.5	25	37.5
12	5	4	15	<b>3</b> 3	24	18	11
13	39.5	38.5	37.5	34	39.5	36	37.5
14	18.5	11.5	3	35	39.5	41	41.5
15	14	11.5	20	36	32.5	25	33
16	18.5	18	20	37	28.5	25	7.5
17	36	25	20	38	24	32.5	29.
18	9.5	11.5	25	39	5	7	15
19	24	29.5	35	40	32.5	25	33
20	35	38.5	29	41	18.5	25	15
21	9•5	7	20	42	14	7	11

#### APPENDIX I

Judged Speech Tension for 25 Speakers Ranks Assigned by Three Judges

Speak		Judge		Speaker		Judge	
	х	Y	Z		х	Y	Z
2	5.5	11	4.5	38	13.5	17.5	16
4	8	8	10	39	3.5	5	6.5
5	22.5	17.5	13.5	40	17	13.5	19
7	11	1	1.5	42	8	5	4.5
8	22.5	24	19				
11	1.5	11	10				
12	3.5	2	6.5				
13	22.5	21.5	22.5				
14	11	8	3				
15	8	8	10				
16	11	11	10				
19	13.5	15.5	21				
20	19	21.5	16				
21	5.5	5	10				
22	22.5	24	24.5				
24	1.5	3	1.5				
28	17	19.5	13.5				
30	15	15.5	16				
34	22.5	19.5	22.5				
35	22.5	24	24.5				
36	17	13.5	19				

## APPENDIX J

Judged Topic Stand (Topic I) For 42 Speakers Ranks Assigned by Three Judges

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Speake	er	Jude	;e	<b>—</b> Speak	er	Judge	
- <b>F</b>	X	Y	Z		X	Y	Z
1	41	40.5	42	22	14	15.5	19
2	29.5	36	38	23	29.5	15.5	19
3	29.5	40.5	38	24	29.5	15.5	19
4	41	40.5	40.5	25	14	15.5	5.5
5	14	15.5	5.5	26	35.5	15.5	31.5
6	<b>3</b> 8	40.5	31.5	27	14	15.5	31.5
7	35.5	29	19	28	29.5	29	36
8	14	29	19	29	2	15.5	19
9	14	29	19	30	14	15.5	.31.5
10	38	37.5	40.5	31	14	4.5	19
11	14	29	19	32	14	4.5	5.5
12	14	29	19	33	14	29	31.5
13	14	15.5	5.5	34	14	15.5	19
14	14	29	5.5	35	14	4.5	5.5
15	29.5	29	31.5	36	14	4.5	19
16	29.5	29	19	37	14	4.5	5.5
17	14	15.5	19	<b>3</b> 8	29.5	29	31.5
18	29.5	29	31,5	39	2	4.5	5.5
19	2	15.5	19	40	14	4.5	5.5
20	14	15.5	19	41	14	4.5	38
21	29.5	29.	19	42	38	37.5	

## APPENDIX K

Judged Topic Stand (Topic II) For 42 Speakers Ranks Assigned by Three Judges

Speaker		Judge			er	Judge	
-	X	Y	Z	-	X	Y	Z
1	10	12	11.5	22	24	12	11.5
2	24	27.5	25	23	10	2	11.5
3	32.5	12	11.5	24	39.5	38.5	39.5
4	32.5	12	11.5	25	39.5	38.5	36
5	24	27.5	11.5	26	24	27.5	11.5
6	24	27.5	11.5	27	24	2	25
7	37	27.5	32.5	28	39.5	38.5	39.5
8	24	27.5	25	29	1.5	12	1.5
9	37	38.5	39.5	30	24	27.5	32.5
10	37	35	39.5	31	24	38.5	36
11	10	27.5	25	32	24	12	11.5
12	10	12	11.5	33	10	12	1.5
13	10	27.5	11.5	34	10	12	25
14	32.5	27.5	11.5	35	10	12	11.5
15	10	27.5	11.5	36	10	12	11.5
16	24	12	25	37	42	42	42
17	10	12	25	38	24	27.5	25
18	24	27.5	25	39	10	12	11.5
19	1.5	2	1.5	40	10	12	25
20	10	12	32.5	41	39.5	38.5	<b>3</b> 6
21	10	12	25	42	32.5	27.5	32.5
		and the second secon		i uganta			

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## APPENDIX L

Judged Topic Stand (Topic III) For 42 Speakers Ranks Assigned by Three Judges

Speak	er —	ludge		Speak		Judge	
-	x	Y	Z		X	Y	Z
1	25.5	12.5	14.5	22	25.5	30	29
2	25.5	12.5	29	23	25.5	12.5	14.5
3	9.5	12.5	14.5	24	37.5	40	41
4	25.5	30	14.5	25	9.5	1.5	14.5
5	9.5	30	29	26	35	12.5	36
6	35	30	29	27	25.5	12.5	14.5
7	25.5	30	29	28	25.5	12.5	29
8	9•5	30	14.5	29	<sup>9</sup> •5	12.5	3
9	25.5	30	14.5	30	25.5	12.5	29
10	9.5	30	14.5	31	9.5	12.5	14.5
11	9.5	12.5	14.5	32	9.5	12.5	14.5
12	37.5	30	38.5	33	40	40	41
13	1	12.5	3	34	9.5	12.5	14.5
14	25.5	30	14.5	35	9.5	12.5	14.5
15	25.5	30	3	36	40	40	38.5
16	25.5	12.5	29	37	42	42	41
17	9.5	30	14.5	38	25.5	30	3
18	9.5	30	3	39	9.5	1.5	14.5
19	25.5	12.5	29	40	9.5	12.5	14.5
20	9.5	12.5	29	41	35	38	36
21	25.5	12.5	29	42	40	30	36

