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PREFACE

The Missouri Journal of Research in Music Education, published by the Missouri Music Educators Association, is devoted to the needs and interests of teachers of music in Missouri and the nation. This issue, Volume IV, Number 5, is the twentieth.

The members of the editorial committee are grateful to those readers who have written suggestions concerning the content of past issues and request that criticisms and suggestions again be sent to the editor concerning the content of this issue. We strive for a reasonable balance among music theory, history, philosophy, aesthetics, and pedagogy.

We express our deep gratitude to the Missouri Music Educators Association for their financial support to make it possible to continue to publish the Missouri Journal of Research in Music Education.

The Editorial Board

A SURVEY OF THE EVOLUTION AND DEVELOPMENT OF THE HORN STYLE*

Edward J. Bostley

The University of North Carolina at Chapel Hill

Since the middle of the seventeenth century, when the ancestor of the modern horn first emerged in France as part of the hunt, significant developments in performance technique and horn style have occurred with regularity in the unique evolution of this instrument. Count Spork introduced the hunting-horn into Bohemia in 1680. It gained acceptance as a concert instrument by the first decade of the eighteenth century while remaining a *cor-de-chasse* in France well into the new century.

With the development of the hand-horn, circa 1750, the instrument gained in technical and expressive potential. The 1780's witnessed the rise and proliferation of the great soloists of the instrument with the concertos of Mozart as the most enduring solo literature for the horn. Although the horn was a regular member of the orchestra throughout the eighteenth century, it was in the music of Beethoven, during the first decade of the nineteenth century, that its significance and expressive power as an orchestral instrument began to emerge.

By the second decade of the nineteenth century valves were added to the natural horn. Ironically, both performers and composers ignored this important invention and continued to treat the instrument as a natural horn throughout the greater part of the nineteenth century, even

* Based on Edward J. Bostley's doctoral dissertation at the University of Missouri-Kansas City.

though in the 1850's Wagner and other composers were beginning to force the adoption of the three-valve horn. Toward the end of the century the traditional performance technique of the long established hand-horn had been abandoned, but not necessarily the musical style of the natural instrument. During the era of 1880-1910, the music of Strauss, Mahler, and their contemporaries forced a change not only in performance technique but also on the function and style of the horn in the orchestra.

Throughout the twentieth century the music for horn greatly increased in difficulty both from a technical standpoint of performance and as a function within the orchestral ensemble. Atonality placed new demands on the performer in the second quarter of the century. Since the 1950's unusual extra-musical techniques have been added to the horn repertoire. In spite of the many changes that have occurred during this long development, the original influence of the hunt and the hunting-horn music has remained in evidence albeit of a somewhat ambiguous nature in much of the contemporary music.

The Hunting-Horn Era and the Rise of the Orchestral Horn

Since the emergence of the horn in the mid-seventeenth century as an instrument of the hunt, and throughout its unique history, the evolution of a musical style and the development of a performance technique were directly subject to the limitations of the instrument and to the limitations of the performer. A long coil of tubing with fixed length, the early cor-de-chasse was capable of producing only specific notes found in the overtone series in which it was pitched. Thus an instrument of the required length to produce the fundamental pitch of C would provide the

performer with the series of pitches shown in Figure 1 (Note 1).



Figure 1. Pitches available to the cor-de-chasse.

The music for the early instrument was primarily comprised of signals and calls signifying different aspects of the progress of the hunt. Although each signal was necessarily unique, the hunting-horn style maintained a distinctly uniform nature typified by the predominance of 6/8 meter and triple rhythm as well as the arpeggiated melodic contour and the uniquely distinctive harmonic progression of "horn-fifths." Limited to the few available pitches of the overtone series, these horn-fifths resulted when two horns simultaneously produced the melodic progressions of \underline{c}'' , \underline{d}'' , and \underline{e}'' in the upper horn part, and \underline{e}' , \underline{g}' , and \underline{c}' in the lower horn part. Other limitations of the style of the early horn music were the performance difficulties encountered by blowing on an instrument while actually engaged in the rigors of riding the hunt. In addition, extant instruments dating from the late seventeenth century indicate a certain crudeness of craftsmanship of both mouthpiece and instrument. It is understandable that the performance range was limited to the more comfortable area of \underline{c}' and \underline{g}' , and the music remained simple.

Yet in its simplicity, the music was unique and evocative, and as the popularity of

the hunt increased, the various estates took pride in the quality and elaborateness of the local hunting forays. The horn music of the hunt was as important as any other aspect of the hunt, and as such became a subject of comparative scrutiny from one livery to another. By the end of the seventeenth century the nature of horn playing, while still mainly relegated to the hunt, began to acquire a certain degree of refinement. In 1680 the aristocrat Count Spork imported a pair of hunting-horns to his estate in Bohemia, and had two members of his livery trained to play the instruments. The degree of eventual refinement was such that various courts of the aristocracy modeled their own hunting pageantry after Count Spork's elaborate hunt, and "his Jagerchor, through its legendary perfection, stimulated the development of the German hunting-song epitomized in the 'Hunting Chorus' of Weber's *Der Freischutz*" (Fitzpatrick, 1970, p. 12).

From these primitive beginnings evolved the style of horn playing that has had such a lasting influence on horn music and performance for nearly three centuries. It was only natural that such a strong development of the hunting-horn style should pervade music of the concert hall. Early use of the horns in concert music was of an evocative nature evidenced by the inclusion of hunting motives in operas. Such an instance may be found as early as 1639 in the opera Le Nozze di Teti e di peleo of Cavalli.

One of the earliest uses of horns in the eighteenth century opera orchestra is found in Octavia of Reinhard Keiser of 1705, and clearly illustrates the stylized hunting motives utilized in the opera, including the use of horn-fifths. Many of Keiser's horn passages foreshadowed Handel's treatment of the horns while Keiser's manner of combining hunting motives

with florid figures is similar to the later baroque clarino style typical of Bach's writing for horns.

The emerging orchestral horn style of the early eighteenth century was as much dependent on the development and quality of horn performance as on any other aspect of horn tradition. Horn performance was, in turn, greatly encouraged and enhanced through the improvement of the instrument itself. The first Viennese horn-makers, Johannes and Michael Leichnamschneider, transformed the blatant cor-de-chasse of the field to the dark, warm toned Austrian Waldhorn which became the first orchestral horn. It was this instrument that was first fitted with removable crooks establishing the keys of E-flat and F as the standard length for the horn.

The demand by the musicians of this area for quality instruments reflects the desire for better instruments so better performance could result. No longer a crude instrument of the hunt the orchestral instrument of the Leichnamschneiders still retained the characteristic shape of the French cor-de-chasse, but it had acquired a darker and softer tone quality that had quickly become the hallmark of the concert horn in contrast to the brilliant tone of the out-of-doors, military instrument of the hunt. In addition to the refinement in tone quality, the use of crooks to alter the length of the instrument provided the performer more precise intonation and presumably greater accuracy of tone placement as well. These refinements in the instrument allowed the horn to become a suitable instrument for indoor use and capable of a more successful blend with the other instruments of the ensemble. Thus a style of performance technique was retained and at once refined.

Once the horn became an accepted instrument for inclusion in musical ensembles, composers began to exploit further the potential of the instrument. Even as the hunting-horn character was retained, expansion of the range to include the diatonic possibilities of the higher register was incorporated into the horn style. Bach's Brandenburg Concerto No. 1 illustrates the amalgamation of the early hunting-horn nature with the development of the florid clarino figures which became the recognized trumpet/horn style of playing during the baroque era. The first illustration in Figure 2 shows the relationship of the opening measures of this work with the hunting-horn repertoire. The work actually begins with a "greeting-call" which Bach quickly transforms into the florid clarino style. Composers of this era did not



Figure 2. Johann Sebastian Bach, Brandenburg Concerto No. 1, First Movement.

hesitate to extend the range to the top of the horn's register through florid passages and octave leaps often requiring the horn player to ascend well beyond the sixteenth partial. The

accessibility of partials available for diatonic performance in the extreme high tessitura of the horn naturally encouraged composers to utilize this register more frequently. The large body of music extant from this era not only indicates the nature and proliferation of brass music written in the extreme tessitura as the prevailing brass baroque style, but is a tribute to the high degree of virtuosity generally prevalent during the greater part of the eighteenth century. The clarino style tends to be viewed as an indigenous nature of the baroque horn, but it must be remembered that what may be considered natural and idiomatic for the instrument should not be the basis for a comparable assumption of what is natural for the performer. The music written for the baroque clarino style of horn playing was extremely demanding on the performer, and in point of fact, the high tessitura was employed with specific performers in mind (Fitzpatrick, 1970, p. 66).

Although the hornist was required to ascend to the top of his range in the Brandenburg Concerto No. 1, it is worth considering that extended playing in the extreme area of the third octave (g'' to c''') comprised a frequency of 26% of all horn appearances in the first and third movements, and 12% in the Trio II of the Minuet (Bostley, 1980, pp. 148-157). With the horn parts descending only twice below c' in the entire work, the majority of the horn playing was confined to the middle range of approximately c' to f''. The emerging horn style, that was more and more influenced by the refined and darker tone quality of the improved horns of the Leichnambschneiders, favored the tone of the notes that fell into the middle range. This darker, mellower tone, which was unique to the horn, was the hallmark of the instrument by the end of the eighteenth century, becoming the most

influential aspect of horn style, while performance practice superseded considerations of range and technique.

Such a dark and mellow tone had a tendency to blend easily with the other instruments of the ensemble, and it is understandable how the middle register, which most successfully supported this ideal tone, would be favored by both composers and performers. Ironically, in the rich polyphonic texture of the baroque, a tone that blended too well could cause a loss of clarity within a thickly textured composition. In addition, instrumental identity tends to be absorbed in the texture as well. Selection of registers necessitated more consideration than merely virtuosic concerns. In an unencumbered composition with transparent texture the dark, sonorous tone of the horn in the middle register would be discernible, but as the texture thickened, the high register would provide a better opportunity for the penetration of the horn timbre. Thus the variety of tone color, resulting from the wide range of the instrument, expanded the style of the horn to make it a most versatile instrument during the second quarter of the eighteenth century.

The Emergence of the Romantic Horn

In the second half of the eighteenth century the development of the "romantic" horn tone and style moved away from that of the "baroque-style," and with the discovery of hand-stopping at mid-century, the course of the horn style and performance technique was greatly altered. Although the process of inserting the right hand into the bell was intended primarily to increase the technical potential of the instrument, the softer, darker tone quality that resulted became immediately prized. This concept of tone

remains intact in horn performance technique today, although the use of hand-stopping tends to be limited to muting effects.

Anton Joseph Hampl has been credited with the development of the hand-horn technique that revolutionized the technique and subsequent style of horn playing prevalent in the latter part of the eighteenth century. The technique requires the insertion of the right hand into the bell of the instrument in such a manner as to conveniently alter the open pitches (natural pitches of the overtone series) of the horn to permit a chromatic scale to be played. This revolutionary discovery of hand-stopping also brought about, at one stroke, many significant corollary results. Besides the important potential of diatonic performance throughout the entire range of the instrument, the tone quality was immediately altered and enhanced because the placement of the hand in the bell became standard practice. This new hand position required the lowering of the instrument to the knee, and the resulting new posture helped to absorb some of the brilliant high overtone partials while allowing more of the dark lower partials to project. With the diatonic potential realized in the middle register, the extreme high tessitura was no longer necessary, thus removing the need for excessive mouthpiece pressure. This permitted a change in embouchure (more upper lip on the mouthpiece) which also contributed to a more desirable tone quality. With this embouchure change, performers also adopted the thin rimmed, deep funnel mouthpiece. As a consequence, middle and low register horn playing became more prized. This turn of events resulted in two styles of horn-playing; the retention of the high-horn clarino specialist (cor-alt) of the baroque era, and the low hand-horn specialist (cor-basso) of the emerging classical era. Ironically it was the cor-basso specialist,

having gradually absorbed both styles of playing specialities in becoming a "cor-mixed" specialist, who eventually became the widely acclaimed virtuoso soloist by the 1780's.

