AN INVESTIGATION OF THE RELATIONSHIP OF SELF CONCEPT TO SELECTED COMMUNICATION SKILLS OF CHORAL CONDUCTORS

DISSertation

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By

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This study investigated the relationship between
selected measures of self concept as perceived by a group of
choral conductors, their eye dependency on score, and the
measures of expressive voice. The problems were (1) to
determine the degree of perceived self concept of a selected
group of choral music teachers through measures of (a) total
self, (b) physical self, (c) moral-ethical self, (d) personal
self, (e) family self, and (f) social self; (2) to assess eye
dependency on score of the same teachers; (3) to assess the
aspect of expressive voice through measures of (a) pitch
levels of modulation, (b) speech flow, and (c) voice energy
level; and (4) to examine the relationship between the
measures of self concept, eye dependency on score and
expressive voice.

Thirty high school choral conductors completed the
Tennessee Self Concept Scale, the instrument selected for
measuring conductor self concept. The conductors were then
observed three times over an eight-week period by trained
observers using two observation instruments developed for
this study. These instruments were 1) a time unit coding
system for the observation of conductor eye dependency on
score, and 2) a graphic rating scale for observing conductor 
voice modulation, voice energy level, and speech speed.
Canonical correlation procedure was used to determine the 
degree of relationship between the two sets of variables.

Results showed that no significant relationship existed 
between selected self-concept scores and four selected 
communication skills. No evidence existed from this study to 
support the theory that covert behaviors (aspects of self 
concept) related to overt conductor skills (eye contact, 
expressive voice), and that the covert behaviors should be 
emphasized because of their being the source of the conductor 
overt actions. It was suggested that further research of 
overt and covert conductor behavioral traits and skills be 
undertaken in order to determine possible relationships that 
could effect strategies in choral conducting teacher-training 
programs.
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CHAPTER I

INTRODUCTION

Rationale

Music educators generally agree with choral conductors that good conducting includes the ability to communicate with the performers (18, pp. 17-18). A conductor must not only exhibit conducting gestures and techniques but also communication skills. As Stanton stated,

To conduct is to communicate. A principle justification for the role of the conductor is that he communicates a steady flow of musical ideas, cues, nuances, moods, and interpretive concepts to his singers (49, p. 9).

Stanton also noted that teachers of choral conducting usually give considerably more time in the classroom to the development of conducting gestures and techniques than to communicative skills, such as conveying musical nuances and subtleties, and being at ease with the material and the singers.

Being at ease with one's ensemble may frequently exceed the exhibition of mere musical skills because general humanistic and personal traits and behaviors are involved if a conductor is to make a strong, positive impression on others. As Tillman stated,

Your mannerisms such as speech, gestures, the way you walk, your posture, are all a part of whether
your impressions on students and colleagues are positive or negative. Temperament is also a strong factor in personal magnetism. If your disposition to students and faculty is sporadic from day to day, rather than consistently cheerful and pleasant, changes will need to be made. These qualities are things which subconsciously attract or repel students and colleagues (52, p.19).

In describing magnetism in a conductor, Tillman referred to characteristics, such as an air of self-confidence and of knowing that he or she was accepted (52, p. 20). Authors of choral conducting textbooks, such as Gordon (21), Lamb (32), Roe (43), and Robinson and Winold (42) mentioned a similar need for focusing on the aspect of human relations in the choral conducting experience.

Gordon, who devoted an entire chapter to this aspect of conducting skills, expressed that psychological and sociological aspects of working with singers has received little attention until now. He stated,

Of all the non-musical skills necessary for successful choral directing, the ability to motivate ensemble members toward rehearsal and performance goals is probably the most important. This proficiency is only developed through knowledge of human behavior and practical experience in working with people (21, p. 38).

In a work that emphasized the psychology of conducting over the techniques of conducting, Fuchs (16) pointed out, as had Gordon, that conducting textbooks deal only in a perfunctory fashion with the psychological problems found in conducting. He said,

Much of the space quite understandably has been devoted to the development of a physical technique,
and only very little to what happens after this technique has been developed to a reasonable degree (16, p. vii).

From the above it follows that choral conducting skills and behaviors fall into the realm of two areas, that of (1) covert and (2) overt communicative behavioral skills, traits, and characteristics. Covert communicative traits and behaviors might be specific attitudinal traits of a choral conductor, e.g., a strong self concept and qualities of a self-actualized person, like empathy for others, perceptiveness, creativity, decisiveness, and the ability to show good judgment when confronted with new and unusual situations (35, p. 140). Techniques within the realm of overt communicative skills and behaviors fall under (a) verbal skills and (b) nonverbal and paralinguistic skills. The first of these two groups encompasses command of vocabulary, terminology, phraseology, and the use of specific idioms. The second group consists of behaviors such as eye contact, tone and inflection of voice, the manner in which the conducting gestures are used to convey ideas, and other gestures, postures, and mannerisms typically found in a choral conductor.

Some music educators and choral conductors believe that covert behavioral traits should be more of a concern to educators than the overt ones because the former may be the source of the latter (21, 16, 46, 49). The assumption is that determining how choral conductors view themselves might
have a great deal to do with the nature of their communicative skills during rehearsal. Such beliefs are generally labeled as "humanistic educational theories" and have had a considerable impact upon the music teaching profession in general and choral education in particular.

Maslow (36), Harvey (23), Schmitt (46), and Wehner (56) have suggested that music teachers must be self-actualized before they can know success in the classroom. Maslow defined self-actualization in the following way:

It refers to one's desire for self-fulfillment, namely, to the tendency for one to become actualized in what he or she is potentially. This tendency might be phrased as the desire to become more and more what one is capable of becoming (35, p. 46).

Although admitting that a totally self-actualized person was a rare exception in society, Maslow deduced that the self-actualization potential existed in every normal human being. Harvey concentrated on the quality of "creativity" in the research of Maslow's self-actualization and concluded that all areas of music education could profit from self-actualization awareness. Wehner and Schmitt stated similar needs and carried them further into practical applications in the classroom.

Wehner's list of objectives for the self-actualized specialist in music education were recorded as follows:

If the teacher thinks of his role as a self-actualization specialist with emphasis on learning, the following results are possible.
1. He will concern himself with what others do.
2. He will be concerned with the ego-gratification of others.
3. He will focus on the human potentials rather than on the results of conditioning experience.
4. He will plan his activities in terms of ideas and aesthetic expression (individualism).
5. He will make judgments in terms of human potential.
6. He will place humanness on a high level in his goal structure (56, p. 39).

Schmitt concentrated exclusively upon this positive environment by focusing on the needs of both students and teachers in their mutual involvement in the learning situation. Schmitt limited her study to the establishment of teacher-student rapport, affirming the tenet central to her book that when a student is in a situation of good rapport, he or she usually succeeds in music. The author stated that

Good rapport demands that a teacher possess a keen sensitivity to students' feelings and needs as well as a deep concern for their progress in attaining music skills. (46, p. 2).

To test the validity of the humanistically based educational theories mentioned above, a covert variable must be transformed into observables before it may be related to other observable behaviors. Furthermore, to determine whether the covert behavioral traits are the cause for overt actions, experiments under controlled conditions are needed. However, before variables are subjected to experimental treatment one should determine first whether significant relationships may be assumed at all. Therefore, a first step in validating beliefs and theories like the ones stated above ought to lie in correlating specific measures with each other that may be representative of the two types of behaviors,
namely variables of overt and covert communicative skills, behaviors, and traits. It was the general purpose of this study to conduct one such correlational investigation.

Purpose and Problems of the Study

The purpose of this study was to investigate the relationship between selected measures of self concept as perceived by a group of choral conductors, their eye dependency on score, and measures of expressive voice.

The problems were

(1) to determine the degree of perceived self concept of a selected group of choral music teachers through measures of (a) total self, (b) physical self, (c) moral-ethical self, (d) personal self, (e) family self, and (f) social self;

(2) to assess eye dependency on score of the same teachers;

(3) to assess the aspect of expressive voice through measures of (a) pitch levels of modulation, (b) speech flow, and (c) voice energy level;

(4) to examine the relationship between the measures of self concept, eye dependency on score and expressive voice.

Background of the Study

In the following, a brief synopsis of research on overt and covert communicative skills is given that provided the background for selecting those variables which appear in the research problems.
Research on Selected Overt Communicative Conducting Skills

Three areas of research were of interest in the context of this study: investigations on error detection, instructional feedback procedures, and observation studies that examined specific skills such as eye contact and quality of voice. In most cases, the studies emphasized the development and refinement of appropriate research techniques and were less concerned with the identification of all the variables that might possibly be discernable in the communicative process of a choral rehearsal (59, 29, 22, 15, 58, 28, 25, 27, 37, 48, 40, 34, 8, 47, 19, 50).

Studies which have more specifically addressed the relationship of conducting skills to overt communicative skills are primarily those utilizing observational measurement systems to investigate teacher-student interaction in rehearsals. Erbes (11), Hicks (24), Reynolds (41), and Gipson (17), focused on developing observational systems that would record interactions between teacher and student in rehearsal and private teaching situations. All four of these researchers based their observations on a system of interaction analysis developed by Flanders (14).

Observational research based on systems other than interaction analysis has been completed by Lewis (33), Thurman (51), Ervin (12), Yarbrough (57), and Roshong (45). Lewis developed an observation system that encoded musical scores with categories describing specific gestures at a
selected rate of either one category per beat or one per measure. Thurman was concerned with the quality and frequency of verbal behaviors of five choral conductors. By examining the content of what was said in two rehearsals, the author was able to determine the percentage of time given to particular communication problems by each conductor.

Ervin, Yarbrough, and Roshong observed and evaluated both verbal and nonverbal conducting behaviors. Each author contributed to research on conductor behavior by first developing a scale in which to measure conductor success and then to test the instrument through observation.

Ervin selected variables which included eye contact, expressive conducting gestures, and verbal behaviors such as maintaining classroom control and lecturing about a particular subject within a given rehearsal. Yarbourgh identified variables of conducting motions and gestures, eye contact, facial expression, speech speed, voice pitch and volume as effective ways to observe conductor success in a rehearsal situation. Roshong recorded facial expression, conducting gestures, eye contact, body movement, vocal quality, and silence.

Common conclusions of the studies were (1) that it was possible to observe conducting gestures and skills; and (2) that the observed behaviors had a great influence on the effectiveness of a conductor in a rehearsal situation. In particular, the variables of voice quality and eye contact
proved to be the behaviors best suited for representing overt communicative conducting skills.

**Voice Quality.**—Yarbrough used speech rate (steady flow, hesitant, or repetitive), voice pitch (low, variable, high), and voice volume (soft, normal, loud) as independent variables to measure voice quality. Of the three voice variables, speech rate and voice pitch emerged from her study as the most reliable indicators of conductor voice quality. Roshong observed the intensity of the conductor's voice during instruction giving and rated it on a scale from comfortable to abusive. Voice intensity was described as energy release due to consonant emphasis. This overt conductor behavior was determined by Roshong to be a most effective discriminating variable among conductors.

A combination of the variables and procedures utilized by Roshong and Yarbrough were adapted to this study for purposes of measuring voice quality as an overt communication skill. Pitch levels of modulation, speech flow, and voice energy level through consonant emphasis would be measures in agreement with Stanton (49), Roe (43), Lamb (32), and Robinson and Winold (42) who, as authors of choral conducting textbooks, have stressed the importance of these characteristics in the development of good conductors.

**The Quantification of Eye Contact.**—In the research literature, eye contact has been defined as the time a conductor is looking explicitly at the entire group or an
individual in the group. However, the notion generally held by teachers of conducting is that communication between conductor and singer is weakest when the eyes of the conductor are fixed on the music score. When the conductor's eyes are totally on the music, the probability of two-way communication between conductor and singer is greatly reduced. Since the purpose of measuring conductor eye contact is to determine its use in communicating with singers, and since fixing the eyes on the score greatly reduces communication, it would seem that defining eye contact as eye dependency on score is the most direct way to use this variable in observing conductors.

**Research on Selected Covert Communicative Conducting Skills**

The measurement and empirical assessment of attitudinal traits and behaviors of choral conductors is in its infancy compared to the quantity of studies that have investigated these traits in relationship to teaching and learning processes in general. Of such characteristics as attitude toward oneself, empathy for others, perceptiveness, creativity, decisiveness, and a strong self concept, the last item has received the widest attention by social scientists.

Educators have particularly focused on the question of how a person's self concept effects his or her work satisfaction and effectiveness in a classroom situation. Results of these studies suggest that the manner in which
teachers perceive themselves directly effects their relationships to others (1, 4, 6, 20, 30, 55, 10, 54).

LaBenne states, "Empirical and experimental data clearly indicate a direct relationship between a teacher's self concept and his manifest behavior, perceptions, and teacher performance" (31, p. 24).

Combs and Snygg (7), Maslow (35), Rogers (44), and others concluded in the early fifties that human motivation was primarily the result of the perceived self, and that behavior, therefore, resulted from the personal motivation of each human being. Aspy and Buhler (1), Brown (4), Gooding (10), Roffman (30), Vonk (55), Dedrick (10), Choy (6), and Usher (54) compared teacher perceptual orientation with their success in teaching. Perceptual orientation was described by these authors as the way in which a person viewed himself, others, and the world in which he lived. This description closely compares with the description of self concept defined as an individual's conscious description of himself (13, p. 2). The instruments used to measure self perception in the studies cited above came from an original list of perceptual hypotheses developed during a year-long seminar at the University of Florida in 1959.