#### APPENDIX M

# Scale Values And Factor Scores (Medians Rounded To Nearest Whole Values)

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#### Key For Appendix M

#### The "Self Rating" Phrases

- 1. You giving a political speech
- 2. You presenting an oral report before a class
- 3. You lecturing before a large group
- 4. You introducing a speaker
- 5. You presiding over a meeting
- 6. You participating in college debate
- 7. You taking the dominant part in a group discussion
- 8. You speaking

The "Abstract Speech" Phrases

- 1. Posture
- 2. Projection
- 3. Speaking Performance
- 4. Organization
- 5. Gestures
- 6. Pronunciation
- 7. Audience
- 8. Delivery

The "Speech Topic" Phrases

- 1. Federal aid to education
- 2. Varsity sports
- 3. Atom bomb testing

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	SPEAKER 2										
<b>S</b> cale Va	lues and	Factor Sco	ores* (Me	dians, Ro	unded to	Nearest W	hole Valu	es)			
			¢								
Self-Rating Phrases**											
peri-nacing int	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Evaluative	45422 4	34323 3	44432 4	33243 3		12442 2	44234 4	33334 3			
Potency	22432 2	22324 <u>2</u>		53531 3			43333 3	33424 3			
•	43242 3	24434 <u>4</u>				33551 3	35321 3	42352 3			
Abstract-Speech	Phrases	**						,			
	(1)	(2)	(3)	(4 <b>)</b>	(5)	(6)	(7)	(8)			
Evaluative	22 <u>332</u> 2	22232 <u>2</u>	22432 <u>2</u>	54654 <u>5</u>			64544 <u>4</u>	32243 <u>3</u>			
Potency	22333 <u>3</u>	21623 <u>2</u>	52245 <u>4</u>	47656 <u>6</u>	14321 <u>2</u>	32231 <u>2</u>	32122 <u>2</u>	43342 <u>3</u>			
Activity	53437 <u>4</u>	23355 <u>3</u>	45432 <u>4</u>	26655 <u>5</u>	42153 <u>3</u>	46522 4	34323 <u>3</u>	34145 <u>4</u>			
Speech-Topic Ph	nrases **										
· · ·	(1)	(2)	(3)								
Evaluative	32222 <u>2</u>	35544 4	52533 3								
Potency	32243 <u>3</u>	42433 <u>3</u>	21211 1								
Activity	36466 <u>6</u>	21333 <u>3</u>	53261 <u>3</u>								

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

	ases** (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	23233 3	<u>13334 3</u>	23333 3	32224 <u>2</u>	35322 3	66647 <u>6</u>	42223 2	33433 2
Potency	22234 <u>2</u>	46353 <u>4</u>	24434 <u>4</u>	45346 <u>4</u>	44433 <u>4</u>	24535 <u>4</u>	43663 <u>4</u>	4235 2
Activity	65443 <u>4</u>	34533 3	64265 <u>5</u>	36236 <u>3</u>	56335 <u>5</u>	37617 <u>6</u>	54553 5	22555
lbstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11123 <u>1</u>	22333 <u>3</u>	23333 <u>3</u>	11711 <u>1</u>	33222 <u>2</u>	23232 <u>2</u>	33333 <u>3</u>	33333 3
Potency	12411 <u>1</u>	26334 <u>3</u>	54553 <u>5</u>	77747 <u>2</u>	54342 <u>4</u>	22343 <u>3</u>	46635 <u>5</u>	34533 3
Activity	43333 3	65555 <u>5</u>	55432 <u>4</u>	22561 <u>2</u>	46545 <u>5</u>	53523 3	34523 <u>3</u>	24543 4
speech-Topic Ph			(0)					
	(1)	(2)	(3)					
Evaluative	11514 1	45467 5	11111 <u>1</u>					
Potency	17141 <u>1</u>	74277 2	12471 <u>2</u>					
Activity	11176 1	64711 4	57111 1					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	12423 <u>2</u>	24223 2		23243 3		45423 4	<u>33224 3</u>	22224
Potency	53332 <u>3</u>	22324 <u>2</u>	25343 3	62533 <u>3</u>	24353 3	32334 <u>3</u>	22244 <u>2</u>	32433
Activity	65233 3	266 <u>35</u>	55362 <u>5</u>	64355 <u>5</u>	55555 5	35662 <u>5</u>	65552 <u>5</u>	52453
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11445 <u>4</u>	22232 <u>2</u>	22232 <u>2</u>	13222 <u>2</u>	31232 <u>2</u>	22232 <u>2</u>	22533 <u>2</u>	32242 2
Potency	14433 <u>3</u>	54424 <u>4</u>	22245 <u>2</u>	43242 <u>3</u>	54323 <u>3</u>	32345 <u>3</u>	<u>53223 3</u>	24332 _
Activity	42555 <u>5</u>	23344 <u>3</u>	55562 <u>5</u>	44521 <u>4</u>	52265 <u>5</u>	<b>3</b> 6533 <u>3</u>	33643 <u>3</u>	63256
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	22222 <u>2</u>	22224 <u>2</u>	35224 <u>3</u>					
Potency	52245 <u>4</u>	32222 <u>2</u>	23421 <u>2</u>					
Activity	25455 5	21236 <u>2</u>	32162 <u>2</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