The acceptance of the hand-horn style marked the beginning of the demise of clarino playing. Certain aspects of the clarino style were retained because of the inherent nature of the natural horn as well as the needs of the evolving orchestral style. Many horn passages in the symphonies of Stamitz demonstrate the retention of the extreme high tessitura, but the florid style has given way to the more austere scalar manner of horn playing that developed during the Mannheim era. Horn players were still required to ascend into the fourth octave, and wide interval leaps into the extreme range characterized both the baroque and early classical orchestral horn writing. The second horn, although not required to ascend into the extreme high register on any regular basis, had to negotiate wide intervals in excess of the octave. These wide skips, requiring immediate change from one register to another, became a trademark of second horn writing and an exhibition of virtuosity in the horn concertos during the latter part of the eighteenth century.

It was during the second half of the eighteenth century that the great horn-players gained prominence for their art through the ability to perform accurately throughout the entire range of the instrument, especially in the middle and lower registers. Throughout the remainder of the century and into the first decade of the nineteenth century, horn-playing and horn-players realized greater attainments and recognition for their performance than had been possible prior to this period. Although orchestral horn passages provided only occasional opportunities for the virtuoso.

potentials of these great horn performers, it was the solo literature, the many concertos composed and performed during this era, that established the fame and credibility of the horn as an important artistic instrument.

Unlike the generally demanding and virtuoso level of orchestral horn writing of the baroque, the orchestral passages of the classical composers tended to be bland and not nearly as challenging. Rhythmic accentuation, sustained harmonic accompaniment, and melodic reinforcement characterized the role of the horn in the orchestral works of Haydn and Mozart.

By contrast, the horn concertos of this same era provided the performers the opportunity to display the virtuosity for which they had become widely acclaimed. Many of the techniques of horn writing during the baroque era had an obvious influence on the horn concertos of the late eighteenth century. The florid style, lacking in the orchestral horn parts, was retained in the concerto, frequently occurring in the middle as well as high register.

The popularization and elevation of the horn to an accepted artistic level was not based exclusively on the technical prowess displayed by performer on the fast, florid sections of the horn concertos. Indeed, one of the most important aspects of the horn's popularity, its tone quality, was best displayed in the slow, lyrical movements. The ability of a performer to deliver a slow, smooth, expressive passage on the horn with convincing mixing and blending of the open and closed notes of the middle range was held in as high esteem as any other aspect of performance. Such testimonials as ". . . it is the Parisian critic's comment on Leutgeb's ability to sing an adagio 'as

perfectly as the most mellow, interesting, and accurate voice'," (Fitzpatrick, 1970, p. 164), and the following concerning a concert by Giovanni Punto, perhaps the finest practitioner of the art of horn-playing to emerge during this era, ". . . Even the most respected connoisseurs were forced to admit . . . His delivery on this normally difficult instrument was pure song . . ." (Fitzpatrick, 1970, p. 184) supports the importance subscribed to the lyrical nature of the horn. Thus, by the end of the eighteenth century, the ability of the many horn virtuosos of the era, and the extant music composed for the instrument, points to a very complete range of musicianship, all the more remarkable in considering that the instrument still retained the same physical limitations as its predecessor of one hundred years.

Although the right-hand technique seemed to be reserved for the soloist rather than the orchestral horn-player, stopped passages did occur in the orchestral literature of Haydn and Mozart, but "The majority of Mozart's orchestral horn parts . . . are clearly intended for the run-of-the-mill orchestral horn-players of the day; and considering the degree to which hand-stopping had by this stage been developed by the soloists, were remarkably conservative" (Fitzpatrick, 1970, p. 184). The orchestral horn style, therefore, by the end of the eighteenth century, assumed a less dramatic role than in the baroque orchestra, but this was necessitated not just because of the limitations of the instrument, which seemed to be overcome by the virtuosic abilities of the performers, but the subjugation of the horn to the requirements of the classical style of orchestral music.

The horn style found in the orchestral music of the early nineteenth century though, gradually became more influenced by the highly

developed hand-horn style of the previous century, but with certain modifications. It was not virtuoso music (indeed the era of the famous horn virtuosos gradually faded by the second quarter of the new century, yet the basic elements of artistically blending open tones with the muffled stopped notes was increasingly part of the orchestral horn-playing technique. The famous Scherzo of Beethoven's Eroica Symphony, with the hunting-horn trio, requires the minimum of hand-stopping, a technique which, in this instance, is not of virtuosic demand. The last movement, on the other hand, requires unison horns to deliver a forceful, heroic statement (Figure 3) that involves many chromatic and diatonic progressions necessitating a precise hand-stopping



Figure 3. Beethoven, Symphony No. 3. "Eroica."
Fourth Movement, measures 380-396.

technique for effective and accurate results. There are other examples of the need for hand-stopping in important horn passages throughout the orchestral works of Beethoven, especially the famous fourth horn passages in the Ninth Symphony (the third movement in particular).

Likewise the high tessitura (g'' to c''') was not called upon with regularity. In fact,

Beethoven requires the horns to perform in the high register (g' and above) for only 1% of their appearances throughout the nine symphonies, although 52% of these high occurrences are of a solo or prominent nature. Thus, by the first quarter of the nineteenth century, the orchestral horn-player was accustomed to a horn style that emphasized the unique sonorities of the horn and the most resonant registers of the instrument.

With this horn style development it seems only natural that the instrument gained more prominence as a solo instrument in the orchestra. This is noticeable in comparing the use of the horns in the later symphonies of Mozart with the use of horns in Beethoven's symphonies. Both tended to utilize the horns with about the same frequency (the G minor Symphony of Mozart requires the horns to perform 51% of the time while 47% is required in the Eroica Symphony), but the significant difference is in the prominence of the horn passages appearing in both works. Mozart saw fit to give the horns only 3% of solo or prominent exposure with the majority of playing as merely "filler-parts" and accompanying. Beethoven, on the other hand, favored the horns with 23% appearance in a solo or prominent manner.

Just as the horn style seemed settled by the first quarter of the new century, another development was added to the horn's technique-- a development destined to be even more influential than the hand-stopping technique of the previous century but slower to be accepted by the performers and composers of the new century. During the second decade of the nineteenth century the valve system was developed and added to the natural horn. At first glance, at least in the perspective of today's musicians with an exclusive tradition of playing on the standard

three-valve instrument, this invention would have been the solution to completely perfecting the very limited instrument that had been used for so long. The hand-stopping device provided the performers the ability to extract from their instruments lyrical, diatonic melodies, but with obvious limitations. Certainly the ability to immediately absorb the chromatic advantages enjoyed by the other instruments would have been as welcomed as the advantages discovered with hand-stopping. In addition, the valves provided the advantage over hand-stopping of a more uniform tone production as opposed to the change from open to muffled tones necessitated on the natural horn. Yet, performers and composers alike remained adamant in their reluctance to accept the valve instrument or tamper with the horn style so carefully developed throughout the previous century. In fact, the prevailing "romantic-heroic" style of the natural horn was carefully maintained in the orchestral horn parts of the romantic era composers even as the valves were grudgingly adopted by the performers by the latter part of the nineteenth century.

To the contemporary musician this may seem iconoclastic in a strict sense of tradition, but it must be remembered that hand-stopping provided more than just the ability to perform diatonically throughout the entire range of the instrument. It was the enhancement of tone with a dark, veiled romantic quality that resulted from the hand in the bell and which had come to characterize the horn idiom that performers and composers were determined to preserve. Furthermore, the subtle change of color effected by moving from a muffled tone to an open tone provided a sense of expression not possible with the valve instrument even though the hand was retained in the bell.

Thus, the addition of valves to the horn was not treated as a means of creating a chromatic instrument, but rather as a convenient means to eliminate the necessity of changing crooks to correspond to the key of the music. At first, two valves were added to the instrument. The second valve placed the F horn in E, the first valve provided tubing sufficient to play the natural horn in E-flat, and the combination of the two valves provided a natural horn in D, the four favored and standard keys for the horn. Once a valve was used to establish the proper length of tubing for the appropriate key, the horn was played as a hand-horn, and apparently no consideration was given to the potential of changing valves to provide chromatic, or even diatonic progressions which would eliminate the closed, or muffled tones. This was, in fact, not necessary because the composers continually treated the horn as a natural horn and utilized the open pitches of the overtone series more often than the closed pitches. When resorting to the closed pitches, they generally used the more practical pitches to minimize extreme tone contrast.

Because of the concern for the major advantage of the natural horn, i.e., its tone quality, (the strong tradition that was brought to its peak during the first two decades of the nineteenth century), the performers and composers were reluctant to abandon such a tradition. Brahms, who had played the natural horn in his youth, continued to treat the valve-horn as a natural horn as late as 1880, although it appears that in his later works he did use the valve-horn even though he maintained the earlier traditional style. This trend appears to be true in most of the composers of the late nineteenth century.

The Modern Horn

It was during the era of 1880-1910 that the valve-horn, hitherto treated as a hand-horn, emerged as the modern chromatic instrument still in use today. In view of the famous intricate and demanding passages for horn found in the music of Strauss and Mahler, it may appear that the transformation in the nature and function of the instrument was somewhat abrupt. Yet it was a gradual change that evolved from the mid-century. Robert Schumann's two solo works for the horn of the 1850's, the Adagio and Allegro, and the Concert Piece for Four Horns, both required the use of the valve-horn. Even as composers continued to emulate the hand-horn style, their orchestral music began to require the use of valve-instruments. The famous "Seigfried Horn Call" performed off-stage, from the Ring of the Nibelung of Richard Wagner, which is intended to sound like a natural horn in the distance,

... is a passage that demands the valves for its rapid and smooth delivery. And as a matter of fact no player in his senses would dream of playing it on a valve-less instrument. In short it is a happy instance of a valve-horn passage preserving almost intact all the characteristic features of the old hand-horn music.
(Forsyth, 1935, p. 128)

In the introductory notes to the score of Tristan and Isolde of 1859, Richard Wagner recognized the controversy surrounding the adoption of the valve-horn by orchestral performers, but he strongly encouraged the use of the new horn with the admonition "that capable artists can, by specially careful management" (Blanford, 1922, p. 694) overcome the disadvantages of tone

inherent on the valve-horn. He continued to instruct horn-players to study the horn passages of the opera carefully to insure faithful execution of the stopped notes as indicated in the score. Wagner accurately predicted the inevitable refinements that would soon become a part of the horn-players technique. Even though Strauss admitted that the tone of the valve-horn was inferior to the tone quality of the natural horn, the advantages of the valve-horn were recognized. Mechanical improvements were encouraged, even demanded. Richard Strauss, commenting on the advanced state of the art of orchestration by the turn of the twentieth century, wrote in 1904:

The practical instrumentalist, through his skill, stimulates the composer to new ideas. Great ideas, on the other hand, which at first do not seem feasible, gradually lift the ambitious instrumentalist to their level. They have the greatest influence on progress in the construction of instruments, on improvements in their technique, and on the enrichment of the expressive possibilities. (Berlioz, 1948, p. 1)

Certainly the horn music of the late nineteenth century (at times reminiscent of an earlier tradition) was impractical if not altogether impossible to perform on anything but a valve-horn. The composers at the forefront of contemporary music during this era, especially Strauss and Mahler, did use the horn as a chromatic instrument. Because of the continually expanding size of the orchestra as well as the changing nature of orchestral music, the new and increased demands resulted in adoption of the modern valve-horn. The unusual demands Mahler placed on the instrument were a result of his combining the virtuoso aspects of both the

baroque and classic styles of playing within his symphonic framework. Mahler provides many instances of high florid passages for the entire horn section that rival the most intricate clarino passages to appear in a baroque orchestral work, although Mahler does not extend the range beyond c''. Likewise, Mahler provides many examples of long lyrical solos that typify the lyric adagios of the classical horn concertos held in such high esteem in the eighteenth century. That he was aware of the difficulty of his horn parts is revealed in his own words:

The individual parts [Fifth Symphony] are so difficult to play that they all really need soloists. Some pretty bold passages and figures escaped me here, just because I do know the orchestra and its instruments so well. (Blaukupf, 1973, p. 183)

He even felt the need to "take his trusted first-horn player with him to assure the transcendently difficult passages he had allotted that instrument [Sixth Symphony] an adequate performance" (Engel, 1970, p. 114).