Studies by Jette (26), Trowbridge (53), Bledsoe (3), Craven (9), Black (2), Chovanetz (5), Passmore (39), and Nichols (38) measured self concept in the classroom by means of self evaluation tests rather than through the observation
procedure used in the Florida studies. These tests ranged from non-standardized self-esteem inventories, scales, and checklists to the standardized Tennessee Self Concept Scale (TSCS). The latter instrument was developed by Pitts (13) and has been tested by a large variety of researchers in the context of more than 500 studies. In these studies the TSCS has been found to be reliable, efficient, and valid. TSCS yields scores on one's total self concept as well as sub-scales of the total self concept; namely physical self, moral-ethical self, personal self, family self, and social self. These five sub-scales provide narrowly defined dimensions of self concept that examine more specifically the differences between people as regards this covert variable.

**Summary of the Synopsis of Research on Overt and Covert Communication Skills**

In light of the research cited, a conclusion about specific variables of overt communicative conducting skills was drawn: eye contact and expressive voice emerged as the most representative and usable discriminating traits of different conductors. However, as it is generally held that eye contact between conductor and singer is weakest when the conductor has his or her eyes fixed in the score, the degree of eye dependency on score was therefore chosen as the measure to reflect a conductor's degree of eye contact in a rehearsal situation. In the research cited, expressive qualities of a teacher's voice included pitch level of
modulation, speech flow, and voice energy level through consonant emphasis. These behaviors were determined to be the most effective discriminators of a conductor's voice and, therefore, were chosen as the measurement of conductor expressive voice in a rehearsal situation.

Research on selected covert communication skills revealed that self concept represented a behavioral trait worthy of investigation. The Tennessee Self Concept Scale by Fitts(13), which was tested by a large variety of researchers and found to be reliable, efficient, and valid, emerged as the best instrument for measuring conductor self concept.
CHAPTER BIBLIOGRAPHY


CHAPTER II

RELATED RESEARCH

Research relating to this study is presented in two sections: 1) research on self concept, and 2) research on skills in choral conducting. In recent years educators and psychologists have provided us with extensive research in the area of self concept. For purposes of this study, the discussion on research in self concept is limited to educational studies concerned with teacher self concept. The research in choral conducting is limited to studies in the areas of instructional feedback and the development and validation of observational systems where conducting skills are identified and evaluated.

Studies of Teacher Self Concept

Research results of the past twenty years propose that teacher self concept positively effects achievement in the classroom. Combs stated,

Positive views of self provide teachers with advantages for dealing with life in or out of classrooms. They provide basic feelings of security leading to behavior likely to be perceived by others as personal strength and assurance. . . . Studies on effective and ineffective teachers have provided us with empirical evidence that positive views of self clearly distinguish good teachers from poor ones (10, p. 161).
In 1959 the problem of teacher effectiveness was studied in a year-long seminar at the University of Florida, where perceptual factors that influence a person's behavior were studied (Combs, 9). The seminar investigated the hypothesis that effectiveness in teaching was a function of the individual's perceptual orientation.* It was suggested that effective teachers are similar in their perception of themselves and their task of teaching. Since that time numerous studies, mostly from the University of Florida, have been conducted which support the perceptual view of teacher effectiveness. Gooding (23), Brown (6), Vonk (49), Dellow (15), Usher (48), Dedrick (14), and Choy (8), investigated perceptual organization in elementary, secondary, and college teachers. Perceptual orientation was measured in each of these studies by observers trained in perceptual psychology as defined by Combs in 1959 (9). In all of these studies significant differences between perceptual orientation of effective and ineffective teachers were reported.

Gooding, Brown, Vonk, and Dellow investigated the relationship between grade school teachers and perceptual orientation. Gooding demonstrated that perceptual orientation of elementary school teachers was related to ratings of effectiveness by supervisors. Teacher

*Perceptual orientation was described as the way in which a person views himself, others, and the world in which he lives. This terminology closely aligns itself to self concept as defined earlier, and is used throughout the Florida studies.
effectiveness was determined by independent ratings by both the teacher's principal and supervisors. No specific criteria were used by these administrators other than making a subjective judgment regarding the quality of their teachers. The teachers considered as "the very best or poorest in your school" were used for the study. The subjects consisted of nineteen women teachers rated effective and thirteen women rated as ineffective. Gooding inferred perceptual organization from observations and interviews. Teams of observers visited every teacher three times and held one interview—without knowledge of the teacher's effectiveness classification. Each teacher was judged on twenty perceptual factors concerning perceptions of self, others, and the teaching task. Using a discriminant function analysis, Gooding concluded that effective teachers were characterized by

A. Perceptions of people and their behavior as
   1) Able rather than unable
   2) Friendly rather than unfriendly
   3) Worthy rather than unworthy
   4) Internally rather than externally oriented
   5) Dependable rather than undependable
   6) Helpful rather than hindering

B. Perceptions of self as
   1) With people rather than apart from people
   2) Able rather than unable
   3) Dependable rather than undependable
   4) Worthy rather than unworthy
   5) Wanted rather than unwanted

C. Perceptions of the teaching task as
   1) Freeing rather than controlling
   2) Larger rather than smaller
   3) Revealing rather than concealing
4) Involved rather than uninvolved
5) Encouraging process rather than achieving goals

D. General frame of reference which emphasized
1) Internal rather than external
2) People rather than things
3) Perceptual meanings rather than facts and events
4) Immediate causation rather than historical
(28, p. 58)

Brown studied the relationship between the perceptual organization of Outstanding Young Educators (OYE, an honor bestowed by the Jaycee Organization) and a random sample of elementary and secondary teachers. Forty-eight subjects were selected from a population of finalists over the past five years in the OYE program. The comparison group, also comprised of forty-eight subjects, was drawn from a population of teachers who were enrolled in general education graduate courses at Florida Atlantic University. Brown collected perceptual evaluations from a variety of instruments containing questions on classroom management, objectives and procedures, and self-evaluation. Median tests were performed between the OYE and a random group of teachers. Brown found that the OYE group differed significantly from the comparison group in the following perceptual areas:

A. Frame of reference as hopeful rather than despairing.

B. Other people perceived as
1) More worthy than unworthy.
2) More unthreatening than threatening.
C. Themselves perceived as
1) More with people than apart from people.
2) More certain than doubting.  
(6, p. 39)

The differences between groups on perceptual characteristics were significant beyond the .01 level of confidence.

Vonk explored the relationship between perceptual organization of in-service teachers and pupil ratings. The subjects were fifty elementary and secondary teachers attending an in-service graduate seminar at Florida Atlantic University. Perceptual inference data were obtained from three written descriptions of teaching incidents. Pupils using a self-anchoring scale* were asked to place the teacher on a scale somewhere between the best and worst teachers they had had. Correlations between perceptual factors and student ratings were found to be significant beyond the .01 level.

Regarding their views of the purposes of teaching, Vonk found that effective teachers had broader purposes and were more concerned with students' perceptual experience of feeling, thinking, and understanding. Effective teachers were further found to have greater desire to expand uniqueness, disclose themselves, and humanize their teaching. Also it appeared that their objectives were more directed toward

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*A self-anchoring scale is one in which each respondent is asked to describe, in terms of his own perceptions, goals and values, the top and bottom, or anchoring points of the dimension on which scale measurement is desired, and then to employ this self-defined continuum as a measuring device. What led to the construction of a self-anchoring scale was the dissatisfaction with questionnaire-type instruments that used forced-choices and preconceived categories to attempt to accurately reflect subjective appraisal.
helping students learn. After a factor analysis of the perceptual ratings, Vonk concluded that most of the perceptual dimensions revealed in the study were found in all of the teachers rated as effective.

Dellow examined the relationship between two different approaches for studying the question of teacher effectiveness: the perceptual approach of Arthur Combs and the facilitating conditions of Carl Rogers (43). The sample consisted of thirty-four elementary teachers in first, second, third, and fourth grades. By facilitating conditions Rogers meant a relationship in which a person (teacher) had the intent of promoting the growth, development, and maturity of another person (student). The two approaches were examined by investigating the relationship between selected perceptual characteristics of teachers and their classroom conditions of empathy, congruence, and positive regard.

Perceptual characteristics observed in teachers were taken from the following categories developed by Combs: general frame of reference of the teacher, how the teacher saw others and their behavior, how the teacher saw himself, and how the teacher saw the task at hand and its problems. These perceptual data were inferred from two essays written by the teachers sampled. The facilitating conditions of empathy, congruence, and positive regard as described by Rogers were rated from audio tapes of the teachers' interaction with students during reading instruction.
Canonical correlation was used for purposes of determining the relationship between these two sets of data.

Results of this study indicated no significant relationship between these two approaches for studying teacher effectiveness. Dellow concluded that the variables used in the perceptual approach were apparently different from those used in the facilitation conditions approach. The author also reported that the high degree of intercorrelation between the perceptual variables tended to confirm the observation of Combs and others, that there was a high degree of interrelationship between the many perceptions one has of oneself, others, and one's purpose in teaching.

The results reported by Gooding, Brown, Vonk, and Dellow were in agreement regarding the perceptions of elementary teachers and their success in teaching situations. Each study provided evidence in support of a positive relationship between perceptual orientation and teacher effectiveness.

Usher (48), Dedrick (14), and Choy (8) expanded the scope of the previous research by exploring the relationship between effective college teaching and perceptual orientation. Usher measured the effectiveness of thirty-five college teachers by looking at the following categories: student evaluations of teachers, department head ratings, the teacher's record of publication and research, and his or her number of professional activities. Perceptual orientations were determined by trained raters who observed two sessions
of classroom teaching. Significant results were found only between ratings of perceptual orientation and pupil ratings. No significant relationship was observed between perceptual ratings and department head subjective judgments, publications and research, or number of professional activities. Usher offered this possible explanation:

It may be that the perceptual organization of professionals is more pertinent to the more "human" and personal aspects of effectiveness in professional work than to the less personal aspects of research, publications, and professional activity (48, p. 104).

Dedrick examined the relationship between perceptual organization and student ratings of thirty-two junior college instructors. Perceptual ratings were inferred by trained raters from three essays written about a significant past event which involved the subject and one or more other persons. Student ratings were obtained on a self-anchoring scale and on the Purdue Instructor Performance Indicator (PIPI). The PIPI is a rating scale that requires the rater to make a series of choices from blocks of descriptive teacher-behavior items. According to the manual, the PIPI was designed primarily as an instrument to provide quick, economical, reliable, and valid measure of student opinion of college instructors as teachers.

Five of the six perceptual dimensions tested showed high predictive power when multiple step-wise regression correlates were computed between inferred perceptual orientation and student ratings. These five
instructor perceptual dimensions were (1) sensitivity and concern toward others; (2) viewed others as able to deal with their own problems; (3) viewed others as worthy of respect; (4) viewed self as relating to diverse persons and groups; and (5) viewed self as liked and successful. These results indicated that the instructors were similar in perceptual orientation and effectiveness in instruction.

Choy designed a study to investigate college teacher effectiveness through a comparison between certain global ratings of thirty-two faculty members on a number of criterion measures on the one hand, and their conceptual systems orientation and perceptual orientations on the other. The criterion measures used were Conceptual Systems Orientation based on the theoretical constructs advanced by Harvey, Hunt, and Schroeder in 1961. The correlations among the criterion measures and the faculty members of the Department of Psychology at Colorado State College were also computed. Teacher effectiveness was determined by ratings of "good," "average," or "poor" as judged by 1) self, 2) administrator, 3) colleagues, and 4) students. Perceptual orientation as advanced by Combs (1965) was again used as the major research variable in determining perception of self by the teachers tested. Teacher effectiveness scores were compared against the conceptual/perceptual research variables using simple correlations and linear multiple regression analysis. A major conclusion drawn by Choy was that the
faculty's characteristic ways of perceiving other people, self, and their task, related strongly with their effectiveness as college teachers.

The findings of Choy, Usher, and Dedrick concerning the perceptual orientation of college instructors were consistent with previous findings on public school teachers. Each author indicated a positive relationship between teacher effectiveness and perceptual orientation.

Koffman (35) investigated the relationship between perceptual organization and teacher effectiveness of outstanding and randomly selected teachers in "open" and "traditional" classrooms. Twenty-five elementary teachers were used as subjects for each group. This study aimed at determining whether a relationship between the two could be generalized across different types of teaching situations. Eleven perceptual dimensions were established for the study and expressed in the form of eleven different continua. These were used to rate teachers' reaction to critical incidents in teaching by two raters who were given intensive training in making perceptual inferences. The eleven dimensions were divided into two sections; teachers' perception of self, and teachers' perception of others. Dimensions included under teachers' perception of self were: identified-apart, adequate-inadequate, trustworthy-untrustworthy, wanted-unwanted, and worthy-unworthy. Teachers' perceptions of others included able-unable, worthy-unworthy,
helpful-hindering, friendly-unfriendly, internally motivated - externally motivated, and dependable-undependable. A questionnaire was used to determine the perceptual nature of the teacher by recording teachers’ responses to situations that might arise in a classroom situation.

Results of the study were that outstanding teachers with either traditional or open teaching styles differed significantly from the comparison group on nine of the eleven perceptual factors measured. The two factors not found to be different between the two groups, regarded the teacher's perception of others as helpful-hindering and dependable-undependable.

The above mentioned studies compared perceptual factors with different forms of rating scales. Aspy and Buhler (2) further validated the relationship between perceptual orientation and teacher effectiveness using student test results. The authors conducted a study which compared perceptual orientation of teachers with student academic growth. They examined the relationship between teachers' inferred self-perception and student achievement as measured by five sub-tests on the Stanford Achievement Test. Trained raters inferred perceptual orientation in two one-hour classroom observations. The results indicated a positive relationship between students' academic growth and teachers' perceptual orientation. Four of the five sub-tests showed significant relationships with self-perceptions at the .05
level of confidence. Aspy and Buhler contended that the study indicated the need for assessing teachers by looking at their perceptual orientation as well as examining their intellect and knowledge of the subject.