-	ases** (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	36232 3	22222 2	12323 2	12232 2	31112 <u>1</u>	22222 <u>2</u>	11142 1	22222
Potency	23331 3	11624 <u>2</u>	23341 3	62313 3	33171 3	21362 2	11335 3	12535
Activity	46133 3	26363 3	35332 3		72735 5	14462 4	77542 5	42576
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11111 <u>1</u>	11111 <u>1</u>	23242 <u>2</u>	11111 <u>1</u>	11132 <u>1</u>	11111 <u>1</u>	22324 <u>2</u>	44422
Potency	11443 <u>3</u>	42414 <u>4</u>	14454 <u>4</u>	43143 <u>3</u>	22413 <u>2</u>	41442 <u>4</u>	45335 生	54244
Activity	71427 <u>4</u>	11764 <u>4</u>	46443 <u>4</u>	71571 <u>5</u>	71123 <u>2</u>	17623 <u>3</u>	24536 <u>4</u>	47145
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	65667 <u>6</u>	23233 <u>3</u>	65535 <u>5</u>					
Potency	31653 <u>3</u>	51122 <u>2</u>	32112 <u>2</u>					
Activity	53413 <u>3</u>	11336 <u>3</u>	12233 <u>2</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspondent with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phro Evaluative Potency Activity	(1) 56555 <u>5</u> 53344 <u>4</u> 64543 <u>4</u>	(2) 45445 <u>4</u> 32445 <u>4</u> 34544 <u>4</u>	(3) 66555 <u>5</u> 53434 <u>4</u> 44344 <u>4</u>	(4) 54444 <u>4</u> 45444 <u>4</u> 34444 <u>4</u>	(5) 65555 <u>5</u> 44445 <u>4</u> 43344 <u>4</u>	(6) 45546 <u>5</u> 43445 <u>4</u> 43444 <u>4</u>	(7) 56555 5 45544 <u>4</u> 34344 <u>4</u>	(8) 45454 <u>4</u> 4 <b>434</b> 4 <u>4</u> 44444 <u>4</u>
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	35522 3	75362 <u>5</u>	12231 <u>2</u>	32113 <u>2</u>	23432 <u>3</u>	21112 <u>1</u>	53333 <u>3</u>	32233 <u>3</u>
Potency	54234 <u>4</u>	11111 <u>1</u>	24534 4	44143 <u>4</u>	53344 <u>4</u>	33433 <u>3</u>	42343 <u>3</u>	44423 <u>4</u>
Activity	64444 <u>4</u>	11742 <u>2</u>	43345 4	23333 3	12133 <u>2</u>	54533 生	22224 <u>2</u>	34344 <u>4</u>
Speech-Topic Ph	rases**							
Freduction	(1)	(2)	(3)					
Evaluative	34543 4	44454 <u>4</u>	74717 <u>Z</u>					
Potency	56556 <u>5</u>	41224 <u>2</u>	11111 <u>1</u>					
Activity	43443 4	11224 <u>2</u>	11171 <u>1</u>					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr Evaluative Potency Activity	(1) 55233 <u>3</u> 53542 <u>4</u> 55325 <u>5</u>	(2) 33333 <u>3</u> 25334 <u>3</u> 26623 <u>3</u>	(3) 33333 <u>3</u> 34332 <u>3</u> 26663 <u>6</u>	(4) 33323 <u>3</u> 62233 <u>3</u> 66336 <u>6</u>	(5) 33333 <u>3</u> 53253 <u>3</u> 63335 <u>3</u>	(6) 53225 <u>3</u> 52524 <u>4</u> 35365 <u>5</u>	(7) 23335 <u>3</u> 34333 <u>3</u> 36552 <u>5</u>	(8) 33533 <u>3</u> 23553 <u>3</u> 33562 <u>3</u>
Abstract-Speech	Phrases*	*						
Trolucting	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative Potency	52233 <u>3</u> 23233 <u>3</u>	22233 <u>2</u> 55332 <u>3</u>	33343 <u>3</u> 32353 <u>3</u>	23332 <u>3</u> 54345 <u>4</u>	33333 <u>3</u> 55324 <u>4</u>	33322 <u>3</u> 32345 <u>3</u>	33353 <u>3</u> 22232 <u>2</u>	33333 3
Activity	23535 3	33653 3	55323 <u>3</u>	53553 5	63325 <u>3</u>	36532 <u>3</u>	24335 <u>3</u>	32433 <u>3</u> 36326 <u>3</u>
Speech-Topic Ph	rases**			<u> </u>				
	(1)	(2)	(3)					
Evaluative	32323 <u>3</u>	22222 <u>2</u>	52525 <u>5</u>					
Potency	23223 <u>2</u>	22432 <u>2</u>	26452 4					
Activity	222 <u>35</u> 2	23255 3	66232 <u>3</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	26362 <u>3</u>	23223 <u>2</u>	24522 <u>2</u>	23543 3		32342 3	53323 3	32222 2
Potency	22221 <u>2</u>	12222 <u>2</u>	22221 <u>2</u>	22225 <u>2</u>		21226 2	22222 <u>2</u>	22222 <u>2</u>
Activity	662 <u>35</u>	26535 <u>5</u>	66552 <u>5</u>	65555 <u>5</u>	62525 <u>5</u>	35622 <u>3</u>	52362 3	52545 5
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	52235 <u>3</u>	43362 <u>3</u>	24232 <u>2</u>	35553 <u>5</u>	63233 <u>1</u>	35445 <u>4</u>	35555 <u>5</u>	22222 <u>2</u>
Potency	36266 <u>6</u>	<u>33222 2</u>	2 <b>1</b> 222 <u>2</u>	55555 <u>5</u>	23322 <u>2</u>	35523 <u>3</u>	23332 <u>3</u>	22222 <u>2</u>
Activity	45366 <u>5</u>	23726 <u>3</u>	55352 <u>5</u>	26556 <u>5</u>	35253 3	53455 <u>5</u>	23526 <u>3</u>	63255 <u>5</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	42363 3	12423 <u>2</u>	64256 <u>5</u>					
Potency	34355 4	31222 <u>2</u>	25222 <u>2</u>					
Activity	22546 4	22235 <u>2</u>	62262 2					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr Evaluative Potency Activity	(1) 34533 <u>3</u> 55433 <u>4</u> 65524 <u>5</u>	(2) 45334 <u>4</u> 45444 <u>4</u> 36524 <u>4</u>	(3) 44532 <u>4</u> 54343 <u>4</u> 25254 <u>4</u>	(4) 33334 <u>3</u> 44543 <u>4</u> 34445 <u>4</u>	(5) 35543 <u>4</u> 36343 <u>3</u> 33236 <u>3</u>	(6) 52343 <u>3</u> 34343 <u>3</u> 26444 <u>4</u>	(7) 53333 <u>3</u> 33334 <u>3</u> 13544 <u>4</u>	(8) 43333 <u>3</u> 34444 <u>4</u> 33642 <u>3</u>
Abstract-Speech					( - )		(-)	( )
<b>11</b>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	32224 <u>2</u>	55544 <u>5</u>	34332 <u>3</u>	43211 <u>2</u>	54553 <u>5</u>	42222 <u>2</u>	44544 <u>4</u>	21234 2
Potency	13234 3	63354 4	34244 <u>4</u>	22223 <u>2</u>	64434 <u>4</u>	43333 3	<u>33344 3</u>	44441 4
Activity	24543 <u>4</u>	42453 4	64544 4	64542 <u>4</u>	52344 <u>4</u>	64534 <u>4</u>	23224 <u>2</u>	54345 <u>4</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	31315 3	32433 <u>3</u>	72526 <u>5</u>					
Potency	55544 5	31422 <u>2</u>	33234 3					
Activity	25345 4	21453 3	64233 3					