The horn playing in the first decade of the twentieth century was not the culmination of the art and technique of the instrument, but the emergence of the modern horn. In the first decade Schoenberg added new demands to horn playing, not only in technically difficult passages, but also by their inclusion within the spectrum of his experimentation with atonality. Although his Chamber Symphony No. 1 of 1906 is basically tonal, the first passage for the horn is a quartal melodic ascent to the high b-flat''. Horn-players had been quite used to delivering triadic and scalar flourishes into the high range, a practice well engrained in the horn-

players' psyche through two hundred years of tradition. With the gradual demise of the familiar traditional harmonic concepts of tonality, performance security was greatly affected. Twelve-tone and other serial music provided performers with new technical problems that could only be overcome by developing a familiarity and comprehension of the new abstract musical vocabulary.

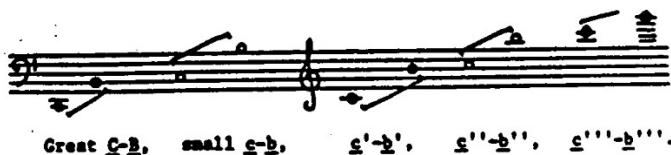
More recently horn-players have been faced with new technical demands. "Vocalizing" into the horn is not new; horn-players of the eighteenth century performed so-called "double-stops" or "horn-chords" (Weber's Concertino in E for horn requires production of chords on the horn) by simultaneously buzzing a tone in the normal manner and humming another pitch in the overtone series. Contemporary composers, though, require a variety of vocalizing techniques that approximate conversations and other vocal expressions in the instrument. Buzzing non-determined pitches on the mouthpiece alone, or placing the mouthpiece into other tubing of the horn, the use of half-depressed valves, and finger tapping on the horn bell or mute, are just a few other examples of new horn techniques in recent avant-garde music.

To what extent any of these new devices will become enduring aspects of the continually evolving horn tradition must be left to speculation, but any innovations that tamper with tradition have always been open to challenge and criticism. The use of horn-chords in the eighteenth century was considered "worthy only of charlatans" (Morley-Pegge, 1960, p. 147). Even the addition of valves was resisted for the greater part of the nineteenth century. Innovations aside, the most enduring aspect of the horn tradition, the uniquely inherent, expressive tone quality best revealed in the lyrical song-like melodies,

promises to remain a dominant influence on performers, composers, and audiences well into the future.

Reference notes

1. The following system of identifying registers and individual notes which fall within the register, will be utilized throughout the article and will identify the pitches as they appear on the staff regardless of the pitch of the instrument sounding the note.



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THE EFFECT OF APPROVAL, DISAPPROVAL, AND
TEACHER ERROR ON CLASSROOM
ATTENTIVENESS: HIGH SCHOOL
BAND VERSUS HIGH SCHOOL CHORUS*

Denise E. Moyer
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Attending behavior has been proven as a prerequisite to all learning by Krathwohl, Bloom, and Masia (1964, pp. 98-99); Engelmann, and Thomas (1975, p. 33); and others. If the student is not attending to instruction, how can he learn and participate in class? The instructor is responsible for getting and keeping the attention of the students, and demanding that no other behavior occur. How is this achieved?

Kuhn (1972, p. 8) and Murray (1972, pp. 2-8) and other music educators stress the value of positive reinforcement and its effect on classroom attentiveness. However, results from studies give conflicting evidence.

Madsen, Wolfe, and Madsen (1969, pp. 22-34) claim in their study that there was a significant improvement ($p < .01$) in intonation of scales sung by students receiving positive reinforcement. They also report a significant improvement ($p < .01$) in intonation of scales sung by students receiving no positive reinforcement.

Greer, Randall, and Timberlake (1971, pp. 10-18); Jorgenson (1971, pp. 134-145); and others have found that music itself may be used

* Based on Denise E. Moyer's master's thesis at The University of Missouri-Kansas City.

as positive reinforcement for appropriate behavior.

Forsythe (1975, pp. 49-55) found the attending behavior of students in elementary music classrooms greater than the attending behavior of the same students in their regular elementary classes. Forsythe speculated that the subject matter may have been more reinforcing.

Moffat (1969, pp. 34-44) found a difference in responses to two contrasting styles in music, and speculated that some types of music may be more reinforcing than others. If a director of a high school band or chorus is not giving reinforcement, and students are attending anyway, it would tend to support Moffat's conjecture that it is the music itself that is reinforcing. Are there differences in attentiveness relating to the performance medium and its literature? It may be that the music in band or the music in chorus may act as a reinforcer.

The Problem

Is the degree of attentiveness of members of a high school band greater than the attentiveness of members of a high school chorus, regardless of the amount of positive reinforcement, negative reinforcement, and approval or disapproval error provided by the ensemble director?

The Purpose

The purpose of this investigation is to compare the attentiveness of high school band students in three Kansas City Metropolitan area

schools with the attentiveness of high school choral students in the same schools on three observable occasions.

The Definitions

1. On-Task Behavior or Attentiveness (Active) is defined in this study as the amount of time the student is supposed to be singing or playing and looking at either the music or the conductor and is doing so.

2. On-Task Behavior or Attentiveness (Passive) is defined in this study as the amount of time the student is not supposed to be singing or playing, but is quiet and looking at either the music, the conductor, or the section members who are singing or playing.

3. Off-Task Behavior is defined in this study as the amount of time the student is supposed to be singing or playing and looking at either the music or the conductor and is not doing so. Off-Task Behavior may also be defined as the amount of time the student is not supposed to be singing or playing, but should be quiet and looking at either the music, the conductor, or the section members who are singing or playing, and is not doing so.

Method

A descriptive design was used for this study. The sample consisted of members of three high school choruses (one band and one chorus from each school) in three class 4A high schools in the Kansas City Metropolitan area in Missouri.

Three trained observers participated in this experiment. The usual format was not altered in any way by the observers and the approval/disapproval ratios given by the directors were not predetermined or manipulated. The directors did not know the specific behavior being measured until the end of the observational period.

The observation form used in this study was one similar to those used by Murray, Kuhn, and Forsythe (1972, pp. 51-52) modified for use with band and chorus. The observational form was designed so it could be used by all the observers, as well as for summarizing the data after the observation. The decision to use a fifteen-second observe/five-second record interval was based on results obtained during the observer training period. Using that interval each line of the observation represented ten minutes, forty seconds when completed. Two forms were used for each class period being observed, so a total of twenty minutes, eighty seconds was observed. The observers did not begin until approximately ten minutes had passed in each class, to give the students some time to become accustomed to the observer's presence. A prerecorded cassette tape transmitted through earphones provided a verbal cue for the observers. A voice on the tape said "observe," then there was a fifteen-second pause, then the voice said "record," then a five-second pause, then "observe," etc. During the five-second interval, observers recorded the behaviors that had occurred during the previous fifteen-second observation interval.

During the experiment two trained observers recorded overt student off-task behavior. The observers sat behind and to the right of the director. During the first observational interval, on each line of the observation form, "Observe 1," the observers scanned a particular

section of the chorus or band. During the first record interval, the observers recorded the number of students in the section off-task, "Record 2." The same procedure was employed across the other sections so that each of four sections; soprano, alto, tenor and bass, in chorus; and high woodwind, low woodwind, brass, and percussion, in band, was observed for one fifteen-second interval. Each line was one minute, twenty seconds of observation and record. After waiting five minutes, using a second identical form, the observation was repeated. A total of twenty minutes, eighty seconds of time was observed and recorded in each observational setting.

In recording teacher responses during the experiment, one observer sat at the back of the rehearsal room. During each record interval, the teacher responses that occurred during the previous observation interval were recorded. The teacher response recording was carried out at the same time as the observation of student behavior, and the teacher observer heard the same recording instructions on the headphones as the other two observers.

Results

Scores from observer records were tallied on summary sheets before data were analyzed. Data were analyzed by ANOVA (Wright, 1976, pp. 383-383), Pearson product-moment correlation (Spence, Underwood, Duncan & Cotton, 1968, p. 121), t-test (Guilford & Fruchter), and Multiple Regression (Snedecor & Cochran, 1967, pp. 381-418).

A one-way analysis of variance indicated no significant difference (.05 level) in the amount of positive reinforcement provided by the

ensemble director of high school band and of high school chorus, $F = 2.00 (1,45)$, $p < .05$. The amount in each case was quite low.

An analysis of variance with interaction for off-task by band and chorus indicated a significant difference (.05 level) in the percent of off-task behavior for high school band members and high school choral members, $F = 13.60 (1,95)$, $p < .05$. There was greater off-task in chorus.

A one-way analysis of variance indicated a significant difference (.05 level) in the amount of negative reinforcement provided by the high school band directors and high school choral directors, $F = 18.89 (1,45)$, $p < .05$. More disapproval was provided by the high school choral directors.

A one-way analysis of variance with interaction for disapproval and approval error by group indicated a significant interaction in the number of disapproval/approval errors for high school band directors and high school choral directors, $F = 5.71 (1,93)$, $p < .05$. Main effects were not significant. More approval error was provided by high school choral directors, while more disapproval error was provided by high school band directors.

A multiple regression analysis indicated no significant difference (.05 level) between the amount of positive and negative reinforcement and attentiveness of the students. There was no significant relationship between observed disapproval, approval and number of off-task incidents in the sample. Regression effect of disapproval was practically nil.

Conclusions

Subject to the circumstances and limitations of this study, the following conclusions were drawn. The amount of positive reinforcement provided by the ensemble director did not differ significantly between high school band and high school chorus. The amount of approval provided in both ensembles was moderately low.

In this study there was a significant difference ($p < .05$) in evidence of off-task behavior. Choral students were observed more often off-task than band students. It appears then, that approval was not related to attentiveness.

This study indicates no significant interaction between the amount of positive and negative reinforcement and attentiveness of the students. This finding would tend to support the speculation of Forsythe (1975, pp. 49-55), that the music itself may be more reinforcing. If there is no significant relationship between the amount of positive and negative reinforcement provided by the ensemble director, and students are attending anyway, it would appear that the ensemble medium may be more reinforcing.

From the data generated in this investigation, it was concluded that if more disapproval than approval is provided by the ensemble director, the students may be observed off-task more often as a means of getting teacher attention. When there is a greater number of students off-task, the ensemble director may tend to give more disapproval rather than providing approval for the students that are on-task or attending. However, there was no significant relationship found in this study between approval, disapproval, and their effect on

attentiveness. This again tends to support the conjecture of Forsythe (1975, pp. 49-55), that the music itself may be more reinforcing regardless of approval or disapproval provided by the teacher.

Results from this study indicate that the degree of attentiveness of members of a high school band is greater than the attentiveness of members of a high school chorus, regardless of the amount of positive reinforcement, negative reinforcement, and approval or disapproval error provided by the ensemble director.