Wasicsko (50) based his study on the commonly held notion that perceptual characteristics differentiated effective from ineffective teachers. The author wanted to improve the process by which teachers were selected. For this purpose he developed and tested self instructional materials for use by teacher selection officials. Wasicsko stated that historically research designed to improve the process of teacher selection has had disappointing results and that recent perceptual research provided a strong basis for teacher evaluation and selection.

Three hypotheses were tested in the study. The first was that through the self-instructional materials developed, selection officials would be able to make perceptual inferences that agreed highly with trained raters. Hypothesis two tested the relationship between perceptual orientation and inference skills. It was hypothesized that the perceptual orientation associated with teacher effectiveness would compare well with scores by highly trained raters. Hypothesis three tested for effect of training. It was hypothesized that the thirty educators, using self instructional material, would show a higher mean agreement score over the twenty teacher-education instructors.
used as the untrained group in a comparison of means. The positive results of the tested hypotheses revealed that perceptual inference techniques could be employed as a useful measure in the teacher selection process. Wasicsko also concluded that perceptual inference training provided administrators with criteria for making teacher evaluations that traditionally had been left to subjective judgments.

Self-concept studies in college-age students by McWilliams (38), Hughes (26), Black (4), Chovanetz (7), Jette (31), Passmore (41), and Nichols (40) have investigated a variety of variables and reported various results. Although these studies were not about teachers, some of them represented research in teacher preparation programs. The main reason, however, for their inclusion here was that they compared selected variables to self concept in adult-age students. Research of this kind closely related to the nature of this author's study.

McWilliams and Hughes examined the effects of programs of instruction in education on student self concept and concluded that no differences existed in the selected teaching techniques. Black, Chovanetz, and Jette studied the effect of selected acquired skills on college-age students' self concept.

The all male population in Black's study was divided into high physical performance group and low physical performance group. Both groups of forty-five students were
tested on the **Tennessee Self Concept Scale (TSCS)** to
determine specific aspects of their self concept. Results
showed that the high physical performance group scored
significantly higher than the low physical performance group
on physical self, moral-ethical self, and family self.
However, no differences resulted between groups in overall
self concept, personal self, and social self.

Jette studied the effect of a seven-week course in
modern dance on the self concept of eighty female university
students. A self-concept test developed by Loevinger,
Wessler and Redmore was designed to measure the ego
development of the students as they wrote sentence
completions regarding things they found to be most important.
Results of the study over the seven week trial period
revealed no improvement in self-concept scores.

Chovanetz studied the relationship between self concept
in forty-four undergraduate students in a speech class and
their ability to project various aspects of personality to
their listening audience during prepared speeches. An
**Empathetic Discrimination Test** was constructed by the author
for evaluating the effectiveness of selected variables
relating to speaker empathy. This instrument measured the
students' response to the affect he felt existed on a series
of stimulus statements recorded on tape. These statements
were then rated by a trained professional rater and compared
with the students' ratings to determine the degree of
empathetic discrimination for each subject. The Tennessee Self Concept Scale was used as the self-concept measure. Results of the study revealed a high positive correlation between self concept in college-age students and their empathetic communication ability. The findings reported by Chovanetz were of particular importance to this author because of the similarity in the communication skills needed between speaker and audience and those needed between conductor and choir.

Passmore and Nichols investigated the effect of self concept on student teacher success. Passmore's research focused on elementary student teachers' personality factors and success in student teaching. The Tennessee Self Concept Scale (TSCS) scores and selected personality traits were compared to age, grade point average, and rating of student teacher effectiveness. A Professional Judgment of Student Teacher Competence Form was designed for use by the supervisors in measuring student teacher success. The elementary school student teachers (N=108) were divided into high and low rated self-concept groups and then compared against the standard for teaching success established for that particular study. A positive significant relationship at the .05 level of confidence was found between high self-concept scores and student teaching success.

Building on the significant results of the research by Passmore, Nichols studied, in like manner, forty-two student
teachers at the secondary level. Nichols again used TSCS to measure self concept but used the Illinois Rating of Teacher Effectiveness form to measure teacher effectiveness. This instrument assesses ten teacher traits (Appearance, Work Assignments, Explaining Lessons, Friendliness, Grading, Discipline, Teaching, Voice, Mannerisms, and Knowledge of Subject). The composite score of these ten traits represented the rating of teacher effectiveness. When comparing the composite score for teacher effectiveness with the self-concept scores, Nichols, like Passmore, found a significant positive relationship to exist between the two variables.

Boardman (5) studied the relationship of teacher self concept to student achievement in selected academic areas. This research sought to determine if pupils of teachers with high self concept showed statistically significant higher achievement than pupils of teachers with low self concept. TSCS was administered to a group of thirty-four teachers as the self-concept measure. Students were placed in two classes under high and low self-concept teachers with the Iowa Test Of Basic Skills administered as a pretest-posttest student measure. The results of this twenty-six week study of sixth- and eighth-grade students indicated that high self concept on the part of English teachers appeared to be a critical factor in the academic achievement of their pupils. Results in math, however, revealed that pupils of teachers
with low self concept performed somewhat better than pupils of high self-concept teachers. These differences, however, were found not to be statistically significant. A reason for the inconclusive results may have been due to the manner in which the self-concept teacher groups were drawn. The thirty-four teachers were given the TSCS and divided according to the mean score of 369. Those scoring above the mean were designated high in self concept; those below as the low self-concept group. Teachers separated by only a few points on the TSCS were placed in opposite self-teacher groups, therefore, making differentiations among teachers difficult to judge.

Jersild (30) and Trowbridge (47) reported findings that support the generally held premise according to which a relationship exists between teacher self concept and achievement in the classroom. Jersild collected information from essays written by over 2000 students ranging from fourth grade through college level on the subject, "What I Like About Myself." Data were collected and categorized under seventeen headings (i.e., physical characteristics, school, intellectual ability, personality and character, and social attitudes and relationships). Jersild determined from the results of this study that teachers must help students develop their composite selves. The author stressed that teacher-training programs must emphasize training that best insures that the person certified as a teacher will be an
understanding person. Jersild emphasized the importance of
the teacher self concept when he said, "... the teacher's
understanding and acceptance of himself is the most important
requirement in any effort he makes to help students" (30, p. 3).

Trowbridge investigated the effect of a teacher training
program on student self concept. Thirty teachers schooled in
IMPACT, a federally funded teacher-training program designed
to increase teacher creativity, taught elementary-age
students over a twelve week period. A similar group of
students were taught by teachers who were not trained in
IMPACT. A Self-Esteem Inventory was used to measure student
self concept before and after the training period. Results
of the student self-concept scores revealed a significant
increase in self concept among students taught by teachers
trained in IMPACT. Since earlier testing of the IMPACT
program revealed increased teacher self concept through
training in the program, the author concluded that high self-
concept teachers somehow transfer self worth to students
through their teaching behavior. According to Trowbridge,
changes in teacher self concept and behavior should produce
changes in student self concept and behavior.

Tennessee Self Concept Scale

Of particular interest to this writer was the use by
many of these researchers of TSCS as the instrument for
measuring self concept in their particular studies.
McWilliams, Black, Chovanetz, Passmore, Nichols, and Boardman defended its use by declaring it the most efficient, reliable, and valid self-concept instrument available. These authors referred to the TSCS Manual (19) for evidence relating to the standardization, reliability, and validity of TSCS. In the development of TSCS, the first step consisted of a compilation of a large pool of self-description items. The original pool of items was taken from research by Balester (3), Engel (16), and Taylor (45). These authors studied the consistency and stability of self-concept in adolescents and juvenile delinquents. Additional items were derived from mental health research where a number of written self-descriptions by psychiatric patients and non-patients were used. After the items were edited, clinical psychologists were used as judges to classify items as positive or negative in content. This evolved into the two-dimensional, three by five scheme employed on the score sheet. The first ninety items were equally divided into positive and negative items. The remaining ten items of the one hundred-term scale comprised the Self Criticism Scale.

The standardization group from which the norms were developed was a sample of 626 people. The sample included people from various parts of the country and age ranging from twelve to sixty-eight. There were approximately equal numbers of both sexes, both black and white subjects, representation of all social, economic, and intellectual
levels and educational levels from sixth grade through the Ph.D. degree program. The manual also reports additional studies by other researchers who confirmed the norms. Reliability was attained through the use of a test-retest coefficient with a total "positive" score of .92.

In evaluating and establishing the validity of the TSCS, its authors were concerned with four validation procedures.

1. **Content Validity.** Content validity dealt with the dependability of row and column scores. An item was retained in the scale only if there was unanimous agreement by the judges that it was classified correctly.

2. **Discrimination Between Groups.** Discrimination on the basis of psychological status was investigated by comparing the scores of 369 psychiatric patients with 626 non-patients from the norm group. The Scale items demonstrated significant (.001) differences between the test groups on almost all items. Congdon (11), Piety (42), Havener (25), and Wayne (51) conducted similar investigations with other groups of patients and non-patients with like results. Cross validation was also accomplished by comparing patients and non-patients scores from different hospitals from different sections of the country. Discrimination within four patient groups was examined by Huffman (27) and also found to be significant (.001).

3. **Correlation With Other Measures.** Correlations with other measures dealt with the correspondence between scores
on the TSCS and other measures for which high correlation should be predicted. Two self-concept scales designed for psychiatric patient study (Minnesota Multiphasic Personality Inventory (MMPI), Edwards Personal Preference Schedule) were high and significant at the .05 level. Correlations with lesser known personality inventories yielded similar results.

4. Predicting Behavior Change. Ashcroft and Fitts (1) conducted an experimental study designed to measure TSCS on changes through psychotherapy. Thirty patients in therapy for six months and a twenty-four patient no-therapy control group were measured on a test-retest basis with the Scale. Results showed that the therapy group changed significantly and in the expected directions on eighteen of the twenty-two variables studied while the control group changed in only two variables. Fitts concluded that considerable evidence existed to indicate that peoples' concept of self does change as a result of significant experiences. His feelings were that TSCS reflected these changes in predicted ways, thus constituting additional evidence for the validity of the instrument.

Studies of Choral Conducting

Music education research in choral conducting over the past twenty years has emphasized ways of improving conductor effectiveness through the development of conducting skills. Of particular interest to this study was the conducting research in the area of instructional feedback and the
development and validation of observation systems where conducting skills were identified. For purposes of this study, related research in choral conducting was limited to these two areas.

**Conducting Studies in Instructional Feedback**

With the development of the videotape recorder as a practical educational tool, music educators and researchers have been able to improve conducting skills through videotape feedback. Hunter (28) and Zdzinski (55) were two of the first researchers who used replayed feedback in the field of conducting.

Hunter's study was designed to use the instant replay feature of video recording. In his experiment, a control group (N=15) was taught conducting in the traditional student-teacher feedback manner, while an experimental group (N=20) was exposed to the video replay of their conducting. Following the replay, the experimental group held discussions with the instructor about what was viewed. After the treatment period, each student was evaluated on the basis of the following physical aspects of conducting: 1) preparatory beat, 2) basic beat movement, 3) dynamic indication, 4) cuing, 5) independence of hands, 6) cut-offs, 7) facial communication, 8) posture, 9) attention to musical detail, and 10) overall achievement (28, pp. 57-58). Although the experimental group scored higher than the control group in nine of the ten categories, the difference between the groups
was not significant. Hunter suggested that the ten-week period had not been long enough to allow each student of the experimental group more than one appearance before the camera (28, p. 69).

Zdzinski attempted to find out whether visual records would offer conducting students an opportunity for increased awareness of factors involved in conducting skills. In his study, forty students were filmed with an eight-millimeter movie camera. Procedures were set up to contrast the feedback given during the standard classroom routine of the first two-thirds of a semester and feedback given by means of filmed records during the last third of the semester. While viewing the films outside of class, students were asked to evaluate themselves on the basis of twenty-two skills in conducting. These skills included preparatory beat, posture, release, left hand, tempo, beat pattern, style of beat, and cuing.

The primary conclusion drawn from the student evaluation forms was that the use of visual records of conducting performance did offer the students a more direct means of feedback than that offered by standard class procedures. Zdzinski stated that no attempt was actually made to determine whether the use of visual records resulted in an improvement on conducting skills.

Efforts to determine the effect of videotape recorder feedback on conducting skills were made by King (34), Grose
(24), Fleming (21), and Keller (33). Even though these studies were on video equipment rather than on instruction in conducting, they are included here for purposes of showing how the researchers used selected conducting skills as independent variables of instructional effectiveness. Although each study varied to some degree, the four authors shared the common purpose of statistically measuring the difference between videotape feedback and conventional teaching strategies in teaching conducting skills.

King wanted to see if students who studied and evaluated themselves through videotape while conducting acquired more skills than those who did not have access to videotape recordings. Two groups of twenty-five beginning conducting students were taught identically, except that the experimental group was videotaped five times during the course. After each taping session the experimental group was allowed to view and evaluate themselves with the aid of the instructor. At the end of the term three judges rated each student's conducting progress as compared against a pretest given during the first week of the term. Items to be evaluated were concerned with ten physical attributes of conducting virtually identical to those used by Hunter. They were preparatory beat, basic beat movement, dynamics, cuing, independence of hand movement, cut-offs, facial communication, posture, attention to musical detail, and overall conductor success. The analysis of the data
indicated that the videotape feedback used had a significantly positive effect on the students in a beginning conducting class.