- \* Factor Scores Underlined.
- \*\*Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	22333 <u>3</u>	23333 3	33433 3	33333 3	35333 3	33333 <u>3</u>	53333 2	33333 3
Potenc <b>y</b>	23352 <u>3</u>	23235 3	36522 <u>3</u>	63225 <u>3</u>	53223 <u>3</u>	52323 <u>3</u>	22332 <u>2</u>	22353 3
Activity	66232 <u>3</u>	26523 <u>3</u>	36263 <u>3</u>	45235 <u>4</u>	53336 <u>3</u>	35363 3	26622 <u>2</u>	23353 3
Abstract-Speech	Phrases*	ž						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	22323 <u>2</u>	33232 <u>3</u>	33333 3	53222 <u>2</u>	22 <u>333</u> <u>3</u>	33423 <u>3</u>	22333 <u>3</u>	33333 3
Potency	23232 <u>2</u>	33222 <u>2</u>	32533 <u>3</u>	33223 <u>3</u>	22223 <u>2</u>	54325 4	22223 <u>2</u>	22533 <u>3</u>
Activity	22535 3	32452 <u>3</u>	55224 <u>4</u>	32532 <u>3</u>	62225 <u>2</u>	53532 3	33323 <u>3</u>	53325 <u>3</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	23325 <u>3</u>	111 <b>1</b> 2 <u>1</u>	52522 <u>2</u>					
Potency	62333 <u>3</u>	11222 <u>2</u>	22132 <u>2</u>					
Activity	22255 <u>2</u>	11126 1	62262 <u>2</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 67666 <u>6</u> 65653 <u>5</u> 65523 <u>5</u>	(2) 55555 5 33355 3 55523 5	66553 <u>5</u>	64335 <u>4</u>	(5) 56655 <u>5</u> 55556 <u>5</u> 56255 <u>5</u>	32535 <u>3</u>	(7) 55535 5 46332 <u>3</u> 25533 <u>3</u>	(8) 54555 5 35553 5 25532 3
Abstract-Speech	Phrases* (1)	* (2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	34565 5	32253 3	45555 5		55654 5		65555 5	55555 5
Potency	35453 4	53332 3	34652 <u>4</u>	22333 <u>3</u>	62225 <u>2</u>	32352 <u>3</u>	33222 <u>2</u>	35555 5
Activity	35553 <u>5</u>	22522 <u>2</u>	65225 <u>5</u>	36722 <u>3</u>	33535 3	43325 <u>3</u>	35253 <u>3</u>	36226 <u>3</u>
Speech-Topic Ph	rases**		_					
	(1)	(2)	(3)					
Evaluative	44354 <u>4</u>	12312 2	62622 <u>2</u>					
Potency	33333 3	62322 🧕	23132 <u>2</u>					
Activity	36253 <u>3</u>	11121 <u>1</u>	<u>52152 2</u>					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 34455 <u>4</u> 23421 <u>2</u>	(2) 36464 <u>4</u> 15564 <u>5</u> 26622 <u>2</u>	66561 <u>6</u>		(5) 42534 <u>4</u> 22152 <u>2</u> 45355 <u>5</u>		(7) 24335 <u>3</u> 12343 <u>3</u> 34322 <u>3</u>	(8) 33435 <u>3</u> 12424 <u>2</u> 23623 <u>3</u>
Abstract-Speech	Phrases*	**						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	22114 <u>2</u>	44443 4	44334 <u>4</u>	11111 <u>1</u>	12242 <u>2</u>	42232 <u>2</u>	66754 <u>6</u>	<u>33444 4</u>
Potency	14144 <u>4</u>	44441 4	31244 <u>3</u>	12112 <u>1</u>	14414 <u>4</u>	51414 <u>4</u>	42242 <u>2</u>	31443 3
Activity	444 <u>3</u> 3 <u>4</u>	44445 <u>4</u>	52332 <u>3</u>	25661 <u>5</u>	42242 <u>2</u>	46423 <u>4</u>	44646 <u>4</u>	32335 <u>3</u>
Speech-Topic Pr	ases**							
	(1)	(2)	(3)					
Evaluative	21215 <u>2</u>	13221 <u>2</u>	73726 <u>6</u>					
Potency	41544 4	21115 <u>1</u>	24414 <u>4</u>					
Activity	11447 4	11134 1	66141 4					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	24222 2	22224 <u>2</u>		• •	34222 <u>2</u>	· · ·	42222 1	42222 1
Potency	22621 <u>2</u>	21213 <u>2</u>	12231 <u>2</u>	62622 <u>2</u>	66132 <u>3</u>	12332 <u>2</u>	12233 <u>2</u>	12223 <u>2</u>
Activity	55266 <u>5</u>	14565 <u>5</u>	66262 <u>6</u>	66256 <u>6</u>	62656 <u>6</u>	26562 <u>5</u>	63652 <u>5</u>	52356 <u>5</u>
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	22224 <u>1</u>	22242 <u>1</u>	24222 1	43222 <u>2</u>	24222 1	42222 <u>1</u>	43232 <u>3</u>	22224 <u>1</u>
Potency	12133 <u>2</u>	21221 <u>2</u>	11233 <u>2</u>	52212 <u>2</u>	23312 <u>2</u>	32312 <u>2</u>	13532 <u>3</u>	31222 <u>2</u>
Activity	22556 <u>5</u>	26656 <u>6</u>	62462 <u>4</u>	65562 <u>5</u>	66256 <u>6</u>	66625 <u>6</u>	65556 <u>5</u>	66256 <u>6</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	22224 <u>1</u>	22422 <u>1</u>	31422 <u>2</u>					
Potency	66213 <u>3</u>	62222 <u>1</u>	33133 <u>3</u>					
Activity	12266 2	22266 <u>2</u>	65662 <u>6</u>					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