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REHEARSAL OBSERVATION FORM:

STUDENT ACTIVITY: STUDENT ON/OFF TASK, TEACHER RESPONSE

INTERVALS

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**EXPLANATION OF REHEARSAL
OBSERVATION FORM**

Student Activity	
Teacher Responses	# of Students off-task

N	P	1	2	3	4
A	D	I			
Ⓐ	Ⓓ	P			

STUDENT ACTIVITY

N = Nonperformance

P = Performance

	<u>BAND</u>		<u>CHORUS</u>
1 =	High Woodwind Section	=	Soprano Section
2 =	Low Woodwind Section	=	Alto Section
3 =	Brass Section	=	Tenor Section
4 =	Percussion Section	=	Bass Section

TEACHER RESPONSES

A = Approval

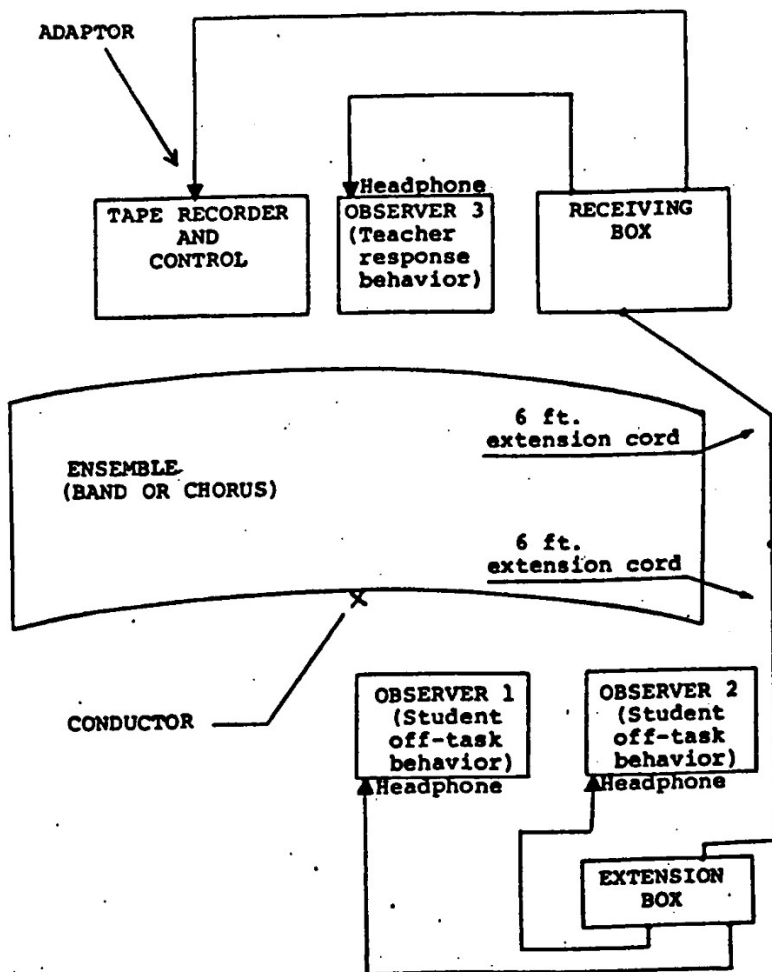
Ⓐ = Approval Error

D = Disapproval

Ⓓ = Disapproval Error

I = Instruction

P = Performing



A COMPARISON OF FREQUENCY DISCERNMENT ABILITIES

Olin G. Parker
University of Georgia

A musical stimulus consisting of two frequency components can be analyzed. The listener can hear two tones with pitches corresponding to the individual stimulus frequencies if the difference in the frequencies is not tuned small (Smootenburg, 1970). Roederer (1975) says this is due to the ability of the cochlea to extricate the frequency components from a complex vibration pattern. A single vibration pattern at the oval window gives rise to two resonance regions of the basilar membrane. If the frequency difference between the two component tones is large enough, the corresponding resonance regions then can be heard as two separate tones. Each tone oscillates with a frequency corresponding to the component tone. If the frequency difference is smaller than a certain amount (jnd or the difference limen), the resonance region overlaps and only one tone of intermediate pitch with modulated or "beating" loudness is heard. Pratt (1928) proposed that in the middle of a tonal range the difference in frequencies which will give rise to a perception of two different pitches in one-half of the total number of trials is twenty cents.

In this connection it may be said that the pitch sub-test of the well-known Seashore battery includes intervals as small as six cents. Leipp (1977) reported that 50 percent of the students in the Conservatoire de Paris were able to discriminate intervals of four cents and Rakowski (1977) observed some students at the Academy of Music in Warsaw who could

discriminate intervals with two cents differential. Meyer (1978) reported similar results but cautioned that each musician's discrimination range varied according to timbres. In the foregoing, discernment of frequency differences (of the fundamentals) was better than in studies such as the present one due to the fact that musical sounds present a timbre identification element not present when the stimuli are audio generated.

Averaged over a number of trials and encompassing the frequency range utilized in orchestral music, however, the smallest difference limen (jnd) generally is reputed to be fifty cents. According to several authors (Thurlow & Bernstein, 1957, and Plomp, 1964), the auditory separation of two simultaneous frequency tones in most musical frequency ranges may be accomplished only when the interval between the simultaneous sounding frequencies is not smaller than a semitone. Lundin (1967) reports that the average person has a difference limen (jnd) of plus or minus three cycles when the reference frequency is 435 Hz. There are many reports which emphasize that individuals differ in their ability to discriminate differences in frequencies--that these limits vary considerably from individual to individual, dependent on the occasion and the frequency range (Roderer, 1975, and Radocy & Boyle, 1979).

Because trombonists must pay constant attention to pitch and deal with very small degrees of variance in pitch, it would seem that their acuity for frequency discernment within the range of a trombone will be more discriminative than the acuity of pianists, who are not required to pay constant attention to pitch and who work only with the pitch variation that occurs in the equal-tempered scale. Trombonists, however, are accustomed to a smaller range of

frequencies than pianists. It would seem that pianists will have greater frequency discernment ability than trombonists at frequencies above and below the range of the trombone.

Hypotheses

H_0 --There is no significant difference in the reports of pianists and trombonists as to whether or not they perceived two frequencies.

H_1 --There will be a difference in the reports of pianists and trombonists as to whether or not they perceived two frequencies.

Method

Subjects. The sixty subjects were university students--trombonists and pianists. The criterion for the thirty trombonists was that they had registered as students in applied trombone at the University of Georgia. The criteria for the thirty pianists were that each subject had registered as a student in applied piano and that each pianist did not play any other instrument in an instrumental performing organization.

Apparatus and Utilization. Two sine wave audio generators (an RCA WA-504 A and a Hewlett Packard 3300A) were used to provide the frequency signals. A Stroboconn 645 was used to set and control the frequencies of each generator. (The signal from each generator to the Stroboconn was fed in directly instead of using its microphone.) To combine the frequencies into a single channel, each signal was fed into a Flickinger Custom Mixer at a ± 3 dB. To regulate and control the intensity, the output to the tape deck was controlled to be no more than

a ± 3 dB. An additional aid in intensity control was the LED VU meter. An Ampex 351 tape deck (full track) was used to record the two frequencies and for the playing of the taped stimuli to each subject. Tape splicing equipment was used to control the duration of each tonal stimulus and each time spacing between stimuli. TDK-Audua tape was used.

To mask out unwanted noises from outside the test administration room, the taped stimuli were played using Ultralinear speakers in the four corners of the room in addition to Koss KO/747 earphones. Amplification was provided by a Harmon Kardon Citation 17 PreAmp, GAS Son of Arappilla Amplifier for the speakers, and a Rotel RA-120 amplifier for the earphones.

Procedure. Sine waves were employed for the purposes of this experiment examining the frequency discernment acuity of a group of trombonists and a group of pianists. One sine wave generator was set on a selected fixed frequency while the other generator sounded a comparison frequency which varied upward from the fixed frequency in increments of 10 cents.

Seven frequencies (chosen so as not to represent a first position in any octave for the trombonists) were selected to be the fixed frequencies in each set of stimuli. They were: 36.708(D₁), 92.499(G₂), 130.81(C₃), 220.0(A₃), 311.13(E₄), 987.77(B₅), and 2349.3(D₇). A total of 70 dyads of tones were produced (10 dyads at each frequency). Each stimulus was a combination of the chosen fixed frequency and a higher frequency designated randomly in the dyads, ranging from the fixed frequency to a frequency 100 cents higher, in increments of 10 cents. (See Appendix B.)

Stimuli duration was controlled by hand splicing each tonal stimulus on exactly 15 inches of tape (one second at a tape speed of 15 inches per second); each space between stimuli was spliced to 30 inches (2 seconds at 15 i.p.s.); and each space between sets of stimuli was spliced to be 60 inches (4 seconds at the tape speed used). Again, frequencies were controlled by referring to the Stroboconn at the presentation of each tonal stimulus-- first setting the fixed tone, then setting the tone to be varied.

The stimuli were presented to the 60 subjects (one subject at a time) through earphones while simultaneously another amplifier fed the stimuli to the four corner speakers. After hearing the verbal instructions of the test administrator and reading the explanations and instructions on the answer sheet, each subject had two practice exercises. He was asked to write "1" or "2" in the appropriate blank after hearing each of the practice exercises, indicating whether he heard the stimuli as one pitch or two pitches. The correct answer was given and discussed after each of the practice exercises. If it appeared that the subject was not clear concerning the discernment to be made, the practice exercises were repeated and again discussed. When the test administrator was satisfied that the subject understood the procedure, the tape presenting the stimuli was put into operation and was not interrupted until all 70 stimuli had been experienced. (See Appendix A--an unused answer sheet.)

The reader will note, by referring to Appendix B, that the variances used in constructing the dyads were listed in a random fashion so that the subjects were unable to assume a predictiveness about the "next" stimulus. Also, it should be noted that the stimuli

forming the basis for this investigation were pairs of tones sounded simultaneously rather than successively.

Results

The raw data were processed with two procedures to obtain and to check χ^2 (Chi-Square) values. First, the formula $\chi^2 = \frac{(O - E)^2}{E}$ was employed, computing on the basis of the experiment being a one-sample test. χ^2 was found to be .89. The tabled value of 3.84 > .89 ($P > .05$) indicated failure to reject H_0 .

Second, the formula

$$\chi^2 = \frac{N \quad AD - BC - \frac{N^2}{2}}{(A + B) (C + D) (A + C) (B + D)}$$

was employed, computing on the basis of the experiment being based on two independent samples. χ^2 was found to be .59. The tabled value of 3.84 > .59 ($P > .05$) indicated failure to reject H_0 .

Summary and Conclusions

The difference limen (jnd) of a group of trombonists and a group of pianists was not found to be significantly different. The group responses were very similar when measures of central tendencies (mean, median, mode, range) and standard deviations were compared. When the formulas of computing for Chi-Square were applied, the value of χ^2 indicated that no significant differences existed in these sixty subjects when they were grouped as pianists and trombonists.

Trombonists have been strongly conditioned by learning and psycho-acoustic methods during the acquisition of their kinesthetic skills, i.e., constantly adjusting pitches by movement of the slide whereas pianists have none of this. It would seem that there would be significant differences in their frequency discernment abilities. The one major factor not controlled in this experiment was the assessment of or the matching of the subjects' musical abilities or musical sensitivities. Was it that the pianists, through listening as an adjunct to their acquirement of psychomotor skills, learn pitch acuties indirectly?

Recommendations for future research should include a similar type study with the stimuli being complex tones produced by actual orchestral instruments. Heterogeneous and homogenous mixtures of timbres would be an added dimension. It is generally assumed that the complexity of tones does not interfere with the discernment of pitches because the fundamental is the listener's point of focus, and, in fact, the upper partials may play a helpful role in the discernment of frequency differences. This assumption needs to be examined. Also, might significantly divergent results be found if groupings were made according to sex, age, intelligence, or scores/classifications obtained from the subjects taking a standardized music test(s)?

It was proposed at the beginning of the foregoing experiment that, because trombonists have to pay constant attention to adjustment for pitch and that pianists do not, trombonists would have a more accurate acuity for frequency discernment. Is it possible that pianists, being involved in performing simultaneous sounding tones (whereas trombonists perform tones

sequentially), have an "advantage" because of this experience?