Research by Fleming was patterned after King's study and netted similar results. Fleming used the same pretest and posttest evaluation procedure that King had used to measure student conducting progress. A three-judge panel utilized evaluation sheets based on King's research. This study, like King's, concerned two groups of beginning choral conducting students. Each group of twenty subjects were taught in a similar manner. Fleming, however, implemented over a period of seven weeks the treatment procedures which were completely independent of classroom instruction. Students in the experimental group viewed themselves on a video monitor during two private video practice sessions each week. During these sessions the individuals were given guided practice materials which consisted of 1) a score study guide, 2) special conducting considerations, and 3) a self-evaluation guide (21, p. 34). Fleming's procedure resulted in a significant difference on posttest performance, favoring the experimental group at the .05 level.

Grose, in a manner similar to King and Fleming, investigated the effectiveness of videotape recording on the improvement of conducting skills in thirty-five beginning instrumental conductors. Grose set up an experiment to determine whether subjects (N=20) videotaped in class and
viewed with instructor evaluation were aided in the acquisition of conducting skills over a control group (N-15) that was not videotaped. Students in each group were given four laboratory conducting experiences with the experimental group being videotaped during each lab period. After each taping, class viewing and discussion followed. The control group was not taped but did participate in class discussion. A panel of three judges used a thirty-item rating scale developed by the author to rate the conductors under the following general headings: right hand, left hand, score reading, cues, cut-offs, beat pattern, and overall conducting effectiveness (24, p.40). Items included under "overall conductor effectiveness" were directions and control over the ensemble. Although results of the study did not prove the videotape variable to cause a statistically significant difference in the two groups, evidence seemed to indicate that videotape feedback was a valuable educational tool. Grose proposed that the use of the videotape recorder holds promise in making a contribution to conducting in the following ways: 1) increased efficiency and quality of instruction; 2) focusing the student's attention on musical detail in conducting techniques; 3) providing the student and instructor visual and audio records of performance for in-depth study and evaluation (24, p. 9).

Keller, like King, Fleming, and Grose, attempted to determine the significance of videotape feedback upon the
acquisition of selected basic conducting skills. Keller chose the following six basic skills of conducting for evaluation: 1) posture and baton positions, 2) preparatory beat, 3) ictus, 4) cuing, 5) phrase indication, and 6) fermata (33, p. 9). Nineteen students enrolled in beginning conducting at Ohio State University in the spring of 1979 participated in the study. The question at hand was whether the experimental group using videotape feedback would show a significant difference in posttest results from a control group not using videotape feedback. Five times during the quarter the experimental group was video-recorded. Students then viewed their tapes individually with the instructor and received feedback. The Conductor Evaluation Form (CEF) was designed by Keller to measure each fundamental behavior that had been selected. CEF is a rating scale that asks a rater to check a number from one (highest) to ten (lowest) concerning conductor effectiveness as described in the six categories listed. Specific CEF directions provided basic points of consideration for users of this rating scale. A panel of three judges scored each student's performance on the pretest and the posttest.

Results of Keller's research showed the experimental group to perform significantly better than the control group. The students receiving videotape feedback also improved in fermata, cuing, posture, and baton position. Keller hoped that by examining the six basic skills separately, a more
efficient and useful method of using videotape would result, thereby improving instruction effectiveness of videotape usage in the classroom.

The use of the videotape recorder in studies by Gonzo and Forsythe (22), and by Jordan (32) was similar in the researcher's attempt to determine the independent effect that videotape recordings had on instruction in conducting. Rather than providing feedback for student conductors, these studies were designed to supplement the learning of conducting skills with videotape instruction.

Gonzo and Forsythe developed and used videotapes of junior high, senior high, and college choral organizations to teach students in an introductory music education class the principles and techniques of rehearsal procedure. The authors stated,

Some interactions are vital to the success of a choral conductor; it would seem that videotape excerpts of teacher-student interactions within rehearsal settings would prove to be valuable training of music teachers, specifically with regard to the analysis of teacher reinforcement behavior (22, p. 33).

Twenty-six hours of choral rehearsal videotapes were edited to isolate the teaching-learning process as it relates to problem solving in specific choral settings. A posttest control group design was used to see if a group of students (N=27) receiving the videotape material would be significantly different from a control group (N=36). The investigators were concerned with the students' observational
skills, knowledge of behavior principles, and attitudes toward the course. Results indicated the following: 1) Videotape materials had a significant effect upon the ability to perform an observational task; 2) Videotape materials had no significant effect upon the understanding of behavior principles; and 3) Use of videotape materials had considerable potential for reinforcing subject matter and also creating a higher level of interest for the course (22, p. 39).

Jordan, like Gonzo and Forsythe, sought to evaluate the effectiveness of videotape instruction as a supplement to classroom instruction in a beginning conducting class. Jordan developed videotapes of competent instrumental and choral conductors at the University of Illinois. Special skills to be recorded were three types of gestures for fermati and three types of gestures for cues. The beginning class of conductors was divided into an experimental group (N=12) and a control group (N=13). The only variable between groups was the periodic viewing of these tapes by the experimental group. At the conclusion of the study, a panel of trained judges observed the groups performing these gestures. Results indicated that the experimental group with the video instructional material was more effective in the performing of the conducting gestures for cues and fermati than was the control group.

Nelson (39) compared the effect of differential feedback procedures on selected music teaching skills and attitudes of
prospective teachers. She contended that research indicated the positive effect of feedback on teaching skills but that it was inconclusive in determining which feedback procedure was most effective. Nelson set up an experiment to compare three feedback procedures: 1) systematic self-observation of videotape lesson, 2) unguided videotape self-observation, and 3) instructor verbal feedback without videotape observation (39, p. 37).

Thirty-two students in elementary music methods classes at the University of Texas in Austin were randomly assigned to the three teacher-feedback conditions. Twenty students in elementary music classes constituted a no-contact control group. Each prospective elementary teacher taught five-minute music lessons during eight videotaped teaching sessions. Teacher skills to be measured and evaluated included 1) verbal reinforcement (any approving or disapproving teacher statement directed at students), 2) non-verbal reinforcement (approving and disapproving facial expression, i.e., frown, shaking head, and touches, hugs, and pushing hand away) directed at students, and 3) use of instructional time. Results of the study revealed no significant difference between feedback groups on any measure of teaching skill, student attentiveness, or teacher attitude. All three feedback groups were significantly higher than the control group in verbal, touch, total reinforcement rates, and touch approval rates.
What makes this study unique to the other instructional feedback research is that Nelson considered verbal and non-verbal teaching behaviors as the music teaching skills to be measured and evaluated. The other studies concentrated on the physical skills of conducting and the effects of designed programs of instruction on conducting students for validation of their research. By emphasizing both verbal and non-verbal teacher behavior, Nelson closely aligned herself to the research that observed and evaluated conductor effectiveness in a rehearsal situation.

**Conducting Studies With Observational Systems**

Recent studies of conductor effectiveness in rehearsal situations have shown that conductor behaviors can be observed, measured, and evaluated. Researchers have examined verbal behavior, non-verbal behavior, and a combination of the two in efforts to determine the effect of certain conductor skills on success in conducting.

**Verbal behaviors**—In a 1972 study, Erbes (17) developed an observational system with which to study the interactions occurring in the rehearsal of large musical organizations. Based on a system of interaction analysis developed by Flanders (20), Erbes developed the **Rehearsal Interaction Observational System (RIOS)** which records the verbal interaction between conductor and students during rehearsals. Erbes constructed a list of twelve interaction categories to be used for coding and applied the listing to eight musical
rehearsals. The eight categories that dealt with conductor verbal behavior were: 1) Uses—the conductor responds to student ideas. 2) Encourages—the conductor responds to student ideas by direct encouragement, praise, or acceptance. 3) Questions—the conductor questions with the intent that the student responds. 4) Informs—the conductor gives information. 5) Demonstrates—the conductor demonstrates in a manner in which performance should be or is accomplished. 6) Directs—the conductor directs or commands the student with the intent that he comply. 7) Criticizes—the conductor criticizes, rejects or challenges the student ideas, performance, behaviors or feelings. 8) Corrects—the conductor corrects student ideas, performance, or behaviors. The RIQS coding technique required the recording of conductor-student behaviors every three seconds.

A conclusion from Erbes' study gave the following information about conductors' interaction.

The conductor-student interaction in large group rehearsals is unique compared to academic classroom subjects. In a study of twelve rehearsals for the research for this dissertation, informing, demonstrating, direction-giving, criticizing, and correcting constituted 89% of the conductor verbal behaviors. Student verbal behaviors consisted primarily of responses to conductor questions (17, p. 139).

Erbes' study proved that it was possible to apply systematic methods of observation to large group rehearsals. By succeeding to measure conductor-student interaction, Erbes was able to support his premise that rehearsals are primarily conductor dominated.
Thurman (46) described the frequency and quality of the verbal behaviors of five choral conductors in a rehearsal situation. Six sub-problems were devised to determine, in terms of frequency of time, the extent to which the following conductor behaviors were used in rehearsals:

1. Verbal communication;
2. Statement reference to seven elements of choral performance, i.e., pitch, time, text/diction, phrasing/dynamics, tone color, style, and vocal production;
3. Demonstrations, verbal explanations, and verbal imagery;
4. Verbally expressed approval and disapproval feedback;
5. Conducting and/or monitoring of rehearsal trials;
6. Involvement with one vocal part, more than one vocal part but not all, all vocal parts, less than a musical phrase, and a musical phrase or more (46, p. 1).

Five choral conductors varying from high school conductors to university and professional choir conductors agreed to being videotaped in two rehearsals. Tapes were reviewed until all of the rehearsal was categorized as one of the six sub-problems. Thurman found that most of the subjects' rehearsal time was spent without verbalization. During the time of verbal communication, fifty to sixty percent was devoted to statements by the conductor about the choral performance. The remaining forty to fifty percent of verbal communication was spent locating starting and stopping places in the music scores, or had to do with discipline, organizational arrangements, and announcements. The Thurman study also indicated the establishment of conductor rehearsal
priorities. According to overall averages among conductors, phrasing, dynamics and time were the most emphasized of the elements observed, and tone color the least emphasized.

Non-verbal Behaviors.—A Choral Conductors Observation Scale (CCOS) was designed by Lewis (36) for use in beginning conducting classes. The system, which consisted of seventeen categories describing specific gestures used by conductors of music ensembles, was designed so that musical scores could be encoded with the categories at a selected rate of either one category per beat or one per measure. The seventeen categories were concerned with the following non-verbal conductor skills: time beating, cuing, phrasing, sustaining, releasing, accenting, tempo changing, and indicating dynamics. Two coding procedures for CCOS were utilized by Lewis. In the first method the trained observer watches the conductor as he conducts and enters at least one code per measure on a copy of the piece being conducted. The percentage of circled codes were computed, and then studied and discussed with the instructor. The second method used in the study had the conductor precoding the piece, thus indicating the gestures he or she hoped to use throughout the piece. The conductor, if using videotape or a trained observer, then compared the gestures coded on the score with those actually observed.

Forty-two students were equally divided into control and experimental groups. The latter group received instructor
comments with their videotape in addition to using the CCOS. A training manual was provided to help the group code their conducting. Even though results of the study indicated that conducting gestures could be coded, and that CCOS was a reliable and useful system, there was no evidence of significant improvement in conducting skills through the use of CCOS. Lewis recommended that further research needed to be done to determine the overall influence of the use of CCOS.

The purpose of a study by Immell (29) was to provide information which might systematize and objectify the nature of affective responses to music. Although this study was on music students rather than on conductors, it was included here because of its close relationship to the research on non-verbal skills in conductors. Immell confirmed the relationship of his study to conductors when he stated,

Knowing more about the nature of affective responses to music may provide music instructors with a greater understanding about the effect that music lessons and rehearsals have on their students (29, p. 6).

The author set up an experiment to study the rate, duration, and magnitude of certain face and body movements as reliable indicators of affective response to music. Also, he sought to determine which aspects of face and body movements best predicted affective responses in music.

Seventy junior high students were divided into fourteen groups and videotaped as they listened to and rated a variety of music examples. Music examples that rated highest with
the subjects were then observed for body and facial movement in an attempt to measure non-verbal overt affective behavior. Body and facial movement were divided into six categories: face movement, head movement, shoulder and arm movement, hand and finger movement, leg and foot movement and postural shift. Once the videotape session was completed, rate of movement was determined by counting tallies of each movement within an observation category. A count was made when there was a change in direction of movement or change from a static position. Tapes were reviewed until all six categories had been observed and tallied.

Although facial behavior is generally considered to be a useful indicator of response to non-music stimuli, Immell's study indicated that no measure of facial movement was present as a predictor of affective response. It should be mentioned, however, that Immell defined facial movement as a composite of eye, brow, and mouth movement, and that it was not recorded as a response unless all three movements occurred simultaneously to the listening event. All other categories, i.e., head movement, shoulder and arm movement, postural shift, etc., were recorded as mutually exclusive events. Other results of the Immell study indicated that non-verbal behaviors, especially body movement, i.e., leg and foot or hand and finger, might serve as useful indicators of response to music (29, p. 53).

Roshong (44) and Yarbrough (52) developed observational instruments that recorded non-verbal conductor behaviors as a
means of determining conductor success. The conductor observation portion of the present study has been patterned to a large extent on the work of both of these researchers.

Roshong developed an observational instrument designed to inventory the non-verbal communication of conductors and to see if relationships existed between the observed behaviors and the nature of the task being performed at the time the behavior occurred. The developed observational form recorded non-verbal conducting gestures, eye contact, body movement, vocal quality, and use of silence in rehearsal (44, p. 87).