elf-Rating Phra	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	23323 <u>3</u>	22222 <u>2</u>	42222 <u>2</u>	22232 <u>2</u>	35322 <u>3</u>	22222 <u>2</u>	52323 <u>3</u>	52223
Potency	23334 <u>3</u>	22522 <u>2</u>	35234 <u>3</u>	72545 <u>5</u>	55322 <u>3</u>	13332 <u>3</u>	32222 <u>2</u>	32535
Activity	65252 <u>5</u>	16535 <u>5</u>	65352 <u>5</u>	35255 <u>5</u>	62355 <u>5</u>	25532 <u>3</u>	25321 <u>2</u>	51552 <u>5</u>
Abstract-Speech	Phrases*	*						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	72111 1	21116 <u>1</u>	12222 <u>2</u>	25211 <u>2</u>	22221 <u>2</u>	21221 <u>2</u>	32553 <u>3</u>	22132 2
Potency	12323 <u>2</u>	31214 <u>2</u>	23353 🤰	55242 4	15343 3	31242 <u>2</u>	43522 <u>3</u>	21231 2
Activity	51325 3	15532 3	53532 3	35552 <u>5</u>	65135 <u>5</u>	26215 <u>2</u>	35332 <u>3</u>	23155 2
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	32365 <u>3</u>	25212 <u>2</u>	76765 <u>6</u>					
Potency	53643 <u>4</u>	27225 <u>2</u>	12221 <u>2</u>					
Acti <b>v</b> ity	36363 <u>3</u>	11325 <u>2</u>	67232 3					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Prolucht	(1)	(2)	(3) 1120/12-2	(4) 2000 0	(5)	(6)	(7) 24444 <u>4</u>	(8) 34444
Evaluative	23344 <u>3</u>	24233 3	42243 <u>3</u>	<u>34444 4</u>	44442 4	44445 4	. —	
Potency	23331 <u>3</u>	12333 <u>3</u>	24542 <u>4</u>	53325 <u>3</u>	55244 <u>4</u>	32344 <u>3</u>	25554 <u>5</u>	24344
Activity	65233 <u>3</u>	25553 5	45354 <u>4</u>	36435 <u>4</u>	35435 <u>4</u>	25424 <u>4</u>	66545 <u>5</u>	34455
Abstract-Speech	Phrases*	¥						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11122 <u>1</u>	34432 <u>3</u>	22222 <u>2</u>	13222 <u>2</u>	22433 <u>3</u>	22322 <u>2</u>	41544 <u>4</u>	23233 🕻
Potency	24434 <u>4</u>	43223 <u>3</u>	24535 4	43243 <u>3</u>	23444 <u>4</u>	42343 <u>3</u>	42333 <u>3</u>	54553
Activity	33446 <u>4</u>	22532 <u>2</u>	56433 <u>4</u>	52464 <u>4</u>	63245 <u>4</u>	35533 3	34456 <u>4</u>	33345 3
Speech-Topic Ph								
<b>—</b> • • •	(1)	(2)	(3)					
Evaluativo	45455 5	22334 <u>3</u>	74664 <u>6</u>					
Potency	34444 <u>4</u>	52232 <u>2</u>	21423 <u>2</u>					
Activity	66335 <u>5</u>	12346 3	72112 2					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra	(1) 64333 <u>3</u>	(2) 33333 <u>3</u>	(3) 24233 3	(4) 54434 <u>4</u>	(5) 24332-3	(6) 23553 <u>3</u>	(7) 43333 <u>3</u>	(8) 23325 3
Potency	62652 <u>5</u>	26343 <u>3</u>		33523 3		62443 <u>4</u>	23553 3	23563
Activity	45545 <u>5</u>	36653 <u>5</u>	43665 <u>5</u>	54544 <u>4</u>	43545 <u>4</u>	55344 <u>4</u>	44533 <u>4</u>	56542 5
Abstract-Speech	Phrases*	*						
_	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	32223 <u>2</u>				35234 <u>3</u>		24444 <u>4</u>	52332 3
Potency	64445 <u>4</u>	46224 <u>4</u>	33534 <u>3</u>	43344 <u>4</u>	26244 <u>4</u>	43444 <u>4</u>	44444 <u>4</u>	44553 4
Activity	23544 <u>4</u>	26456 <u>5</u>	54364 <u>4</u>	53543 <u>4</u>	35225 <u>3</u>	54444 <u>4</u>	44354 <u>4</u>	44434 4
Speech-Topic Pr	nrases**							
	(1)	(2)	(3)					
Evaluative	22325 <u>2</u>	11112 <u>1</u>	22222 <u>2</u>					
Potency	26642 <u>4</u>	22222 <u>2</u>	26262 <u>2</u>					
Activity	27266 6	26226 3	62262 <u>2</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Evaluative Potency Activity	(1) 34444 <u>4</u> 33434 <u>3</u> 34333 <u>3</u>	(2) 44433 <u>4</u> 43434 <u>4</u> 25544 <u>4</u>	(3) 43444 <u>4</u> 35444 <u>4</u> 34544 <u>4</u>	(4) 44443 <u>4</u> 44444 <u>4</u> 54345 <u>4</u>	(5) 43334 <u>3</u> 34443 <u>4</u> 42444 <u>4</u>	(6) 24434 <u>4</u> 34444 <u>4</u> 34442 <u>4</u>	(7) 34444 <u>4</u> 43444 <u>4</u> 34542 <u>4</u>	(8) 44444 <u>4</u> 24434 <u>4</u> 43445 <u>4</u>
lbstract-Speech	Phrases* (1)	* (2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11443 3	42444 4	44444 4	33443 4		43444 4	44444 <u>4</u>	44444 <u>4</u>
Potency	14444 4	43334 <u>3</u>	44444 4	44442 4	33544 4	44444 4	44444 4	44444 4
Activity	4 <u>3</u> 444 <u>4</u>	34444 <u>4</u>	44444 <u>4</u>	44544 4	42333 <u>3</u>	54445 <u>4</u>	44444 <u>4</u>	44444 4
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	77677 I	22334 <u>3</u>	54533 4					
Potency	13461 <u>3</u>	22222 <u>2</u>	44622 <u>4</u>					
Activity	74241 4	24244 4	62242 2					