Finally, in the process of the development of frequency acuity discernment abilities, what role does maturation play? Regardless of the instrument on which one performs, are the attained frequency discernment abilities automatic by-products of maturation?

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APPENDIX A

Code number _____

Frequency Discernment Test

To the best of your knowledge, do you have "normal" hearing? Yes No
 (If "no," briefly describe your deficiency. _____).

You will hear, at spaced intervals of one second, a sound to which you are to respond by writing 1 if you hear one pitch, and 2 if you hear two pitches simultaneously. These occur relatively fast, so make your answers quickly and be ready for the next stimuli.

"Here is an example of one tone." _____

"Here is an example of two tones." _____

"Ready, now, for practice exercise number 1." _____ (write "1" or "2")

"The answer is 1 (one) because the tonal presentation had one pitch."

"Ready, now for practice exercise number 2." _____ (write "1" or "2")

"The answer is 2 (two) because the tonal presentation had two pitches present."

"Now you are ready to take the test. Mark your answers in the columns indicated below. There will be a four-second interval to indicate the conclusion of a set. You should, during that time, get ready to start the next column."

Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Set 7	Set 8	Set 9	Set 10
1. ___	1. ___	1. ___	1. ___	1. ___	1. ___	1. ___	1. ___	1. ___	1. ___
2. ___	2. ___	2. ___	2. ___	2. ___	2. ___	2. ___	2. ___	2. ___	2. ___
3. ___	3. ___	3. ___	3. ___	3. ___	3. ___	3. ___	3. ___	3. ___	3. ___
4. ___	4. ___	4. ___	4. ___	4. ___	4. ___	4. ___	4. ___	4. ___	4. ___
5. ___	5. ___	5. ___	5. ___	5. ___	5. ___	5. ___	5. ___	5. ___	5. ___
6. ___	6. ___	6. ___	6. ___	6. ___	6. ___	6. ___	6. ___	6. ___	6. ___
7. ___	7. ___	7. ___	7. ___	7. ___	7. ___	7. ___	7. ___	7. ___	7. ___

APPENDIX B

FREQUENCIES (Deviations in cents)

	(A ₃) 220.0	(E ₄) 311.13	(C ₅) 130.81	(D ₇) 36.708	(B ₃) 967.77	(D ₇) 2349.3	(G ₂) 92.499
1.	40	100	80	40	10	70	50
2.	90	90	90	50	80	40	10
3.	100	10	70	70	70	60	100
4.	90	60	40	30	20	30	20
5.	70	70	60	60	90	50	80
6.	20	20	30	20	60	90	30
7.	80	80	90	80	30	20	70
8.	10	40	20	100	100	100	40
9.	30	90	100	40	50	80	90
10.	60	30	10	10	40	10	60

EDITORIAL PERSPECTIVES IN SUNDAY SCHOOL
HYMNALS PUBLISHED BETWEEN 1859 AND
1898 WHICH REFLECT EDUCATIONAL
PHILOSOPHY AND PRACTICE*

Mary Voogt

Lowell Mason experienced such success teaching music to the men and women of Boston using Pestalozzian principles that he adapted the techniques to the teaching of children (Tellstrom, 1966, pp. 37-38). His experiments convinced educators and the public of the truth of his belief that "a capacity for music is much more common than is generally supposed" (Mason, 1826, p. 21). The city of Boston made music a part of its public school curriculum in 1838, followed by Chicago in 1841, and Cincinnati in 1846 (Tellstrom, 1966, pp. 35, 39). This interest in teaching music to children led to publications for both public schools and Sunday Schools. Instructional series such as Lowell Mason and George Webb's The Primary School Song Book in Two Parts (1846), Mason's The Song Garden Series (1864), Hosea Holt's Normal Music Course (1883), and Luther Mason's National Music Course (1873-1895) were published for public schools. Hymnals for Sunday School children also flooded the market. Thirty-four Sunday School hymnals published between 1859 and 1898 were surveyed for content and editorial perspective. The hymnals are listed chronologically by short title and the contents of each itemized in Figure 1. The full title and publication information for each hymnal is listed in Note 1. The perspectives of the editors of some of these

* Based on Mary Voogt's master's thesis at the University of Missouri-Kansas City.

DATE	TITLE	AGE LEVEL										INDICES					WORSHIP AIDS							
		SEMINARIAL	NUMBER OF HYMN TEXTS	NUMBER OF HYMN TUNES	NON GRADED	JUNIORS ONLY	JUNIORS	PRIMARY	JUNIORS	YOUTH	SUBJECT	SUBJECT INDEX	TITLE/FIRST LINE INDEX	COMPOSER INDEX	AUTHOR INDEX	PRACTICAL INDEX	TUNE NAME INDEX	PEALS	PLAYERS	RESPONSIVE READINGS	ORDERS OF WORSHIP	DOCTRINAL AIDS	HISTORICAL STUDIES	TEACHING AIDS
1859	Oriels		314	165	X							X	X											
1859	Sabbath Chimes		330	100	X						X	X												
1860	Sabbath School Hymn and Tune		220	220							X	X												
1860	Sabbath School Bell No. 2		172	125	X							X	X											
1861	Bradbury's Golden Chain		125	110	X							X	X											
1865	Plymouth Sabbath Col.		295	185	X							X	X											
1865	Happy Voices		244	165	X							X	X											
1865	The Casket		125	110	X							X	X											
1866	Golden Promise		125	120	X							X	X			X								
1867	Fresh Laurels		181	160	X							X	X											
1868	Shining Pearls		51	51	X							X	X											
1869	Bright Jewels		172	150	X							X	X											
1870	Sabbath Songs for Child.		210	160	X							X	X							X				
1870	Silver Song		150	150	X			X	X			X	X											
n.d.	Sunday School Harmonist		125	115	X			X	X			X	X			X								
1871	The Cherm		142	120	X			X	X			X	X											
1871	Pure Gold		175	150	X							X	X											
1871	Sparkling Jewels		91	91	X							X	X											
1872	Golden Rule		135	135	X							X	X											
1874	Golden Gate		151	125	X							X	X											
1876	Gardens of Praise		165	165	X							X	X											
1876	Good News		282	272	X							X	X											
1877	Welcome Tidings		181	145	X							X	X											
1878	Precious Jewels		81	81	X							X	X											
1880	Children's Hymns With..		240	275	X			X			X	X	X											
1881	San of Sons		191	160	X							X	X											
1881	Good as Gold		235	170	X							X	X											
1885	Epworth Hymns		300	305	X							X	X										X	
1885	Our Song Wreath		31	31	X							X	X											
1891	Jeweled Crown		180	180	X							X	X											
1895	Spirit and Life No. 2		150	185	X							X	X											
1896	Sunday-School Book	X	300	0	X					X		X	X			X				X		X		
1897	Young People's Hymns	X	245	220					X			X	X										X	
1898	Songs of Zion		104	75	X							X	X											

*Some tune names listed as titles

Figure 1. Chronological list of hymnals.

hymnals will be shown to reflect the educational philosophy of the time.

The central emphasis of the Pestalozzian educational theory, which Lowell Mason thought he was following, was the moral development of the child. Moral development took precedence over both physical and intellectual development (Tellstrom, 1966, p. 25). Pestalozzi "considered music a prime contributor in effecting the moral aim of children" (Tellstrom, 1966, p. 25). Pestalozzi thought that singing, rather than the study of music principles, could reinforce emotions and cultivate a gentle spirit. Editors of Sunday School hymnals of this time period also attribute to singing the power to influence the moral development and even the salvation of the young.

Robert Lowry and Howard Doane state in the preface to Pure Gold for the Sunday School (1871) that "The music of the Sunday School is now acknowledged to be an important factor in that grand educational force which is levering up the rising generation to a plane of personal morality and Christian enlightenment" (Note 1, p. 2). They indicate that they have "aimed at a compilation of songs that would carry with them not only transient gratification, but permanent profit" (Note 1, p. 2). In 1872 S. W. Straub, editor of The Golden Rule, also mentions moral development. He indicates "That the religious and moral influence of Sunday School is second to none, is conceded by all" (Note 1, p. 2).

Editors of some Sunday School hymnals indicate that salvation, a specific type of moral development, was their goal. William B. Bradbury states in the preface to Bradbury's Fresh Laurels for the Sabbath School (1867) that:

Believing in the early conversion of children to Christ, we have tried to put such songs in their mouths . . . as shall lead them directly to their loving Saviour.
(Note 1, p. 2)

Horace Waters, in the preface to Sabbath School Bell No. 2 (1860) writes, "and we hope by the instrumentality of this book to sing a great multitude into the kingdom of Heaven" (Note 1). Even the title, Happy Voices (1865), indicates a positive view of the Sunday School. The preface states the editor's hope that this volume will "promote not only the happiness, but the salvation of the young" (Note 1, p. 2). In the preface to Pure Gold for the Sunday School (1871), the editors write, "With the hope that our labors may, in some degree, help the Sunday School teacher in his blessed calling, and be instrumental in leading many souls to the dear Redeemer" (Note 1, p. 3).

Other editors of hymnals published between 1859 and 1872 who express a similar evangelistic goal for their hymnals are C. C. Mudge in The Sabbath Chimes (1859), Leonard Marshall in Sabbath Songs for Children's Worship (1870), W. A. Ogden in The Silver Song (1870), and P. P. Bliss in The Charm (1871).

From 1872 to 1898, only three editors from this survey make reference to evangelism as a goal of their works. These references appear in The Children's Hymnal (1880), The Young People's Hymnal (1897), and Songs of Zion (1898). Henry Wilder Foote, in his Three Centuries of American Hymnody (1940), suggests that

The great wave of enthusiasm for missions which marked the period from about 1820 to about 1870 had passed its crest, and with

it ebbed the impulse to write missionary hymns. (Note 1, p. 263)

Through Rousseau educators had come to respect the natural process of a child's growth and development. The emphasis of this theory "was upon the development of the child from within" (Tellstrom, 1966, p. 27). Two essential aspects of the application of developmentalism to the educational process are reflected in the editorial statements found in Sunday School hymnals of this time period. The first of these aspects of developmentalism is the need to teach from the simple to the complex, thus adapting the subject matter to the child's growth process.

As early as Bradbury in 1859 and Mason in 1860, editors of Sunday School hymnals discussed the need for music that children could understand and enjoy. Although differences of opinion existed over the use of secular tunes, the use of newly composed music, and the use of standard hymn tunes, all editors attempted to make their music appropriate for children. Bradbury's comment in Fresh Laurels (1867) is representative of the attitude of hymnal editors of that time. He says that "GOOD [sic] music, suited to the tastes and adapted to the capacities of children, must frequently be introduced" (Note 1, p. 2).

It is not until 1870 that an editor presents the idea of providing music for various age groups of children within the Sunday School. Speaking of the hymns of The Silver Song (1870), Ogden the editor writes, "These are divided into three departments, viz:--Songs for 'General Class,' Songs for 'Infant Class,' and songs and choruses for the Sunday School and Home Circle" (Note 1, p. 2).

The use of the word "infant" to describe a

Sunday School age group was quite common at this time. It was used as early as 1860 by Waters in The Sabbath School Bell No. 2. Beneath the title "Happy Days of Childhood (Note 1, p. 71) is the designation "for the Infant Class." This is the only Infant Class song in that collection.

Hymns designated for the Infant Class are probably meant to be sung by three- and four-year olds as well as children in the lower elementary grades. The vocabulary seems to be aimed at young children. Phrases are short. Eighth and quarter note values are used almost exclusively. The repetitive melodies consist of much stepwise movement and frequent repeated notes. Skips, when used, outline triads. Tonic, subdominant and dominant harmonies are usual.