This study was unique in that research showed concern with both the frequency and the quality of each particular behavior. A behavior was first measured for frequency of use in a rehearsal segment by the counting of tallies. Roshong then examined the quality of the behavior by placing it on a scale from encouraging to restrictive. An example of polarity of behavioral quality from encouraging to restrictive would be an eye flick in the direction of the individual entrance to the other extreme of a fixed gaze at a section that had erred. This form was used in analyzing three rehearsal segments (starting the ensemble, stopping the ensemble, sustaining the ensemble) of three Ohio college band directors. Trained observers viewed each videotape segment six times so as to concentrate on the recording of frequency and quality of each separate non-verbal behavior.
Results showed that some commonalities of non-verbal behaviors existed between the observed conductors during specific rehearsal events. There was facial approval and forward movement during starting, stopping, and sustaining events; facial disapproval; eye contact with group; and movement away during instruction. Even though this study showed that behaviors can be coded (counted) and evaluated (rated) by one observer using one instrument, it seems to this researcher that this is too much to ask of any one observer in one videotape viewing. To count the number of eye contact tallies and to determine the quality of this behavior requires objective data gathering at the same time as subjective judgments are made. This researcher feels that both coding events and rating judgments require the full attention of the observer and therefore ought to be done separately.

The purpose of Yarbrough's study was to investigate the effect of magnitude of conductor behavior on performance, attentiveness, and attitude of students in mixed choruses. Magnitude was defined by the experimenter as the attaining of high positive results on a Music Conductor Form (MCOF) designed for this study. The eight conductor behaviors examined on MCOF included activity, body movement, conducting gestures, eye contact, facial expression, speech speed, voice pitch, and voice volume (52, p. 44). Each behavior was encoded by trained observers using the MCOF. The following
behavioral descriptions were given with instructions for the observation form. Activity was concerned with whether the conductor was instructing, singing, teaching, or talking while students performed. Body movement was limited to three movements: approaching chorus, departure from chorus, or stationary. Conducting gestures were described as either strict (beat pattern) or expressive (departure from beat pattern for expressive reasons). Eye contact was either looking at the entire group, at an individual, at the score, or something other than the chorus or music for three continuous seconds. Facial Expression was described as either approval, disapproval, or neutral face. Speech speed referred to the flow of the voice. The three categories were steady flow, hesitant, or repetitive. Voice Pitch and volume were categorized accordingly into low, variable (modulation), high, and soft, normal, loud.

Two hundred and seven students from four mixed choruses were observed under three conditions: 1) with regular conductor, 2) with conductor displaying qualities of high magnitude, and 3) with conductor described as low in magnitude. One SATB composition, "Alleluia" by Randall Thompson, was selected as the number to be rehearsed. With the rehearsal plan identical for each session, each director was instructed to use the rehearsal time as he wished and to conclude the rehearsal with the students singing as much of the music as possible without accompaniment. Expert judges,
on hearing twenty audiotaped pre- and post-performances in random order, found little disparity between sets of ranking. Further results indicated that three of the four groups received their lowest ratings under the low magnitude conductor and two groups received their highest ratings under the regular director. After the treatment was administered, two trained observers recorded overt student off-task behavior by viewing videotapes. Data analysis (ANOVA) of these observations revealed that students were less off-task under the high magnitude condition than under the low magnitude or regular condition. No significant difference, however, resulted between the two experimental conductors and the regular conductor.

The importance of the Yarbrough study lies not so much in the actual results as in the observation procedures used. The *Music Conductor Observation Form* developed by Yarbrough was used in later studies, Yarbrough (53); Yarbrough, Wapmick, and Kelly (54); and Madsen and Yarbrough (37) as the basis for continued research in conductor behavior. Behavior-observation procedures of this present study are also patterned after the Yarbrough study.

*Verbal and non-verbal behavior.*—In her second study, Yarbrough (53) evaluated both non-verbal behaviors and verbal behaviors as they effect beginning conductors. The question at hand was to evaluate the effectiveness of videotape observation, self evaluation, and rehearsal behavior on
senior music education majors enrolled in basic conducting at Syracuse University. Two observation forms were used to evaluate the student conductor videotapes: The **Choral Rehearsal Observation Form (CROF)** (Madsen) to measure verbal approval and disapproval of teacher responses; the **MCOF** (Yarbrough), for non-verbal teacher behaviors. As with the **MCOF**, the **CROF** is a coding procedure where the observer records either approval (A), disapproval (D), or neutral (N) over a five-second time interval as regards the nature of conductor verbal responses.

Thirty-five students were randomly assigned to one of two groups. Students in the experimental group were videotaped while conducting in a rehearsal setting. This was followed by self-evaluation and evaluation through videotape feedback. The control group observed the videotaping sessions but were not taped themselves. Results of the study demonstrated a significant difference between the experimental and the control groups. The experimental group had more body movement, more expressive conducting, more group and individual eye contact, more facial approval, less facial disapproval, less verbal disapproval, and more verbal approval.

Building upon the results of the previous study, Yarbrough, Wapnick, and Kelly studied the effect of instructor feedback versus systematic self-evaluation on forty-seven beginning conducting students: performance,
attitude, and verbalization. Three measures were used: 1) judges' rating of student's conducting performance; 2) verbal content analysis of student's written critiques; and 3) an instructional rating survey assessing student's attitude toward instructor warmth, academic/intellectual content, and student work/input (54, p. 106). Results of this study revealed no significant difference between the feedback techniques with regard to measurement of eye contact, mannerisms, and composite techniques. Also, no significant difference was found in terms of student attitude toward instructor warmth, academic/intellectual content, and student work. Verbal content analysis, however, showed differences between the groups. The instructor feedback group made mention of the instructor, self mannerism, composite technique, and eye contact significantly more often than the observation group. The observation group mentioned body movement, rehearsal time and facial expression more often.

In the most recent research by Yarbrough and Madsen, the investigators designed a competency-based conducting course based exclusively on systematic observation of videotapes. Students demonstrated their conducting skills on a pre- and post-test measure. Treatment consisted of six conducting sessions (three practice sessions using a single piece of music, three using a second selection to examine transfer effect to determine the effect of systematic videotape
observations). Competencies to be rated came from the Conductor Evaluation Form developed by Madsen. These competencies were beat clarity, style of gestures, starts and stops, tempo, beat-note choice, entrance cuing, interpretation, dynamics, score preparation, rehearsal procedure, and leadership. Again CRQF (Madsen) and MCOF (Yarbrough) were used to measure the verbal and non-verbal student conductor behaviors.

Statistical analysis showed that conductors improved significantly from pretest to posttest when exposed to the videotape observation system. It was concluded that systematic observation of videotapes in the absence of traditional instruction may be an effective means of developing conducting competencies.

Other research in the observation of verbal and non-verbal conductor behaviors was done by Daellenbach (12,13) and Ervin (18). In an attempt to identify behaviors that are pertinent to music classes, Daellenbach created two observational instruments: one which focused on students, and the other on teachers. In developing the teacher-observational instrument, Daellenbach identified music teaching behaviors at several instructional levels, several levels of teaching experience, and in music teaching environments ranging from studio to large group instruction. Instrumental and vocal music classes were observed.

Daellenbach made extensive use of videotape recordings to develop his list of behaviors. Twenty teachers were taped
for a one-hour period. Randomly selected ten-minute segments of these tapes were then edited onto a master tape. After viewing this master tape a list of music teacher behaviors was compiled under the three categories of verbal behaviors, non-verbal behaviors, and conducting behaviors. Verbal behaviors considered were directions or instructions, positive or negative reinforcement, questioning, disciplining comments, and manneristic use of word phrases. Non-verbal categories included directed and non-directed motor behaviors, impromptu or patterned mannerisms, and concentrated listening. Conducting behaviors referred to what previous authors had called non-verbal conducting behaviors, i.e., one and two-hand beat patterns, playing or singing with students, foot beating and clapping.

After completion of his research of teacher behaviors, Daellenbach made a subsequent study of music student behaviors. Seventeen vocal and instrumental music students ranging from preschool to college-level were videotaped in varied classroom situations. As in the first study, Daellenbach randomly selected ten-minute segments to produce the master tape. A viewing of the master tape by qualified observers resulted in a classification index of observable performance behaviors in music students. Verbal behavior indexed considered whether the response made to the instructor or other students was a question, a statement, or an interjection. Classification of student non-verbal
behaviors included eye contact, arm and hand movement, facial expression, body position and observed listening behavior during rehearsal. Daellenbach concluded that the two studies provided a medium for studying music teacher-student interactions. He suggested that further research could analyze in detail the interaction in music classes by using both observational instruments simultaneously.

Whereas Daellenbach researched the behaviors of music teachers and students, Ervin's study dealt with the measurement of success in conducting. As with the studies by Yarbrough and Roshong discussed earlier, the purpose of this research was to develop and assess a systematic method of observation that would evaluate conductor effectiveness. Conductor effectiveness was defined as the behaviors of a conductor which result in the relatively short term goal of improvement in performance. Videotape recordings of ten-minute duration were made of thirty-seven junior high, high school, and college level instrumental and vocal conductors and were recorded on a seven-point scale. A list of thirty-five variables which might discriminate between good and bad conductors was then constructed. Most of the variables used came as the result of an earlier study by Ervin whereby he attempted to describe a musical rehearsal through a system of classification of verbal statements. Examples of these verbal classifications included technical: a statement pertaining to performance techniques; questions:
any question or comment directed at the student; and
non-musical: any statement not pertaining to the music. The
videotapes of the fourteen conductors ranking the highest and
the fourteen ranking the lowest were observed and coded to
indicate the frequency of each of the thirty-five variables.

Data analysis of the two groups revealed eleven
variables that discriminated most noticeably between the two
groups of conductors. They were, in Ervin's terms,

.... eye contact, expressive conducting gestures,
pitch theme unit, reinforcement theme unit, time
theme unit, volume theme unit, other musical theme
unit, discipline/punishment theme unit, "being on
task" theme unit, non-musical direction theme unit,
teaching function theme unit, (18, p. 58)

The term "theme unit" meant to describe the number of times a
conductor talked about a particular subject within a given
rehearsal.

As a final step in his research Ervin attempted to
validate this observation system with five music educators
who reviewed ten randomly selected tapes from the original
twenty-eight recorded conductors. Results indicated that in
eighty-two percent of the cases, the conductors were placed
in the same high and low group into which the original judges
had placed them.

Summary of Conductor Communication Skills

Conductor skills examined in this chapter included both
verbal and non-verbal behaviors. Non-verbal conductor
behaviors divided into two groups; 1) the physical technique
of conducting, e.g., cueing, cut-offs, preparatory beat, dynamic indication, fermata, beat patterns; and 2) personal behaviors and mannerisms of eye contact, posture, facial expression, body movement, and use of expressive voice. Of the personal non-verbal variables investigated, conductor eye contact and expressive voice emerged as the two behaviors that most consistently discriminated between effective and ineffective conductors. This information guided this writer in the selection of the overt variables that were to be used in the present study.
CHAPTER BIBLIOGRAPHY


CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the relationship between self concept, as perceived by a selected group of choral conductors, eye dependency on score, and their use of expressive voice. The four problems were: (1) to determine the degree of perceived self concept of a selected group of choral teachers through measures of (a) total self concept, (b) physical self, (c) moral-ethical self, (d) personal self, (e) family self, and (f) social self; (2) to assess eye dependency on score of the same teachers; (3) to assess the aspects of expressive voice through measures of (a) pitch levels of modulation, (b) speech flow, and (c) voice energy level; and (4) to examine the relationship between measures of self concept, eye dependency on score, and expressive voice. Selection and development of such instruments was accomplished through a pilot study.

The Pilot Study

The pilot study, conducted over a ten-week period in the fall of 1982, sought to

1. determine if the Tennessee Self Concept Scale (TSCS) was usable in measuring the self concept of choral conductors;
2. develop and test instruments for observing eye dependency on score and expressive voice;
3. train observers in the observation procedures and to test their observation proficiency in live rehearsal situations.

**Conductor Self Concept Measurement**

Ten instrumental conductors from the junior high (n=4), high school (n=3), and college (n=3) level agreed to participate in the pilot study. Instrumental rather than choral conductors were used for the purpose of saving available choral conductors for the main study. It was the belief of this author that sufficient similarities existed between instrumental and choral conductors so that the use of instrumental conductors in the pilot study would satisfy the problem of determining the usability of TSCS among conductors.

Each conductor was given a TSCS test booklet and scoring sheet. The self-administered test was completed and returned after one week's time by each of the ten conductors. Although the counseling form of TSCS scores six separate categories of self concept, only the total P score was used for purposes of the pilot study, because according to the TSCS Manual, the total P score

...is the most important single score on the Counseling Form. It reflects the overall level of self esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in
themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves (2, p. 13).

Table 1 shows the results of the ten conductors tested. In addition to the total P score the percentile ranking that each score represents as regards self concept in relationship to a standardized norm is also reported. The wide range of scores and their percentile ranking against the standardized norm, seemed to indicate that TSCS was able to discriminate sufficiently among conductors of music.