- \* Factor Scores Underlined.
- \*\*Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

0	ases** (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	16122 <u>2</u>	12225 <u>2</u>	45223 3	12223 <u>2</u>	16223 <u>2</u>	22152 <u>2</u>	22222 <u>2</u>	62322
Potency	12221 <u>2</u>	11222 <u>2</u>	13221 <u>2</u>	41212 2	22221 <u>2</u>	21322 <u>2</u>	22252 <u>2</u>	72222
Activity	63236 <u>3</u>	17664 <u>6</u>	55352 <u>5</u>	26256 <u>5</u>	72234 <u>3</u>	26352 <u>3</u>	56532 <u>5</u>	31565
Abstract-Speech	Phrases*	*						
· .	(1)	(2)		(4)		(6)	(7)	(8)
Evaluative	21222 <u>2</u>	42563 <u>4</u>	32232 <u>2</u>	22222 <u>2</u>	25322 <u>2</u>	22422 <u>2</u>	44444 <u>4</u>	22222
Potency	22422 <u>2</u>	25355 <u>5</u>	21333 <u>3</u>	32222 <u>2</u>	53432 <u>3</u>	11222 🧕	44444 <u>4</u>	21222 🥻
Activity	62347 <u>4</u>	33555 5	66362 <u>6</u>	35662 <u>5</u>	62245 <u>4</u>	57623 <u>5</u>	44444 <u>4</u>	65136
Speech-Topic Ph	irases**							
	(1)	(2)	(3)					
Evaluative	76666 <u>6</u>	11112 <u>1</u>	77777 I					
Potency	22646 <u>4</u>	62112 <u>2</u>	22415 <u>2</u>					
Activity	23722 2	22266 <u>2</u>	17111 1					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 35131 <u>3</u> 52224 <u>2</u> 34523 <u>3</u>	(2) 67623 <u>6</u> 16334 <u>3</u> 44535 <u>4</u>	66444 <u>4</u>	12243 <u>2</u> 24264 <u>4</u>		(6) 52362 <u>3</u> 45654 <u>5</u> 36444 <u>4</u>		(8) 35556 <u>5</u> 73555 <u>5</u> <b>23</b> 343 <u>3</u>
Abstract-Speech	Phrases*	*						
	(1)		(3)		(5)	(6)	(7)	(8)
Evaluative	25633 3	63544 <u>4</u>	34443 <u>4</u>	41322 <u>2</u>	33433 <u>3</u>	44631 <u>4</u>	44344 <u>4</u>	34443 <u>4</u>
Potency	55644 <u>5</u>	33455 <u>4</u>	54333 <u>3</u>	32343 3	52433 <u>3</u>	74544 4	44333 <u>3</u>	34533 3
Activity	43444 4	45455 5	64563 <u>5</u>	24642 <u>4</u>	46455 5	34333 <u>3</u>	44454 <u>4</u>	34655 <u>5</u>
Speech-Topic Ph	irases**							
	(1)	(2)	(3)					
Evaluative								
Potency	24234 <u>3</u>	14353 3	22443 <u>3</u>					
Activity	35235 3	42264 4	64445 <u>4</u>					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 24433 <u>3</u> 43333 <u>3</u> 36255 <u>5</u>	(2) 34234 <u>3</u> 34434 <u>4</u> 24554 <u>4</u>	35343 3	(4) 23344 <u>3</u> 44444 <u>4</u> 54345 <u>4</u>	<u>33242 3</u>	(6) 34443 <u>4</u> 33343 <u>3</u> 55345 <u>5</u>	(7) 42344 <u>4</u> 35334 <u>3</u> 64545 <u>5</u>	(8) 43234 <u>3</u> 33334 <u>3</u> 54545 <u>5</u>
Abstract-Speech Evaluative Potency	<b>P</b> hrases <b>*</b> (1) 22124 <u>2</u> 22424 <u>2</u>	(2)		(4) 24332 <u>3</u> 44244 <u>4</u>		(6) 41223 <u>2</u> 54422 4	(7) 44544 <u>4</u> 45444 4	(8) 33244 <u>3</u> 43433 <u>3</u>
Activity	42644 <u>4</u>	24444 <u>4</u>		34542 <u>4</u>		54453 <u>4</u>	54464 <u>4</u>	55345 <u>5</u>
Speech-Topic Ph		658	(0)					
Evaluative Potency Activity	(1) 42222 <u>2</u> 44344 <u>4</u> 24664 <u>4</u>	(2) 24224 <u>2</u> 41243 <u>3</u> 22444 <u>4</u>						