Although Bliss in The Charm (1871) includes a section of songs designated for the Infant Class, he makes no editorial statement about presenting music appropriate for different age groups. Included in this section is "The Storm--An Exercise Song" (Note 1, p. 108). The directions indicate the children are to use their hands and feet in imitating rain, thunder, and wind. The use of hand motions with song is a common practice even today with small children.

Developments within The American Sunday School Union at this time indicate a growing awareness of the need to provide materials appropriate for various age groups. The first primary teacher's meeting took place in St. Paul's Methodist Episcopal Church in Newark in 1870 (Development, 1905, p. 19), the year of Ogden's The Silver Song. The resulting Newark Primary Union became the National Primary Union in 1884. In spite of the union's goal of a separate course for the primary departments, it was not until 1901 that the first one-year

course for primary grades appeared (Development, 1905, p. 19).

Despite Ogden's age grouping in The Silver Song (1870), such grouping did not become common practice. Shaw designates a single song for the Infant Class in The Golden Gate (1874). Hull includes one song with hand motions in Garlands of Praise (1876). In Spirit and Life No. 2 (1895), the editor, Lorenz, includes "children" as a subject heading in the topical index. Fifteen songs are listed. These fifteen songs are scattered throughout the contents of the hymnal.

The first hymnal in this survey that is geared specifically for older children is The Young People's Hymnal (1897) edited by W. D. Kirkland, James Atkins, and William J. Kirkpatrick. No exact ages are indicated in the preface.

From 1859 to 1898 there is the beginning of editorial interest in providing music for distinct age groups. Criteria for choosing music appropriate for various age groups are nearly non-existent. Usually music for more than one age group is presented in one hymnal. Graded books for school use were appearing at this time.

The second aspect of developmentalism considered essential in an educational process was maintaining the interest of the student. "The developmentalists considered interest as the prime stimulant or motivation for learning" (Tellstrom, 1966, p. 94). Editors of Sunday School hymnals emphasize the importance of maintaining the interest of the children in Sunday School through the use of song.

As early as 1836, Lowell Mason refers to the importance of maintaining the child's interest in singing in the preface to Sabbath School Songs. Mason writes:

The music will be found very simple and easy, and in general of a lighter or more melodious character than is usual in common psalm tunes. Experience proves that music of this kind is more pleasing than that of a heavier or slower character, and that it is calculated to make the exercise of singing in Sabbath Schools more interesting and useful. (Mason, 1936, p. 2)

The primary way of maintaining interest in Sunday Schools proposed by the editors of Sunday School hymnals in the years 1859 to 1898 was through the repeated introduction of newly composed song material.

The 1859 Bradbury title, Oriola, A New and Complete Hymn and Tune Book for Sabbath Schools, emphasizes the word "new." In addition to the title's emphasis, the preface also shows support for new hymns by criticizing the use of standard hymn tunes. Bradbury writes:

We do not believe in the stiff, old-fashioned way many have of keeping the children singing nothing but Old Hundred, Dundee, Mear, St. Martins, and such like. Good old tunes these, no one will deny, and should be sung from time to time, but they are not in any peculiar sense children's tunes, and the children should not be limited to them. (Note 1, p. iii)

As a replacement for the standard hymn repertoire, Bradbury offers "current popular melodies and many composed for this volume" (Note 1, p. iii).

In the preface to Bradbury's Golden Chain of Sabbath School Melodies (1861), Bradbury succinctly states his goal. The purpose of the volume is "to furnish a pleasing variety of good NEW [sic] music and hymns composed and arranged expressly for the Sabbath School at a very moderate price" (Note 2, p. 2).

Asa Hull states in the preface to The Casket of Sunday School Melodies (1865) that "In compiling the 'Casket' it has been the leading object of the author to furnish the largest amount of new music in the smallest space possible" (Note 1, p. 2).

Bradbury relates the maintenance of interest directly to the use of newly composed music in his preface to Fresh Laurels (1867). He states that "in order to keep up the interest in the school, new music, and GOOD music, suited to the tastes, and adapted to the capacities of children must frequently be introduced" (Note 1, p. 2).

Similar tributes to the benefits of newly composed hymns and tunes are found in the prefaces of the following works:

1869 Robert Lowry's Bright Jewels for the Sunday School

1870 Leonard Marshall's Sabbath Songs for Children's Worship

1870 W. A. Ogden's The Silver Song

1871 Knowles Shaw's Sparkling Jewels for the Sunday School

1872 S. W. Straub's The Golden Rule

After 1872 there is less editorial emphasis on newly composed music. Several hymnal titles

still indicate this emphasis:

- 1877 Robert Lowry, Howard Doane, and Ira Sankey's Welcome Tidings: A New Collection of Sacred Songs for the Sunday School
- 1881 Robert Lowry and W. Howard Doane's Good as Gold: A New Collection of Sunday School Songs
- 1891 Asa Hull's The Jeweled Crown: A Choice Collection of Original Hymns and Tunes for the Sunday-School
- 1895 E. S. Lorenz's Spirit and Life No. 2: A Collection of New Songs for the Sunday School, Young People's Societies, Gospel and Devotional Meetings, Etc., Etc.

A regard for newly composed music can also be deduced when the editor or editors of the volume compose all of the music, or when the publisher copyrights most of the music for that edition.

Robert Lowry and Howard Doane edited and published Pure Gold for the Sunday School in 1871. Of the 151 tunes included, Lowry and Doane are credited with 111. Lowry and Doane again combined efforts on the hymnbook Welcome Tidings (1877). Ninety-three of the 145 tunes in this volume are copyright 1877 by either Biglow & Main or John Church & Co., the two publishers listed on the title page. In a similar effort in 1881, Good as Gold, Biglow & Main hold the 1880 copyright on 130 of 170 tunes.

By the end of the nineteenth century there is less emphasis on newly composed music. The 1898 title Songs of Zion, A Collection of Old

and New Songs for Sabbath Schools, Prayer Meetings, Revivals and All Other Religious Worship indicates that this book includes both the old hymns and newly composed hymns.

The editorial emphasis on newly composed music, perhaps in response to the developmentalist emphasis on the importance of maintaining interest, resulted in a strong reaction from other editors. Mason was the first to recognize the danger of conforming to the "fancied wants of children" (Park, Phelps, Wayland, Mason, Note 1, p. ii). In the introduction to The Sabbath School Hymn and Tune Book (1860) he and three other editors indicate that it was poor singing habits, especially slow singing, that led leaders to believe a more spirited type of song was necessary for children. Mason indicates that the solution to the problem of poor singing habits is not in the choice of music, but in the training (Note 1, 1860, p. ii). In a lengthy introduction to this work Mason makes several points which are echoed in prefaces of Sunday School hymnbooks later in the nineteenth century. Mason suggests that "tunes of an inferior character were written" (Note 1, 1860, p. ii) because it seemed that children liked them. He comments that children exposed only to "jigs, ditties, negro songs (so called) [sic] and silly tunes" (Note 1, 1860, p. iii) will have a hard time appreciating devout worship music. Mason apparently did not approve of "the setting of some of the less objectionable secular melodies to sacred words" (Note 1, 1860, p. ii). He seems to object to secular tunes because "the religious end of the singing exercise is often almost wholly ignored, and the song is made a mere amusement" (Note 1, 1860, p. iii).

Mason is also the first editor to present the idea that correct training of children in Sunday School music will both enhance their

ability to worship as adults, and improve congregational singing.

The importance of restoring to the people their right and ability to participate vocally in the service of song, seems to be extensively felt, and there is much inquiry as to the ways and means of doing this. Here is one of the most efficient: Let the children be taught in the Sabbath School to use and love the hymns and tunes used in the great congregation, and very much will be done toward securing good congregational singing. (Note 1, 1860, p. iv)

In the same year in the preface to Sabbath School Bell No. 2 (1860), Horace Waters alludes to this controversy over the use of secular tunes for Sunday School. Waters supports the premise that all music is intrinsically holy "although it is sometimes, like the livery of heaven, used for profane purposes" (Note 1). Since he believes all music to be holy, he can defend the use of secular music.

It is well known that many secular compositions possess unequalled excellence and power as music, and are especially adapted by their animation and embodiment of the true idea of music, to interest the young. In connection with the new sentiments they utter, their former associations will be forgotten, and their fire and spirit be secured for the inculcation of holier sentiments. (Note 1)

Reference has been made to Hull's desire to "furnish the largest amount of new music in the smallest space possible" in The Casket (1865) (Note 1, p. 2). In the same preface Hull suggests that:

For the sake of experiment will choristers using this book select such pieces as . . . "Nearer My God to Thee," "Rock of Ages," etc. learning them thoroughly, giving the children the same chance to learn them as other tunes of a more rapid movement? Then give them an opportunity to show their preference and you will soon learn they can be interested in music which is really good (Note 1, p. 2)

Hull's use of the phrase "music which is really good" to describe standard hymn repertoire seems to indicate his personal values. He seems to be trying to persuade the leaders who use this little book not to neglect standard hymns. To find this suggestion in the same preface with the boldly stated goal of providing a large amount of newly composed music seems contradictory.

In the preface to Fresh Laurels (1867) Bradbury indicates the same two goals. He comments on his inclusion of "new music, and GOOD [sic] music, suited to the tastes and adapted to the capacities of children" (Note 1, p. 2). Then he immediately follows this statement with, "far be it from us to object to their learning the standard tunes of the church; on the other hand, so important do we consider this, that we have inserted a large number of them in 'FRESH LAURELS'" (Note 1, p. 2). Bradbury is not as strong in his defense of standard hymns as was Hull. He seems to have included standard hymns in his book to preclude objection to their absence. His use of the word "inserted" to describe the inclusion of standard hymns even implies a preconceived package of new songs in which he has now layered some existing great hymns.

Only two years later, Robert Lowry, a co-worker of Bradbury, makes the following statement in the preface of Bright Jewels (1869). "It has not been deemed advisable to introduce in 'BRIGHT JEWELS' any considerable number of the 'old standards' which are supposed to be in possession of all our Sunday Schools" (Note 1, p. 2). The fact that Lowry mentions the absence of the hymns indicates that the issue of new songs versus standard hymns was not settled yet. Lowry avoids responsibility for providing standard hymn repertoire for children by indicating that Sunday Schools already own copies. S. W. Straub, in The Golden Rule (1872) writes "While nearly all the words and music in the 'Golden Rule' are new, a few of the indispensable standard pieces are used" (Note 1, p.2).

It is not until 1876, in the preface to Good News, that another editor follows Mason's direction and encourages the use of standard hymns by children both for worship training and for the future improvement of congregational singing. McIntosh, the editor, writes:

We considered it best to occupy some of the space with familiar pieces from former publications, and standard hymns and tunes that are already in general use among the congregations; because such an arrangement, we believe, greatly facilitates the introduction of a new book, and tends to familiarize the young people with the "worship song" of the sanctuary; a matter that should be kept constantly in view by all who would encourage congregational singing. (Note 1, p. 2)

In the preface to The Jeweled Crown (1891) Hull indicates the still secondary place of standard hymn repertoire, "A few of the old standard church tunes have been introduced to

fill parts of pages--a feature of our late books, which has been received with such general favor as to induce us to continue the same plan herein" (Note 1, p. 2).

The controversy over the use of newly composed, child-oriented song material versus the use of standard worship hymns in Sunday School seems to reflect the controversy between advocates of the rote-note method of the National Music Course and the note method of the Normal Music Course (Tellstrom, 1866, pp. 82-83). Those advocating newly composed song material for Sunday Schools and the rote-note method of instruction in public schools seem to have immediate gratification as a primary argument. Children would enjoy Sunday School and enjoy music, and as a result be encouraged to participate in further experiences. Those advocating standard worship hymn repertoire for Sunday Schools and the note method of instruction in public schools seem to emphasize the further results. Congregational singing would improve, and children would develop independent musicianship.