**TABLE I**

**TSCS SCORES OF TEN CONDUCTORS USED IN THE PILOT STUDY**

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Total P Score</th>
<th>Percentile Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>395</td>
<td>95</td>
</tr>
<tr>
<td>2</td>
<td>378</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>377</td>
<td>82</td>
</tr>
<tr>
<td>4</td>
<td>359</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>359</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>358</td>
<td>65</td>
</tr>
<tr>
<td>7</td>
<td>357</td>
<td>60</td>
</tr>
<tr>
<td>8</td>
<td>353</td>
<td>57</td>
</tr>
<tr>
<td>9</td>
<td>339</td>
<td>38</td>
</tr>
<tr>
<td>10</td>
<td>329</td>
<td>28</td>
</tr>
</tbody>
</table>
Description and Justification of TSCS Scores.—Although the total P score represents the single most important score on the Counseling Form, TSCS also yields scores on specific aspects of the total self concept; namely physical self, moral-ethical self, personal self, family self, and social self. These five sub-scales are described in the TSCS Manual (2, p. 3) in the following ways:

1. **Physical self.** The score which pertains to the physical attributes or functioning, sexuality, state of health, and appearance of the self;

2. **Moral-ethical self.** The score which pertains to the moral, ethical, and religious aspects of the self;

3. **Personal self.** The score which reflects the individual's sense of personal worth, his feeling of adequacy as a person and his evaluation of his personality apart from his body or his relationships to others;

4. **Family self.** The score which pertains to an individual's perception of self in reference to his closest and most immediate circle of associates;

5. **Social self.** The score which reflects the person's sense of adequacy and worth in his social interaction with other people in general.

Originally, the total P score was the only score considered relevant for the main study. However, upon evaluating the self concept scores in the pilot study, it was determined that five dimensions of the self which are
separately measured and scored provide a more specific view of each subject than just the total P score. It was therefore decided to correlate these five TSCS scores with the selected conductor communication skills in the main study. Five scores instead of one would seem to provide more precise and narrowly defined dimensions of self concept. The less precise total P score, which is the sum total of the other five scores, might not be sensitive to differences among types of self concept. For example, a person could earn an extremely high physical self score, while rating an extremely low social self score. The total P score would not reflect this discrepancy since these two scores are added with the others to provide total P. The investigator suspected that a person's social self score might be more closely related to conductor communication skills than the physical self score. By studying the factors independently, the interpretability of the data would be enhanced without abandoning the use of total P score which was valuable in providing an overall perception of the subject's self concept. Information regarding reliability and validity of TSCS was presented in Chapter II.

Observation Training Sessions Pertaining to the Development of Expressive Voice Rating Scale

Eight undergraduate music education majors were used as observers in the pilot study. None of the selected students had any previous experience in observation research; thus
observer training sessions were necessary for learning how to observe voice modulation, voice energy level, and speech speed.

The first of four observation training sessions included a brief explanation about the general nature of the study, followed by the students' introduction to the initial form for rating expressive voice (See Figure 1). Rating items and their graphic representation were described and explained. Each observer was instructed in the procedure of placing a check at the appropriate point on the continuum which represented their estimation of the conductors' effective use of that particular voice variable.
Prior to the training session, this researcher had developed a master audio tape of teachers and speakers whose voices were used as a frame of reference for determining the degree of expressiveness of any particular voice. After listening to each voice sample several times, this investigator had rated the voices as to whether they were highly expressive, moderately so, or low in expressiveness. Both expressive and nonexpressive examples of the selected voices were presented in the tape samples and each sample was designated a specific place on an unbroken continuum. At the conclusion of the first training session, the eight observers rated three tape-recorded teacher voice samples by utilizing the form as shown in Figure I.

Results of the ratings are presented in Table II. The numbers reported in Table II resulted from dividing the continuum into five one-inch parts after the observer ratings were made. This division was done after the observation in order to allow the observer a freedom of judgment not available when specific categories or divisions existed. Tallies falling within each one-inch space were then counted and recorded. The number 1 signified a high voice rating located on the upper one-fifth of the continuum. A rating of 4 signified a low rating falling on the fourth inch along the continuum.

In order to measure consistency of the ratings, inter-observer reliability was computed from these data.
TABLE II
RESULTS OF THREE VOICE SAMPLE RATINGS AFTER ONE TRAINING SESSION USING THE INITIAL EXPRESSIVE VOICE RATING SCALE

<table>
<thead>
<tr>
<th>Observer</th>
<th>Teacher Voice Sample I</th>
<th>Teacher Voice Sample II</th>
<th>Teacher Voice Sample III</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1 1 2</td>
<td>4 2 2</td>
<td>1 1 1</td>
</tr>
<tr>
<td>II</td>
<td>2 2 3</td>
<td>4 3 5</td>
<td>1 1 1</td>
</tr>
<tr>
<td>III</td>
<td>1 1 1</td>
<td>2 2 5</td>
<td>1 1 3</td>
</tr>
<tr>
<td>IV</td>
<td>2 2 4</td>
<td>2 2 4</td>
<td>2 2 2</td>
</tr>
<tr>
<td>V</td>
<td>1 2 1</td>
<td>4 2 5</td>
<td>1 2 1</td>
</tr>
<tr>
<td>VI</td>
<td>1 1 2</td>
<td>4 2 4</td>
<td>2 2 1</td>
</tr>
<tr>
<td>VII</td>
<td>1 1 5</td>
<td>3 2 5</td>
<td>3 2 1</td>
</tr>
<tr>
<td>VII</td>
<td>1 1 2</td>
<td>3 3 5</td>
<td>1 1 1</td>
</tr>
</tbody>
</table>
Reliability coefficients were determined using the Bennett formula (1) \( S = \frac{K}{K-1} (P - \frac{1}{K}) \), where \( P \) represents the proportion of agreement among observers and \( K \) represents the number of categories (See Table III).

### TABLE III

FIRST MEASURE OF OBSERVER CONSISTENCY
FOR RATING EXPRESSIVE VOICE

<table>
<thead>
<tr>
<th>Modulation</th>
<th>Voice Energy</th>
<th>Effective Speech Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consonant Emphasis</td>
<td></td>
</tr>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample One</td>
<td>.69</td>
<td>.54</td>
</tr>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Two</td>
<td>.38</td>
<td>.69</td>
</tr>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Three</td>
<td>.54</td>
<td>.38</td>
</tr>
</tbody>
</table>

INTER-OBSERVER coefficient average

|               | .54 | .54 | .49 |

The coefficients were well below the .70 figure set by Flanders (3, p. 34) as a standard necessary before an observation tool can be considered reliable. However, the results provided this writer with the following insight. The Bennett formula and most observer-reliability formulas are based only on the number and specificity of given categories. For purposes of computing an inter-observer reliability check, this author had divided the continuum into five
sections, each an inch apart. When the continuum was divided evenly into three rather than five sections, coefficient results were found to be much higher. Using three divisions instead of five, while sacrificing the degree of variability, produced better inter-observer reliability estimates (See Table IV). It was therefore determined by this author that the three equal divisions of the continuum would represent the scores for the variables of expressive voice.

Even though acceptable inter-observer reliability estimates resulted when the continuum was changed from five to three divisions, other weaknesses in the instrument were evident at the conclusion of this training session. Observers expressed confusion over Variable Three: Speech

<table>
<thead>
<tr>
<th></th>
<th>Modulation</th>
<th>Voice Energy</th>
<th>Effective Speech Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample One</td>
<td>1.00</td>
<td>1.00</td>
<td>.45</td>
</tr>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Two</td>
<td>.26</td>
<td>.63</td>
<td>.83</td>
</tr>
<tr>
<td>Teacher Voice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Three</td>
<td>.83</td>
<td>1.00</td>
<td>.83</td>
</tr>
</tbody>
</table>

Inter-observer Coefficient Average

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Voice</td>
<td>.70</td>
<td>.88</td>
<td>.70</td>
</tr>
</tbody>
</table>
Speed, normal rate, flowing, varying pace. Apparently, too much was expected of the observer in rating speech speed. Even though the voice qualities mentioned above were related to speech speed, determining an overall judgment of these aspects proved most difficult. Therefore, a revision of Variable Three was made so as to reflect only the flow of the speaking voice. Hesitations, repeated words, and stuttering would be qualities of a low-rated flow. The revised Expressive Voice Rating Scale is found in Figure 2.

Observer __________________________ Conductor __________________________

Date ____________________________________________________________________

Voice modulation
Variable I

| high | (check a point on the line) | low |

Voice energy level
Variable II

| high | (check a point on the line) | low |

Speech flow
Variable III

| high | (check a point on the line) | low |

Fig. 2—Revised version of Expressive Voice Rating Scale

A second observation training session followed using the same eight observers. Explanations were given about the revision of the speech rate variable and voice samples were
played in order to re-establish a frame of reference. Portions of the tapes heard in the first session were again played and discussed until agreement was unanimous as to the degree of effectiveness of each voice variable. At the conclusion of this session, two different five-minute teacher voice tapes were listened to and rated using the revised rating scale. Inter-observer reliability was again computed by dividing the continuum into three equal sections and using the Bennett formula. Reliability estimates are reported in Table V. Based upon the consistency measures, this researcher concluded that the revised rating scale could be applied consistently and was ready for use in a normal rehearsal observation.

TABLE V

MEASURE OF OBSERVER CONSISTENCY ON SECOND VERSION OF EXPRESSIVE VOICE RATING SCALE

<table>
<thead>
<tr>
<th></th>
<th>modulation</th>
<th>voice energy level</th>
<th>speech flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Voice Sample One</td>
<td>.83</td>
<td>1.00</td>
<td>.83</td>
</tr>
<tr>
<td>Teacher Voice Sample Two</td>
<td>.83</td>
<td>.83</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Description of Finalized Form for Rating Expressive Voice and Its Use in Observation.—A graphic rating scale, featuring a five-inch unbroken continuum with low to high ratings indicated from right to left along the continuum, was
used to measure voice modulation, voice energy level through consonant emphasis, and speech flow of the observed conductors. The observer indicated his or her rating by placing a check at the appropriate point on the line that ran from one extreme of the attribute in question to the other.

The conductor was rated three times during the rehearsal, at the one-third mark, at the two-thirds mark, and at the conclusion of the rehearsal. Once the rating sheets were completed and returned, this researcher divided the continuum into three equal sections and recorded the placement of each check mark within these divisions. Each of the three voice variables were then averaged to determine into which division they fell, thereby indicating their expressive voice score. A score of 3 indicated that a particular voice variable was rated high, a score of 2 indicated an average voice usage, and a score of 1 indicated a low voice variable.

**Observation Training Sessions Pertaining to the Development of the Eye Dependency on Score Coding System**

A third observation training session was held for purposes of training the student observers in the coding of eye dependency on score. First, the eight observers were introduced to the eye dependency on score coding system developed by this author (See Figure 3). Category descriptions were made, and the coding procedure of circling S (score) when eyes are focused on the score and 0 (other)
Conductor________________________Date________________________

Observer________________________

Directions: Code three four-minute random segments from the music rehearsal portion of the rehearsal hour. Circle S when eyes are in the score for the total three-second time unit. Circle 0 when the eyes are anywhere other than in the score for the three-second time unit. Allow three seconds for recording each coding, thereby alternating three second units.

Fig. 3—Eye dependency on score coding system
when they are not, was presented and discussed. The original coding instructions asked that five-second time units determine the predominant behavior of the conductor (eyes in score, eyes not in score). Videotape segments of a choral conductor were used to show examples of his eyes predominantly in the score and predominantly out of the score for five-second intervals.

Next, the observers were trained in the counting of five-second intervals, the original time intended for observing and recording the observations. This was accomplished by simulating a practice session where this investigator indicated by voice five-second intervals while the students observed a videotape. After fifteen minutes the observers continued for four additional minutes estimating the five-second interval without the aid of vocal cues. By counting seconds to themselves all eight observers were able to approximate the five-second interval closely and thereby arrive at the same number of total coding units after four minutes of observation.

Once this proficiency was achieved, practice sessions were begun in using the observation form. Four-minute videotape samples of conductors in rehearsal were used to test the coding system. At the end of each four-minute segment, the five-second coded units were counted and compared among the observers.
Replay and discussion followed each practice session. Observers expressed confusion about five-second time units that seemed evenly split between eyes in or out of the score. Since the intent of this observation system was to count events and not to make judgments as to which behavior dominated, a revision of the observation procedure was deemed necessary. The procedure was changed to record total eye dependency on score rather than the predominant behavior within the time unit. Total eye dependency on score was determined to exist when the conductors' eyes were fixed on the score for the entire time unit in question. Three-second time units replaced the five-second time units based on Flanders' suggestion that three seconds was a sufficient length of time for making observations (3, p. 36).

A fourth training session was held using the observation procedure revisions. Observers were retrained to count three-second time units using the procedure described earlier. Once unanimity in counting time units was achieved, two four-minute conductor rehearsal videotapes were coded. Feedback from the observers at the conclusion of the observation was that the coding of total eye dependency on score over three-second time units was an easier method for recording this variable. Using the Bennett formula for inter-observer reliability, a .96 correlation coefficient resulted from this coding session.
Description of Finalized Form for Coding Eye Dependency on Score and its Use in Observation.—The eye dependency on score coding system consisted of counting behaviors using a three-second time unit as the fixed time interval for observation. The observer circled S (score) in the vertical column when the conductor's eyes were focused on the music score for the total three-second observed interval of time. The observer circled O (other) when the conductor looked anywhere other than at the score during the observed three-second interval. Observers were trained in the counting of three-second time units prior to observations. Each observation consisted of three four-minute segments coded during the beginning, middle, and end of the rehearsal under observation. This was done for purposes of attaining an overall view of the conductor rather than looking at behavior unique to only one portion of the rehearsal. Only segments where the conductor was actually rehearsing the music with the choir were used for the samples. The form was designed to allow for a three-second observation to be followed by a three-second time interval for recording the event. Each four-minute segment included forty recorded units or one-hundred twenty total units for the observed rehearsal. Tallies from the twelve minutes of observation were then counted, taken times three seconds, and subtracted from the total twelve-minute time, in order to determine the minutes of time that the conductor's eyes were not fixed on
the music score. A score, for example, of 8.5 indicated that the conductor's eyes were not in the score for eight and one half minutes of that twelve-minute observation segment.