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	33353 3	45526 <u>5</u>	53334 3	33445 <u>4</u>	55453 <u>5</u>	44435 <u>4</u>	23233 <u>3</u>	62343 <u>3</u>
Potency	33342 <u>3</u>	23553 <u>3</u>	33231 <u>3</u>	65723 <u>5</u>	55223 <u>3</u>	45445 <u>4</u>	22332 <u>2</u>	22333 3
Activity	34232 3	25332 <u>3</u>	25233 <u>3</u>	25255 <u>5</u>	42335 <u>3</u>	32542 <u>3</u>	66353 <u>5</u>	23333 3
Abstract-Speech	Phrases*	¥						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	22333 <u>3</u>	34352 <u>3</u>			33554 4	44433 <u>4</u>	64554 <u>5</u>	44433 <u>4</u>
Potency	43344 <u>4</u>	23222 <u>2</u>	43365 <u>4</u>	22232 <u>2</u>	55545 <u>5</u>	43344 <u>4</u>	45223 <u>3</u>	54355 <u>5</u>
Activity	43554 生	34434 4	54333 3	32353 3	52333 <u>3</u>	34434 <u>4</u>	25244 <u>4</u>	53645 <u>5</u>
Speech-Topic P	nrases**							
	(1)	(2)	(3)					
Evaluative	32223 <u>2</u>	11741 <u>1</u>	62761 <u>6</u>					
Potency	64365 5	11221 1	22121 <u>2</u>					
TO COUCY								

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 14332 <u>3</u> 22111 <u>1</u> 16225 <u>2</u>	(2) 24336 <u>3</u> 12244 <u>2</u> 26622 <u>2</u>	23331 <u>3</u>		(5) 26222 <u>2</u> 32122 <u>2</u> 62622 <u>2</u>		13331 <u>3</u>	
Abstract-Speech	Phrases*	*	** <u>*</u>					
	(1)	(2)			(5)	(6)	(7)	(8)
Evaluative	11113 <u>1</u>				35322 3		32222 <u>2</u>	33333 <u>3</u>
Potency	11117 1	13321 <u>2</u>	41332 <u>3</u>	11212 <u>1</u>	34413 <u>3</u>	56213 <u>3</u>	13346 <u>3</u>	21272 <u>2</u>
Activity	72114 2	22542 <u>2</u>	54323 3	22542 <u>2</u>	63333 3	<u>44754 4</u>	33334 <u>3</u>	24235 <u>3</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	77774 2	43463 <u>4</u>	31711 <u>1</u>					
Potency	71717 2	41312. <u>2</u>	11121 <u>1</u>					
Activity	77447 Z	31214 <u>2</u>	62741 <u>4</u>					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phr Evaluative	(1) 33433 <u>3</u>	(2) 34324 <u>3</u>	(3) 46333 <u>4</u>	(4) 43344 <u>4</u>	(5) 44533 <u>4</u>	(6) 33463 <u>3</u>	(7) 54334 <u>4</u>	(8) 43344 <u>4</u>
Potency Activity	55543 <u>5</u> 65552 <u>5</u>	35354 <u>4</u> 24524 <u>4</u>	54643 <u>4</u> 34172 <u>3</u>	44434 <u>4</u> 34335 <u>3</u>	35343 <u>3</u> 42344 <u>4</u>	42543 <u>4</u> 34433 <u>3</u>	34444 <u>4</u> 22543 <u>3</u>	23444 <u>4</u> 22543 <u>3</u>
Abstract-Speech			(2)		(5)	(6)	(0)	(0)
Evaluative	(1) 32233 <u>3</u>	(2) 32452 <u>3</u>	(3) 23233 <u>3</u>	(4) 12222 <u>2</u>	(5) 25333 <u>3</u>	(6) 22335 <u>3</u>	(7) 62644 <u>4</u>	(8) 42433 <u>3</u>
Potency	24244 4	44424 4	52544 4	12233 2	33234 2	32224 <u>2</u>	43642 4	23443 3
Activity	43444 4	53444 <u>4</u>	64453 <u>4</u>	76652 <u>6</u>	41122 <u>2</u>	54566. <u>5</u>	24466 <u>4</u>	55235 <u>5</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	56666 <u>6</u>	66664 <u>6</u>	67766 <u>6</u>					
Potency	24644 <u>4</u>	42335 3	42424 <u>4</u>					
Activity	24121 <u>2</u>	22336 3	24132 <u>2</u>					