In the twentieth century denominational publishing houses produced a large number of hymnals for Sunday Schools. The goal of providing age-appropriate materials became even more important, resulting in graded hymnals. Denominational hymnals also emphasized traditional worship hymns. Non-denominational publications for Sunday Schools, less likely to be graded or to emphasize the worship hymn, continue to be available. Parallels to educational theory may be discernable in a study of the editorial statements of twentieth century Sunday School publications. Certainly the concerns were similar during the last third of the nineteenth century.

Reference Notes

1. A chronological listing of the complete publication information for all the hymnals listed by short title in Figure 1.

1859 Bradbury, William B. Oriola. A New and Complete Hymn and Tune Book for Sabbath Schools. Cincinnati: Moore, Wilstach, Keys & Company.

1859 Mudge, C. C., ed. The Sabbath Chimes, A Collection of 100 Tunes and 350 Hymns for the Use of Sabbath Schools. Brooklyn, N.Y.: [n.p.]

1860 Park, Edwards A.; Phelps, Austin; Wayland, Francis; and Mason, Lowell, (Eds.) The Sabbath School Hymn and Tune Book. New York: Mason Brothers.

1860 Waters, Horace, Ed. Sabbath School Bell No. 2, A Superior Collection of Choice Tunes, Newly Arranged and Composed, And a Large Number of Excellent Hymns. New York: Horace Waters.

1861 Bradbury, Wm. B. Bradbury's Golden Chain of Sabbath School Melodies, Comprising a Great Variety of New Music and Hymns, Composed and Written Expressly for the Sabbath School, Together With Many of the Well Known Sabbath School Pieces. New York: Ivison, Phinney & Company.

1865 Bradbury, Wm. B. The Plymouth

Sabbath School Collection of Hymns and Tunes. New York: Wm. B. Bradbury.

- 1865 Happy Voices, New Hymns and Tunes, With Many Popular and Sterling Old Ones, for the Home Circle and Sabbath-Schools. New York: American Tract Society.
- 1865 Hull, Asa, Comp. The Casket of Sunday School Melodies. Enlarged and improved edition. Philadelphia: Asa Hull.
- 1866 Perkins, T. E. The Golden Promise, A New Collection of Hymns and Tunes for Sabbath Schools. New York: Brown & Perkins.
- 1867 Bradbury, William B. Bradbury's Fresh Laurels for the Sabbath School, A New and Extensive Collection of Music and Hymns, Prepared Expressly for Sabbath Schools, etc. New York: William B. Bradbury.
- 1868 Shaw, Knowles. Shining Pearls, A Collection of Choice Music for Revivals and Sunday Schools. Cincinnati: John Church, Jr.
- 1869 Lowry, Robert, ed. Bright Jewels for the Sunday School, A New Collection of Sunday School Songs Written Expressly for This Work, Many of Which are the Latest Compositions of William B. Bradbury, and Have Never Before Been Published. New York: Biglow & Main.
- 1870 Marshall, Leonard. Sabbath Songs for

Children's Worship. Boston: Lee & Shepard.

- 1870 Ogden, W. A. The Silver Song, A Choice Collection of New Sabbath School Music. Toledo: W. W. Whitney.
- 18-- The New Sunday-School Harmonist, A Collection of Tunes for Anniversary Occasions, and General Use in Sabbath Schools. New York: T. Carlton & J. Porter.
- 1871 Bliss, P. P. The Charm, A Collection of Sunday School Music. Chicago: Root & Bady.
- 1871 Lowry, Robert and Doane, W. Howard. Pure Gold for the Sunday School, A New Collection of Songs Prepared and Adapted for Sunday School Exercises. New York: Biglow & Main.
- 1871 Shaw, Knowles. Sparkling Jewels for the Sunday School, A New Collection of Choice Music. Cincinnati: John Church & Co.
- 1872 Straub, S. W. The Golden Rule, A Collection of Songs, Hymns, and Chants for Sunday-Schools, Juvenile Concerts, Festivals, Anniversaries, and the Home Circle. Cincinnati: John Church & Co.
- 1874 Shaw, Knowles. The Golden Gate, A Collection of New Songs for the Sunday-School, Prayer Meeting, and Social Circle. Cincinnati: John Church & Co.

- 1876 Hull, Asa. Garlands of Praise, A Choice Collection of Original and Selected Hymns and Tunes Suitable for Sunday-Schools, Bible Classes and the Home-Circle. New York: Asa Hull.
- 1876 McIntosh, R. M., ed. Good News, Or Songs and Tunes for Sunday Schools, Christian Associations, and Special Meetings. Boston: Oliver Ditson & Company.
- 1877 Lowry, Robert; Doane, W. Howard; and Sankey, Ira D. Welcome Tidings, A New Collection of Sacred Songs for the Sunday School. New York: Biglow & Main.
- 1878 Leslie, N. H. and MaHaffey, R. B. Precious Jewels for Sabbath Schools, Prayer and Praise Meetings, and the Home Circle. New York: Himan & Woodward.
- 1880 Tucker, J. Ireland, (Ed.) The Children's Hymnal, With Tunes. Hartford, Conn.: W. W. Huntington, Agent, Publisher.
- 1881 Hull, Asa. The Gem of Gems, A Choice Collection of Sacred Songs, Original and Selected for the Use of Sunday-Schools, Bible Classes and Social Worship. New York: Daniel W. Knowles.
- 1881 Lowry, Robert, and Doane, W. Howard. Good as Gold, A New Collection of Sunday School Songs. New York: Biglow & Main.

- 1885 The Epworth Hymnal, Containing Standard Hymns of the Church, Songs for the Sunday-School, Songs for Social Services, Songs for the Home Circle, Songs for Special Occasions. New York: Hunt & Eaton.
- 1885 Vaughn, John B. Our Song Wreath, For Sunday-Schools and Gospel Meetings. Dalton, Ga.: A. J. Showalter & Company.
- 1891 Hull, Asa. The Jeweled Crown, A Choice Collection of Original Hymns and Tunes for the Sunday-School. New York: Asa Hull.
- 1895 Lorenz, E. S. Spirit and Life No. 2, A Collection of New Songs for the Sunday School, Young People's Societies, Gospel and Devotional Meetings, etc., etc. Dayton, Ohio: Lorenz & Company.
- 1896 Evangelical Lutheran Church in North America. Sunday-School Book, For the Use of Evangelical Lutheran Congregations. Revised and enlarged edition. Philadelphia: General Council Publication Board.
- 1897 Kirkland, W. D.; Atkins, James; and Kirkpatrick, William J. The Young People's Hymnal, Adapted to the Use of Sunday Schools, Epworth Leagues, Prayer Meetings, and Revivals. Nashville: Publishing House of the Methodist Episcopal Church, South.
- 1898 Brown, S. M. and Hunt, J. M. Songs of Zion, A Collection of Old and New Songs for Sabbath Schools, Prayer

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TOWARD KNOWING AND LIKING MUSICAL STYLES:
THE HEURISTIC METHOD

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One concern of music education is the expansion of students' understanding and enjoyment of many divergent musical styles. It is generally assumed that music with which students have been previously unfamiliar becomes better understood and is valued more highly as a result of exposure and instruction; however, objective evaluation is desirable to determine the validity of this assumption.

A wide variety of sources exposes a student to many musical styles every day. The media of television, radio, and recordings may exert a compelling influence on individuals through styles made available at home, at school, in cars, stores, offices, and restaurants. Whether the exposure is informal and unplanned or formally structured, the individual becomes selective about the music chosen to remain within a personal environment. As music is sounded and information on styles is transmitted to the student, attitudes are developed, and preference is learned and exercised.

There are many factors in the process of music education which affect the music preference of the students. A number of techniques have been utilized to assess musical preference, including verbalized responses, pictographic and written self-reports, physiological measures, and behavioral evaluations (Kuhn, 1981). A survey of the literature on music preference research indicates that music

preference decisions are based upon the "interaction of input information and the characteristics of the listener, with input information consisting of the music stimulus and listener's cultural environment" (LeBlanc, 1980).

Music educators are responsible for the exposure of students to the variety of music styles present throughout the world. Music experiences should focus on the development of knowledge and skills to prepare the student for the personal valuing process which occurs. When styles are eliminated from the curriculum, students are limited in their future music selection behaviors. Instruction should place students in a position to make intelligent value judgments concerning the style selection they prefer as performers and consumers of music. As reflected in recent basal music series, music materials presented to students should be a sampling of many styles, and not just the individual teacher's, or the student's, preferred style.

Music educators face a basic problem in their roles as guides to understanding and appreciation of musical styles in that the amount of time a student spends in a school music program is minimal, and does not compare with the duration spent in musical experiences outside the classroom. The cultural background of the community makes available a constant barrage of styles through the media or social activities of the individual's particular community subgroup. Music educators have only the time allotted during the school day, and must make the most effective use of that time. Within the constraints of the music classroom, efforts must be expended to impact on the development of knowledge, skills, and values.

Miller (1974) cites reasons for the emergence of rock music as the most highly preferred music style of upper elementary children and adolescents:

Listening to rock music is strongly associated with nonschool, social activities. This cultural phenomenon has become a powerful conditioned reinforcer because of nonmusic or extramusical events with which it is connected. (p. 78)

Sociocultural barriers shape the individual's outlook and therefore act to inhibit the student in transcending environmental limitations. It is essential that a music class is well-structured, and that materials and experiences are presented in an attractive manner that will result in maximum learning as a foundation for affective response.

Masterful teaching and successful learning behavior are dependent upon the effective communication of information through the interaction of the student and teacher with the material and activity presented. The successful attainment of concepts hinges on teaching methodology. A focus on methodology in music education is necessary to eliminate the isolation of school music from that music available in the out-of-school cultural environment, and to allow the learning setting to release knowledge in ways that render students more educated and interested.

Since the mid-1960's, a growing number of educators have advocated that instruction provide opportunities to exercise creative options, imagination, and self-mastery. Teachers have been encouraged to set up circumstances in which the student alone might find the concept being taught. The heuristic

method is related to exploratory problem-solving techniques that utilize self-education to improve performance. Intensive preconceptualization efforts are essential to the approach, which is largely experiential and participatory. Students are encouraged to explore their environment for solutions to problems, and then to make inferences of concepts from invariant properties.

Bruner is the major proponent of what is termed the discovery method, a type of learning which requires the rearrangement of subject matter structure so that the learner is able to go beyond the evidence presented to new insights. Emphasizing process rather than content, Bruner (1968) advises:

Let us not judge our students simply on what they know. That is a philosophy of the quiz program. Rather, let them be judged on what they can generate from what they know--how well they can leap barriers from learning to thinking. (p. 192)

The discovery method is heuristic, insisting that the student manipulate materials and cope with incongruities and contrasts, from which information is derived.

Fowler (1966) compares the didactic-deductive approach to the heuristic-inductive approach:

While the deductive approach begins with the statement of a rule, the induction method relies on being able to tell how to do it. (p. 129)

In making application of this indirect instructional method, Fowler (1970) credits musical performance with the illustration of the time-honored philosophy of learning by doing.

He follows:

The issues in the performance class are not student-teacher but student-music. Through continual experimentation and discovery, the possibilities of both the student and the art of music expand to encompass the total range of human and music capabilities. (p. 26)

Holding to a pragmatic belief that learning occurs through experience, MacMurray (1958) states that

. . . . (a) pupil's activity in the production of musical effect is not simply to enjoy playing or singing but to enjoy the sense of discovery and intellectual grasp. (p. 53)

Woodruff (1966) discussed a similar point:

. . . the experiences students have will be most effective if they are genuine personal encounters with music rather than verbal substitutes for those encounters. This implies of course, that the student, not the teacher, is the active party in the encounter. (p. 54)

An examination of music textbooks used in the general music classroom gives evidence of the concern expressed by music educators about the need for programs which embody hands-on, experiential approaches to music and musical style (Boardman and Landis, 1981; Choate, Berg, Kjelson, and Troth, 1976; Marsh, Rinehart, and Savage, 1980, and Reimer, Hoffman, and MacNeil, 1981). Reimer, et al. preface their widely-used series in this manner:

To be effective, aesthetic education must be active education Without imposition on the child, the textbooks show the child that music can be valued by all who are willing to become involved in it. (p. xi)

Implicit in textbooks and elementary music education curriculums upholding an activities-oriented view is the belief that exposing students to selected works through repeated listening or performance experiences will cause the music to be more reinforcing to the students.