**Live Observations and Results of the Pilot Study**

For purposes of testing the usability of the forms for rating and observing expressive voice and eye dependency on score, six conductors from the ten participating conductors in the pilot study were observed. Each conductor was observed once during a three-week period by teams made up of the eight trained student observers.

The observation of expressive voice and eye dependency on score was recorded by two separate observers, one team member coded the eye dependency on score time units while the other rated his or her expressive voice qualities. The observers were instructed to arrive at the rehearsal ten minutes prior to its beginning and to introduce themselves to the conductor. They then seated themselves near the back of the rehearsal room and remained as unobtrusive as possible during the entire rehearsal. Their seating position was such that the conductor's voice could be clearly heard and his or her eyes easily seen. No talking or other distractions of any kind should have transpired between team members during the rehearsal period.

At the completion of the six observations, observers were asked to comment about problems encountered during their
rehearsal visit. Feedback from observer team members indicated no difficulties in the use of the two instruments in a live rehearsal situation. Although it was not an objective of the pilot study to draw conclusions from this limited observation data, there were indications that conductors with high self concept were more expressive in the use of their voice and spent less time with their eyes on the score. Also, it was observed that some conductors rating low in eye dependency on score chose to sing along with particular sections for over half of the rehearsal time. It was therefore felt that the behavior of singing along with the group or accompanying at the piano for over half of the rehearsal might be a behavior worthy of future investigation since increased eye dependency on score might be due to reasons other than low self concept.

The Main Study

Thirty high school choral directors from the Dallas-Fort Worth metropolitan area were asked in the spring of 1983 to participate in the study. The sample was limited to thirty because this was the number of conductors that could be observed within the requirements set forth for the observers in this study (See observation procedure). Also, in the observation studies reviewed, a sample ranging from twenty to forty was generally considered sufficient. Each conductor was contacted by phone or in person and asked to complete the TSCS self concept measurement. Permission was
sought at this time for student observers to visit their choir rehearsals during the semester. A self-addressed stamped envelope was included with the test booklet and answer sheet. Each conductor was asked to complete the test and to return it within two weeks' time. At the end of the two-week period personal visits and phone calls were made daily by this writer until all self-concept tests were returned. Once all of the TSCS answer sheets were received, this researcher graded and recorded the results of the conductors according to six scores on the TSCS.

Observation Procedure

Ten upper-level music education students enrolled in the music education program at Texas Wesleyan College served as observers in this study and observed twenty hours during the semester. Four one-hour training sessions were held to familiarize the observers with the observation forms and procedures to be used in the study. These training sessions followed the format described in detail in the pilot study, beginning with training in the use of the expressive voice rating scale, followed by training in the use of the eye dependency on score coding system. At the completion of the fourth training session, inter-observer reliability was established for the two observation procedures. Using the Bennett formula described earlier and following the same procedure used in the pilot study, a .80 reliability
coefficient was observed among the ten student observers on the use of both sections of the instrument.

Each of the thirty conductors participating in the study were observed three times over an eight-week period. As in the pilot study, the observers worked in pairs with one observer coding the eye dependency on score variable, and the other rating the expressive voice variables. It was also the responsibility of the observer who coded eye dependency on score to indicate by a check mark at the top of the observation form whether the conductor played or sang along with the choir for the majority of the rehearsal. All students were trained in the observation of both communication skills in order to assure conflict-free scheduling of all observer teams.

**Treatment of Data**

To seek answers to research problems one through three, as stated in Chapter I, means, standard deviations, and score ranges were calculated for all variables at the Data Processing Center at North Texas State University. For research problem four, canonical correlation procedures were used to determine the degree of relationship between conductors' self concepts and eye dependency on score and expressive voice.

**Description of Canonical Correlation.**—Canonical correlation is the multivariate extension of multiple regression analysis in which any number of dependent as well
as independent variables can be included in the analysis. Canonical correlation through least squares analysis forms two linear composites which maximally relate the two sets of variables. The analysis yields indexes of relationships similar to those in multiple regression: $R_c$, the correlation between these two composites, and $R_c^*$, an estimate of the variance shared by the two composites (4).

Through canonical correlation analysis more than one source of common variance can be identified and analyzed. This procedure systematically extracts the first and largest source of variance and determines the relationship between the two sets of variables based on this source of variance. Then the next largest source of variance left in the data after the first source is extracted and independent of the first source is analyzed. The second canonical correlation coefficient is an index of the relation between the two sets of variables due to this second source of variance (4, p. 320). The number of possible sources of variance is limited to the number of variables in the smallest set within the formula. Hypotheses about the statistical significance of the relationships can then be tested by calculating Wilks' Lambda, the values of which approximate the Chi-squared distribution. Chapter IV reports the results of these analyses.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

RESULTS

The purpose of this study was to investigate the relationship between selected measures of self concept as perceived by a group of choral conductors, their eye dependency on score and the measures of expressive voice. The problems were (1) to determine the degree of perceived self concept of a selected group of choral music teachers through measures of (a) total self, (b) physical self, (c) moral-ethical self, (d) personal self, (e) family self, and (f) social self; (2) to assess eye dependency on score of the same teachers; (3) to assess the aspect of expressive voice through measures of (a) pitch levels of modulation, (b) speech flow, and (c) voice energy level; and (4) to examine the relationship between the measures of self concept, eye dependency on score and expressive voice. In this chapter the results from the data collected is presented and discussed.

Conductor Self Concept Measurement

To determine the degree of self concept of a selected group of choral music teachers, The Tennessee Self Concept Scale (TSCS) was used. The TSCS yields scores on six dimensions of self concept including total self concept, physical self, moral-ethical self, personal self, family
self, and social self. Appendix A contains the subjects' raw data on these six dimensions.

Table VI contains means, standard deviations, and ranges of the total self concept measure and of the five self concept sub-scales. Standard deviations compared to the ranges reveals restricted score dispersion on all six tests. Conductors had least dispersion in family self (S.D. 4.8) and social self (S.D. 5.4) and had most dispersion in the dimension of physical self (S.D. 8.7).

**TABLE VI**

MEANS, STANDARD DEVIATIONS, AND RANGES OF SIX TSCS TESTS (N=30)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Self Concept</td>
<td>362.2</td>
<td>22.0</td>
<td>150-450</td>
</tr>
<tr>
<td>Physical Self</td>
<td>69.0</td>
<td>8.7</td>
<td>35-90</td>
</tr>
<tr>
<td>Moral-Ethical Self</td>
<td>76.2</td>
<td>6.4</td>
<td>30-90</td>
</tr>
<tr>
<td>Personal Self</td>
<td>68.9</td>
<td>6.9</td>
<td>25-90</td>
</tr>
<tr>
<td>Family Self</td>
<td>76.0</td>
<td>4.8</td>
<td>30-90</td>
</tr>
<tr>
<td>Social Self</td>
<td>72.1</td>
<td>5.4</td>
<td>30-90</td>
</tr>
</tbody>
</table>
To determine if the conductor sample was similar to the norm group (1, p. 5) a comparison was made between their TSCS scores and the standardized norm. Table VII contains the results of this comparison.

The results indicated that the total self concept (68%), moral-ethical self (74%), personal self (70%), family self (72%), and social self (70%) of the sample ranked well above the average in relationship to the standardized norm. Physical self (30%), on the other hand, revealed a very low mean score among the conductors when compared against the norm.

**TABLE VII**

<table>
<thead>
<tr>
<th>Self-concept Variable</th>
<th>Mean</th>
<th>Percentile Ranking of Mean Score Against a Standardized Norm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Self</td>
<td>69.0</td>
<td>30</td>
</tr>
<tr>
<td>Moral-Ethical Self</td>
<td>76.2</td>
<td>74</td>
</tr>
<tr>
<td>Personal Self</td>
<td>68.9</td>
<td>70</td>
</tr>
<tr>
<td>Family Self</td>
<td>76.0</td>
<td>72</td>
</tr>
<tr>
<td>Social Self</td>
<td>72.1</td>
<td>70</td>
</tr>
<tr>
<td>Total Self Concept</td>
<td>362.2</td>
<td>68</td>
</tr>
</tbody>
</table>

It would appear from the self-concept data shown in Table VII that the sample of conductors had more positive self images than the general population, except for physical self which included assessment of physical attributes or functioning, sexuality, state of health, and appearance.
This indicated that individuals in the sample had lower regard for their physical self than had been shown for members of the general population.

Assessment of Eye Dependency on Score Among Conductors

Problem two of this study was to assess eye dependency on score among the same conductors. Each conductor was observed three times over an eight-week period using the observation instrument and procedure described in Chapter III. Since the investigator considered eye dependency on score a negative conductor behavior and since the purpose of this study was to compare the use of certain communication skills to self concept, the eye dependency on score results were adjusted to show positive results. Therefore, eye dependency on score was calculated by the average time that the conductor spent with eyes not fixed on the music score.

High scores show the conductors with the least amount of eye dependency on score, with twelve representing the highest possible score. For example, a score of 9.4 (78%) means that the conductor spends 9.4 minutes or 78% of an average twelve minute rehearsal segment with his or her eyes not in the score (See Appendix B).

Table VIII contains the group mean, standard deviation, and range of the eye dependency scores. The mean score of 7.0 (58%) suggests that the thirty conductors averaged seven minutes out of each twelve-minute segment or 58% of the time
TABLE VIII

MEAN, STANDARD DEVIATION, AND RANGE OF EYE DEPENDENCY ON SCORE RESULTS FOR THIRTY CONDUCTORS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes Dependent on Score</td>
<td>7.0</td>
<td>1.61</td>
<td>0-12</td>
</tr>
</tbody>
</table>

with their eyes away from the music score. The standard deviation of 1.61 shows the scores to be dispersed over a narrow range thereby indicating that the group of conductors were similar in regard to their use of eye dependency on score.

Conductors Observed Playing the Piano or Singing Along for the Majority of the Rehearsal

Of the ten conductors found to be dependent on the score for half of the rehearsal time (score of 6.0 or lower), four were observed playing the piano or singing along with the choir for the majority of the rehearsal. Since this behavior may have contributed to their low eye dependency scores, an examination of all of the conductors who played or sang along for the majority of the rehearsal was made. Six of the thirty conductors participating in this study were observed playing or singing along for the majority of the time. Table IX shows data pertaining to this behavior among the six
conductors. Total self concept scores and eye dependency scores for each of the six are shown.

The fact that these six conductors rated high in self concept (mean 374) but low in eye contact with the choir (mean 5.9) would seem to indicate that their poor eye contact resulted from this added teacher responsibility and not from reasons associated with conductor self perception.

**TABLE IX**

SELF CONCEPT SCORES AND EYE DEPENDENCY SCORES OF SIX CONDUCTORS WHO PLAYED OR SANG ALONG DURING THE MAJORITY OF REHEARSAL

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Total Self Concept Score</th>
<th>Eye Dependency on Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>410</td>
<td>6.0</td>
</tr>
<tr>
<td>2</td>
<td>377</td>
<td>6.3</td>
</tr>
<tr>
<td>3</td>
<td>374</td>
<td>5.1</td>
</tr>
<tr>
<td>4</td>
<td>373</td>
<td>5.4</td>
</tr>
<tr>
<td>5</td>
<td>361</td>
<td>6.0</td>
</tr>
<tr>
<td>6</td>
<td>359</td>
<td>6.3</td>
</tr>
</tbody>
</table>

In order to further substantiate this assumption, this author asked the six conductors at the conclusion of the observation sessions, why they had played or sung along with the choir for the majority of the rehearsal time. Each of the six conductors gave either one or both of the following explanations as the reason for their behavior: 1) no one else was able to accompany in class, therefore, the conductor had to play as well as direct, and 2) certain sections were extremely weak and therefore needed to have their part played or sung constantly in order to keep them going.
A second assessment of eye dependency on score among conductors was made with the omission of the six conductors discussed above. Table X contains the group mean, standard deviation, and range of the remaining twenty-four conductors. The mean score of 7.3 (61%) compared to 7.0 (58%) of the original thirty conductors indicated a higher overall eye dependency score when those subject's scores were omitted.

TABLE X

MEAN, STANDARD DEVIATION AND RANGE OF EYE DEPENDENCY ON SCORE RESULTS FOR TWENTY-FOUR CONDUCTORS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes not in Score</td>
<td>7.3</td>
<td>1.63</td>
<td>0-12</td>
</tr>
</tbody>
</table>

It was determined that for purposes of further use of the eye dependency on score variable in this study, only these twenty-four conductors would be used.

Assessment of Expressive Voice Among Conductors

Problem three of this study was to assess the dimension of expressive voice through the variables of pitch levels of modulation, speech flow, and voice energy level. Each conductor had been observed three times over an eight-week period using the observation instrument and procedure described in Chapter III. Expressive voice was determined by dividing the continuum into three equal divisions after the
observations were completed and then averaging points where the check marks lay. After the three observations, each result was averaged to show which division (upper-3, middle-2, lower-1) represented each voice variable, thereby determining the degree of conductor expressive voice. Appendix C contains raw data pertaining to these three variables.

Table XI contains means, standard deviations, and ranges on the three expressive voice variables. The conductors were observed as a group to be above the mid-point (2) in the expressive use of the three voice variables.