\* Factor Scores Underlined.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra	(1) 54333 <u>3</u>	(2) 33434 <u>3</u>	(3) 35534 <u>4</u>	(4) 23234 <u>3</u>	(5) 44234 <u>4</u>	(6) 33444 <u>4</u>	(7) 43233 <u>3</u>	(8) 43533 <u>3</u>
Potency	35551 <u>5</u>	15535 <u>5</u>		13514 <u>3</u>	55173 <u>5</u>	52323 <u>3</u>	23565 <u>5</u>	13556 <u>5</u>
Activity	54452 <u>4</u>	24565 <u>5</u>	34354 <u>4</u>	54455 <u>5</u>	44656 <u>5</u>	32142 <u>2</u>	55654 <u>5</u>	52545 5
Abstract-Speech	Phrases*	*						
-	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	51114 <u>1</u>	21222 <u>2</u>	34632 <u>3</u>	54222 <u>2</u>	23332 <u>3</u>	23513 3	43534 <u>4</u>	33334 <u>3</u>
Potency	13222 <u>2</u>	22322 <u>2</u>	23556 <u>5</u>	33113 <u>3</u>	54625 <u>5</u>	62434 <u>4</u>	45555 <u>5</u>	54553 <u>5</u>
Activity	33223 <u>3</u>	32422 <u>2</u>	54554 <u>5</u>	42352 3	33543 3	54544 <u>4</u>	34544 4	54456 <u>5</u>
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	33634 <u>3</u>	11422 <u>2</u>	66626 <u>6</u>					
Potency	35425 <u>4</u>	21211 <u>1</u>	31122 <u>2</u>					
Activity	33345 3	21124 <u>2</u>	12243 2					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11111 <u>1</u>	13111 <u>1</u>	11211 1	12122 <u>2</u>			22212 <u>2</u>	21112 1
Potency	12221 <u>2</u>	11324 <u>2</u>	23131 <u>2</u>	42313 <u>3</u>	33241 <u>3</u>	11111 <u>1</u>	12123 <u>2</u>	12323 2
Activity	11132 <u>1</u>	21674 <u>4</u>	31752 <u>3</u>	34333 <u>3</u>	17647 <u>6</u>	23341 <u>3</u>	13532 <u>3</u>	32242 <u>2</u>
Abstract-Speech	Phrases*	¥						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluative	11111 <u>1</u>	44444 <u>4</u>				22222 <u>2</u>	44444 4	11111 1
Potency	14444 4	44444 <u>4</u>	1 <b>11</b> 33 <u>1</u>	44244 <u>4</u>	33313 <u>3</u>	32443 <u>3</u>	44444 4	21232 3
Activity	71544 <u>4</u>	<u> </u>	64462 <u>4</u>	16643 <u>4</u>	43235 <u>3</u>	24624 <u>4</u>	44234 <u>4</u>	22133 2
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative	33333 3	21313 <u>2</u>	53423 3					
Potency	21124 <u>2</u>	21122 <u>2</u>	41131 <u>1</u>					
Activity	11153 <u>1</u>	11244 <u>2</u>	74141 4					

<sup>\*\*</sup>Key at beginning of Appendix M identifies the phrases which correspond with the numbers in parentheses on the chart.

Scale Values and Factor Scores\* (Medians, Rounded to Nearest Whole Values)

Self-Rating Phra Evaluative Potency Activity	(1) 66455 <u>5</u> 55226 <u>5</u>	33356 <u>3</u> 25545 <u>5</u>	43555 <u>5</u> 55626 <u>5</u>	(4) 22242 <u>2</u> 62652 <u>5</u> 15326 <u>3</u>	23332 <u>3</u> 32323 <u>3</u>	66563 <u>6</u> 5535 <b>5 5</b>	62233 <u>3</u>	56323 <u>3</u>
Abstract-Speech	Phrases*	*						
-	(1)			(4)	-	· -	(7)	(8)
Evaluative	61715 <u>5</u>	21232 <u>2</u>	-	13112 <u>1</u>			22562 <u>2</u>	33552 <u>3</u>
Potency				23262 <u>2</u>			24655 <u>5</u>	65232 3
Activity	43664 <u>4</u>	22352 <u>2</u>	65223 3	73662 <u>6</u>	11122 <u>1</u>	66223 <u>3</u>	14262 <u>2</u>	35225 3
Speech-Topic Ph	rases**							
	(1)	(2)	(3)					
Evaluative								
Potency								
Activity	26231 <u>2</u>	11265 <u>2</u>	22231 <u>2</u>					

\* Factor Scores Underlined.

#### APPENDIX N

Median Values For Each Speaker Resulting From The Means Of The Three Judges' Speech-Tension Scales

## MEDIAN VALUES FOR EACH SPEAKER RESULTING

FROM THE MEANS OF THE THREE JUDGES' SPEECH TENSION-SCALES

Speaker	Median	Speaker	Median
2	4	21	4
4	5	22	7
5	6	24	3
7	3	28	6
8	7	30	6
11	4	34	6
12	4	35	7
13	7	36	5
14	5	38	5
15	5	39	4
16	5	40	5
19	5	42	4
20	6		

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