**TABLE XI**

**MEANS, STANDARD DEVIATIONS, AND RANGES OF EXPRESSIVE VOICE VARIABLES OF THIRTY CONDUCTORS**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice Modulation</td>
<td>2.33</td>
<td>.70</td>
<td>1-3</td>
</tr>
<tr>
<td>Voice Energy Level</td>
<td>2.20</td>
<td>.75</td>
<td>1-3</td>
</tr>
<tr>
<td>Speech Flow</td>
<td>2.66</td>
<td>.63</td>
<td>1-3</td>
</tr>
</tbody>
</table>

The mean score for speech flow (2.66) shows the thirty conductors to rate highest on this aspect of expressive voice. The voice energy level mean (2.20) shows the conductors to be lowest in expressiveness with this voice variable. Standard deviations indicate that the score
dispersions are restricted as was the case in all the overt and covert variables under examination.

**Self Concept and Communication Skills**

Problem four of this study was to determine the relationship between the measures of self concept, eye dependency on score and the three expressive voice variables of voice modulation, voice energy level, and speech flow. Canonical correlation was used to determine the relationship between the five self concept scores (physical self, moral-ethical self, personal self, family self, social self) and the scores on the four selected communication skills. Means, standard deviations, variation coefficients, and range of value for each variable are shown in Table XII.

Variation coefficients reported in column four are an absolute measure of dispersion calculated by dividing the standard deviation by the mean. The higher the variation coefficient the greater the dispersion of scores. Variation coefficients on eye dependency on score (.23), voice modulation (.30), voice energy level (.33), and speech flow (.25) show these communication variables to be more widely dispersed than the five sub-scales of self concept.

Results of the canonical correlation between the two sets of variables are shown in Table XIII. Eigenvalues shown in column one of Table XIII are the squares of the canonical correlation and are an estimate of the variance shared by the two linear composites. Canonical Correlation indicates the
### TABLE XII
MEANS, STANDARD DEVIATIONS, VARIATION COEFFICIENTS, AND SMALLEST AND LARGEST VALUE ON NINE VARIABLES AMONG TWENTY-FOUR CONDUCTORS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Var. Coef.</th>
<th>Smallest Value</th>
<th>Largest Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dependency on Score</td>
<td>7.29</td>
<td>1.63</td>
<td>.23</td>
<td>4.50</td>
<td>10.20</td>
</tr>
<tr>
<td>Voice Modulation</td>
<td>2.33</td>
<td>.70</td>
<td>.30</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Voice Energy</td>
<td>2.20</td>
<td>.75</td>
<td>.33</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Speech Flow</td>
<td>2.66</td>
<td>.63</td>
<td>.25</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Physical Self</td>
<td>68.54</td>
<td>8.29</td>
<td>.12</td>
<td>54.00</td>
<td>85.00</td>
</tr>
<tr>
<td>Moral-Ethical Self</td>
<td>75.46</td>
<td>6.98</td>
<td>.09</td>
<td>60.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Personal Self</td>
<td>68.42</td>
<td>7.17</td>
<td>.10</td>
<td>54.00</td>
<td>81.00</td>
</tr>
<tr>
<td>Family Self</td>
<td>75.21</td>
<td>4.63</td>
<td>.06</td>
<td>67.00</td>
<td>86.00</td>
</tr>
<tr>
<td>Social Self</td>
<td>71.25</td>
<td>5.30</td>
<td>.07</td>
<td>60.00</td>
<td>84.00</td>
</tr>
</tbody>
</table>

correlation between the composite of these two sets of variables and can be interpreted much like Pearson's product-moment coefficient (r). The .51 represents the correlation coefficient of the largest source of variance. The coefficient of .37 shows the degree of relationship due to the largest independent source of variance left in the data after the first source is extracted, and .16 indicates the relationship among the two sets of variables due to the
third largest source of variance independent of source one and two. Bartlett's Test of Remaining Eigenvalues utilizes Wilks' Lamda to test hypothesis. Wilks' Lamda is distributed as Chi-squared and was the statistical test of significance used in this analysis.

**TABLE XIII**

EIGENVALUES, CANONICAL CORRELATIONS, AND BARTLETT'S TEST FOR REMAINING EIGENVALUES ON THE TWO SETS OF VARIABLES

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Canonical Correlation</th>
<th>Number of Eigen Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>.26</td>
<td>.51</td>
<td>1</td>
</tr>
<tr>
<td>.14</td>
<td>.37</td>
<td>2</td>
</tr>
<tr>
<td>.03</td>
<td>.16</td>
<td>3</td>
</tr>
</tbody>
</table>

Bartlett's Test For Remaining Eigenvalues

<table>
<thead>
<tr>
<th>Chi-Square</th>
<th>D.F.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.87</td>
<td>20</td>
<td>0.98</td>
</tr>
<tr>
<td>3.39</td>
<td>12</td>
<td>0.99</td>
</tr>
<tr>
<td>0.67</td>
<td>6</td>
<td>0.99</td>
</tr>
<tr>
<td>0.18</td>
<td>2</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Table XIII shows that the relationship between the five selected self-concept scores and four communication skills was not significant. The correlation matrix for the nine variables is found in Appendix D.
CHAPTER BIBLIOGRAPHY

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS FOR FURTHER STUDY

Summary

The purpose of this study was to investigate the relationship between self concept, as perceived by a selected group of choral conductors, their eye dependency on score, and use of expressive voice. The problems were (1) to determine the degree of perceived self concept of a selected group of choral teachers through measures of (a) total self concept, (b) physical self, (c) moral-ethical self, (d) personal self, (e) family self, and (f) social self; (2) to assess eye dependency on score of the same teachers; (3) to assess the aspects of expressive voice through measures of (a) pitch levels of modulation, (b) speech flow, and (c) voice energy level; and (4) to examine the relationship between measures of self concept, eye dependency of score, and expressive voice.

The Tennessee Self Concept Scale (TSCS) by Fitts (5) was selected as the instrument for measuring the covert variable of conductor self concept. The three reasons for selecting TSCS over other possible self-concept measures were that (1) TSCS is a standardized test with published norms, (2) that over 500 research studies have successfully used this scale,
and (3) because the pilot study suggested that the TSCS could discriminate sufficiently among a sample of ten conductors. The pilot study was also used to develop and test measurement instruments appropriate for investigating overt conducting skills.

The instrument for observing eye dependency on score consisted of a unit coding system where behaviors were counted within a three-second time unit. The instrument for rating voice modulation, voice energy level, and speech flow, consisted of a graphic rating scale with a five-inch unbroken continuum for each variable. Inter-observer reliability estimates on both forms ranged from a .83 to .96. These estimates were considered satisfactory for the purpose of the study by the investigator.

In the main study, thirty high school choral conductors from the Dallas-Fort Worth metropolitan area were used. Each conductor completed and returned the TSCS test and was observed during an eight-week period three times by five pairs of trained observers. At the completion of the observation sessions, data of conductor self concept, eye dependency on score, voice modulation, voice energy level, and speech flow were assembled. A .80 inter-observer reliability coefficient had been observed using both instruments.

Data showed that the conductors viewed themselves as having high self concept. According to the scores on total self, moral-ethical, personal self, family self, and social
self these conductors were well above the average in self concept when compared to the norm group for the TSCS test. On physical self, however, a lower than normal mean score resulted. The narrow range distribution of scores on all five sub-tests led to the conclusion that the conductors sampled were similar in self concept.

Data relating to problem two showed the conductors to be similar regarding their behavior of looking at the music score during rehearsal segments. The conductors were observed spending fifty-eight percent of the time with their eyes away from the score.

Six of the thirty conductors had their eyes in the music score primarily because they were playing the piano or singing along for the majority of the rehearsal. These conductors spent forty-eight percent of the time with eyes away from the score, ten percentage points below the mean for the total group. Because this behavior may have resulted from an added responsibility in conducting and not from reasons likely associated with a weak self concept, it was determined that these six conductors would not be used for further study.

Data relating to problem three showed the conductors to be similar with regard to their use of expressive voice. As in problems one and two, the limited distribution of scores on conductor voice modulation, voice energy level, and speech flow, showed these conductors to vary only slightly in
the degree by which they used their speaking voices expressively. Mean scores of 2.33 (voice modulation), 2.20 (voice energy level), and 2.66 (speech flow), showed on a scale of 1-3 that the conductors were well above the mid-point (2) on the expressive use of all three voice variables.

Data pertaining to problem four were concerned with determining the relationship between five measures of self concept (physical self, moral-ethical self, personal self, family self, social self) and four selected communication skills of eye dependency on score, voice modulation, voice energy level, and speech flow. Canonical correlation was used to determine this relationship. Results revealed no significant relationship between these two sets of variables.

Conclusions

Given the results of the study, it was concluded that no significant relationship existed between the perceived self concept of a selected group of choral music teachers, and their use of eye dependency on score, voice modulation, voice energy, and speech flow. Therefore, the findings did not provide supportive evidence for the theory suggesting that specific overt conducting behaviors are linked to self concept as a humanistic trait, measured by the TSCS. Based upon this evidence, one could conclude that such overt skills might best be viewed as component parts of specific
conducting techniques rather than as the outcome of a person's self concept.

Discussion

Extant research on self concept in education suggests that a positive relationship exists between teacher self concept and success in the classroom (1, 3, 6, 11, 16, 17). In the same manner, research on conducting skills has shown that overt variables such as eye contact and expressive voice represents qualities associated with successful conductors (2, 4, 12, 19). Any assumption that these two sets of variables are also directly linked to each other cannot be supported by the evidence of this research. The results revealed no significant relationship between the selected covert and overt behavioral traits, and therefore this researcher was not able to validate any theory which suggests that either both traits are related to each other, or one trait is the cause for the other. Based upon these findings, this researcher cannot support those music educators and writers of textbooks in choral conducting, who place greater value on psychological traits in a person than on specific techniques and trainable skills. Any endorsement of the "humanistic educational belief" suggesting that covert behavioral traits, such as self concept, affect overt ones, must remain speculative as long as significant positive relationships between the two sets of traits cannot be established.
Humanistic educators (9, 10, 13, 18) and authors concerned with the psychology of conducting (6, 8, 14, 15) have indicated that there is a relationship between the two sets of variables. The question arises why no such relationship was found in this study. The sample of choral conductors proved to be more alike in their overall behavior and conducting skills than had been the case in many other observational studies which included relatively small samples.

A possible explanation for this might be due to the overt variables used. For example, score results regarding the variables of voice modulation, voice energy level, and speech flow showed that high scores were found among both high and low self-concept conductors. This could mean that some conductors compensate for their low self concept through the use of highly expressive voice in rehearsals. These high scores among low self-concept conductors would obviously negate the positive relationship existing among high self-concept conductors and expressive voice, thereby eliminating any chance for a significant relationship to emerge. Further examination of the relationship of this overt behavior to self concept would seem warranted.

Before educators subscribe to a humanistically-oriented theory that suggests that the way choral conductors view themselves determines their use of communicative skills in a
rehearsal situation, research must identify those behavioral traits common to both self-concept variables and specific conducting skills. Such research would have to make use of a wider variety of behavioral traits than was utilized in this study.

The design of this investigation was largely based upon the results of studies in the field in music education which had emphasized the importance of eye contact and expressiveness of voice in the process of choral conducting. The results of this study suggest there may be additional, if not more important, overt communicative skills showing higher common variance with self concept than eye dependency on score and expressiveness of voice. If credibility is to be given to the humanistically-oriented theory of covert behavioral traits being the source of overtly exhibited skills and traits, larger common variances between both sets of variables must be identified. Without such supporting evidence, the teaching of specific conductor communication skills by means of strategies directed at the improvement of self concept of a student, can be justified in music education only on the grounds of highly speculative theory.

Recommendations for Further Study

This study provided information regarding the relationship between self concept and selected communication skills among choral conductors. Based upon the review of the
research and the findings of this study, the following four recommendations are made.

First, this study should be replicated as is or with a re-evaluation or re-definition of the variables used to represent communication skills among conductors. For example, the definition of eye contact for this study was limited to the time when the conductor's eyes were in the music score. This behavior could be defined to represent more specifically where the conductor was looking (singers, accompanist, out the window, floor), or to show the quality of the eye contact (fixed gaze, glance). Also, voice volume could be considered as an overt conductor behavior worthy of consideration as a variable of expressive voice.

Second, results showed that measures of high expressive voice were found among both high and low self-concept conductors. Further investigation of the relationship of these variables to one another might provide an insight into the nature of conductors.

Third, the observational instruments created for this study could be used as developed or modified to examine other conductor behaviors of interest to music educators. With recent advances in systematic methods of observation and multivariant statistical procedures, it seems that many areas concerning conducting-rehearsing could be profitably explored. The coding-unit system developed for the eye dependency on score variable and the graphic rating scale
described in the measurement of expressive voice, could be
used as research tools worthy of consideration in future
observation studies.

Fourth, it is recommended that music educators further
study the relationship between other overt conductor
behavioral traits and covert ones. Overt behaviors such as
gestures, posture, clarity of beat, and instruction giving
could be compared to such covert behaviors as sensitivity,
personality, perceptivity, and empathy. The determination of
a relationship between such sets of variables could provide
music educators with valuable information on which to base
strategies for the development of teaching-training programs
in choral conducting.
CHAPTER BIBLIOGRAPHY


## APPENDIX A

**TSCS SCORES ON SIX SELF-CONCEPT VARIABLES FOR THIRTY CONDUCTORS**

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*Conductors are ranked in the order of their total self-concept scores.*
# APPENDIX B

## EYE DEPENDENCY ON SCORE AND PERCENTILE RANKINGS OF THIRTY CONDUCTORS

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*The score reports the amount of time when the eyes are not in the score during an average twelve minute segment.*
## APPENDIX C

### EXPRESSION VOICE SCORES OF THIRTY CONDUCTORS

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### APPENDIX D

**CORRELATION MATRIX FOR**

**NINE VARIABLES**

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