In the chorus, band, orchestra rehearsal, as well as in many general music classrooms, the playing of instruments and singing are the initial phase of the learning process rather than the end. Students listen, discuss, research, report, and experiment with the music they play and sing. The meaning of music emerges as the student discovers its forms, and its cultural manifestations.

Several studies underline the importance of student involvement in musical experiences for increasing cognitive awareness of the structural elements of musical styles. Bradley (1974) examined the aural and visual discrimination of fourth grade students for basic music notation and elements. He found that total student involvement in concept discovery through composition, performance, and listening activities evidenced greater achievement gains than those in the traditional listening and singing class. Lyke (1967) discovered the value of keyboard performance in clarifying musical concepts, such that pitch discrimination and tonal memory was better developed through a piano class than through the traditional general music class format.

Findings in recent music education research indicate that a greater awareness of the components of music through performance effects a greater liking for that type of music. Familiarity of music selections by high school choir members through rehearsal and performance produced an increase in verbal preference ratings (Clary, 1979). Shehan (1981) found that the heuristic method of Indonesian gamelan instruction was more effective in increasing operant preference for gamelan music, as well as effecting significantly greater increases in cognitive knowledge.

Bartlett (1973) and Shehan (1981) drew a relationship between achievement and preference, and concluded that greater awareness of music structure effects a greater liking for that music. It appears that as one exercises skills of discrimination in listening to a musical style, especially in the discovery of music events through performance experiences, that music is better appreciated and is more frequently selected for listening. Participatory activities which rely on student interaction with the elements of music allow for greater gains in cognitive and affective response. Research findings support the educational truism that knowing is valuing. It may be that appreciation of an art form develops in direct relationship to depth of understanding.

Musical materials presented in a manner which involves students actively in the concrete experiences of instrumental and vocal performance and inductive reasoning causes improved cognitive skills and increased preference for the music studied. The teaching behavior for a heuristic approach is preparatory, beginning before the arrival of the students. The class environment is designed for ultimate student involvement as instruments are positioned and

audio-visual materials are developed for maximum use of limited class time in a discovery setting. Teacher-student interaction occurs at both the group and individual level, such that the teacher facilitates learning by guiding insight and perception of musical events and concepts.

Instruction in unfamiliar or little known music styles can produce cognitive and affective development. The current interest in multi-cultural education, and the arts in general education movement should encourage music educators to include study units on the music traditions of a wide variety of cultures. The challenge of a heuristic approach to the study of foreign or otherwise unfamiliar musics should be considered, and efforts must be directed to provide efficient and effective instruction in over-crowded curricula. In relatively short periods of time, classroom instruments and resources can be utilized to present divergent music styles.

Some authors have suggested that one goal of school music programs is to expose students to music that is less reinforcing in such a way that it acquires greater reinforcement value. To assume that time and materials are too limited to provide adequate instruction of a music style is to underestimate the potential of the profession. Such assumptions can lead to programs which are ineffective in expanding children's knowledge and enjoyment of great music. Effective instruction can increase children's receptiveness of unfamiliar musics.

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ABSTRACT

ACHIEVEMENT OF PITCH READING AND RHYTHM READING FOR BEGINNERS AND ADVANCED PIANO STUDENTS USING AN AURAL-VISUAL READING INSTRUCTION MODEL (AVRI)

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The question of this investigation was: Will the use of AVRI instruction result in a gain in reading the symbol, performing the symbol, and retaining these skills by beginning and advanced piano students? This study was to compare the level of achievement of nineteen beginning piano students and six advanced piano students on a rhythm and pitch reading criterion-referenced test when AVRI instruction was presented to all students in a three-month period of training.

For pitch reading, the study was limited to the achievement: steps in teaching keyboard, direction in keyboard, sets of black keys, sharp names, flat names, and reading staff notation. In the case of rhythm reading tasks, the study was limited to the achievement of duration of long and short sounds, quarter notes, eighth notes, sixteenth notes, rest values, tied values, sightreading new pieces. The investigation period was limited to the achievement within a three-month instructional period. Finally, the study was limited to the achievement of pitch reading and rhythm reading at one music studio.

A quasi-experimental design using repeated measures with equivalent instruction was adopted for examining the primary question. The pre-test scores, the post-test scores, and the retention scores on the pitch reading test and the rhythm reading test constitute the primary

data. Secondary data were years of piano training of subjects.

Beginners and advanced piano students had significant gains from pre- to post-tests for both pitch reading and rhythm reading. However, both groups did not retain post-test level on pitch reading and rhythm reading after one month of no instruction.

ABSTRACT

A STUDY OF THE VOCAL REGISTERS AND TRANSITIONAL PITCHES OF THE ADOLESCENT FEMALE

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The problem was to investigate the nature of female adolescent voices related to pitch production between the vocal range, vocal registers, and transitional pitches of pre-pubescent and post-pubescent females.

The purpose of this study was to measure the vocal range of the adolescent female voice in semitones and to identify the presence or absence of any transitional pitches within the vocal range.

Eighty-five girls between the ages of ten and fifteen were the subjects of the investigation. They were the total number of volunteers responding to a request for participants from Shawnee Mission District elementary, junior and senior high schools.

A standardized record form was designed by the investigator on which the vocal ranges of the girls was recorded. The identity of any

transitional pitches was made observationally by the investigator. Then reliability of measurement was determined by simultaneously recording every twelfth student's responses with a trained observer who then independently rated and recorded the same performances.

Interviews were conducted individually with each girl being asked to sing from g^1 down a four semitone pattern using a "la" syllable, starting each pattern a half step lower until all semitones in her lower range had been sung. The pitch name was recorded on the evaluation form. To identify her highest pitch the student was asked to sing from g^1 ascending in a four semitone pattern successively until she could sing no higher. After the subject's terminal pitch was identified the investigator determined if the voice displayed any transitional pitches.

The results of the study show that ten year old girls have a considerably narrower range than do the fourteen and fifteen year olds. The older the age group the wider the vocal range. Data show that eleven and twelve year old girls' voices display an erratic pattern of transitional pitches. The thirteen and fourteen year old groups were more consistent in the width of their ranges and in placement of transitional pitches. The fourteen year old group had the widest range and the highest set of transitional pitches in relation to the other age groups considered in the study.

Subject to the limitations of the study, no conclusions regarding the characteristics of the female voice were drawn. First, the upper transitional pitch was observed to be higher in the fourteen and fifteen year olds' voice range than in the ten and eleven year olds suggesting that transitional pitches may be higher for older adolescent girls. Second, the data

suggest that a child's natural range widens after age eleven to include tones above and below that set of semitones that were natural to her voice as a ten year old.

ABSTRACT

SELECTED ASPECTS OF THE HISTORICAL,
PSYCHOLOGICAL AND PHILOSOPHICAL
PRINCIPLES OF INSTRUMENTAL MUSIC
EDUCATION IN AMERICAN SECONDARY
SCHOOLS: A SECONDARY SCHOOL
BAND CURRICULUM

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A growing concern on the part of contemporary music educators is the inevitable and ubiquitous call for "return-to-basics." It is for this reason that a music curriculum (instrumental or whatever) is needed which will meet the felt needs of administrators of this time and still do a responsible job musically and aesthetically.

The intent of this dissertation is to assist secondary band music teachers in developing a viable school band curriculum that will provide a varied, meaningful, and encompassing musical experience for all children and will help meet the unique needs of contemporary American education.

To provide insight into the development of the curriculum, consideration was given in part I to selected historical aspects of philosophical theories and psychological approaches to learning. The historical development of instrumental music in public schools subsequent to the turn of the twentieth century follows in

chapters 2, 3, and 4, paying attention to the social, political, and cultural factors which determined its direction.

The curriculum in part II of this paper is designed to emphasize the emerging trend toward musical growth through aesthetic experience. Both long-range program objectives and short-range instructional objectives provide the focus for the guide. A sequential approach to understanding basic music concepts through the dimensions of music provides the needed structure for the guide, and a flexible, but directional and comprehensive organization of the instructional levels provide for varied experiences and the integration of learning.

Chapter 5 of the dissertation, which serves as the introduction to the curriculum defines music as a vital sustaining force in the life of every person. Attention is given to the long-range program objectives in the cognitive, psychomotor, and affective domains.

Chapter 6 deals with course descriptions and the sequential structure of the program. Following are suggested instructional procedures for the music teacher.

Organizational procedures are considered in chapter 7. In chapter 8, a sequential organizational plan of study for musical growth through conceptual understanding of the dimensions of music is outlined by semester for each of the six years the student participates in an instrumental ensemble. Short-range operational objectives in musical competencies (technical, performance, aural) and musical creativity are presented, followed by musical activities.

Chapter 9 deals with evaluative criteria and instruments for assessing achievement toward

specific instructional objectives. Numerous music reference sources are provided in chapter 10. Chapter 11 is concerned with the administrative business operational procedures associated with the instrumental program.

The curriculum is quite specific, in order that it can serve as a framework on which a teacher can build, exercising sound educational practices.

ABSTRACT

AZTEC INDIAN MUSIC AND CULTURE IN THE ELEMENTARY SCHOOL: RATIONALE, METHOD, AND CONTENT

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Music educators, having taken into consideration an expressed concern for more knowledge on those who comprise the American society and their cultural heritage, have attempted to better acquaint themselves and their students with musical cultures other than those of the Western tradition. The emergence of this broadened view of music education is of particular relevance and benefit to the total education of the contemporary child since it purports to reduce the traditional tendency toward ethnocentricity. Unfamiliar musics can add an exciting dimension to general music programs, provide an additional opportunity for furthering musical learnings, and help to promote and further international understanding among different races and cultures. Consequently, music educators must continue to expand the music experience to fit today's changing world.

The only primitive music native to the Americas is that of the American Indians. The Aztec civilization, as it existed in the 15th and early 16th centuries, serves as an example of a highly organized Indian culture, victimized by European acculturation which was accomplished through the destruction of that which was considered pagan--most of the cultural beliefs. Fortunately, a historical consciousness existed among tribal members which was passed on from generation to generation and which continues onward in the presentation of a legacy of literary materials and archeological remains.

The purposes of this study are (1) to provide the music educator with the necessary rationale for the inclusion of Aztec music in the general music education curriculum; (2) to provide historical and cultural information which will lend to a fuller and more thorough understanding of the Aztec culture as a whole; (3) to increase the knowledge and appreciation for the musical system of the Aztec Indians through a reconstruction, explanation, and illustration of its music; and (4) to suggest ideas for an integrated unit of study on Aztec music and its culture, which can be incorporated into the general music education curriculum for upper elementary and middle school.

ABSTRACT

A COMPARISON OF ELEMENTARY GENERAL MUSIC
EDUCATOR PRACTICES AND RATIONALE FOR
THE INCLUSION OF MUSICAL VARIETY IN
AESTHETIC EDUCATION TOWARD
BROADENING MUSICAL TASTE

Michael Benjamin Roberts
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Within a concentrated effort to broaden and enrich life-long taste toward the variety of musical styles throughout the world, teacher selection of music for use in the classroom is a critical issue. The music education profession may find its greatest influence on consumers in the music which is provided for students in the classroom. An individual teacher's training and musical experience, behavioral goals and objectives of the class lesson, the method of presentation, properties of the musical stimulus, and learning and personal characteristics of the students all combine to influence the ultimate decision.

The purpose of this study is to discover the extent to which elementary general music teachers are currently using a wide variety of musics for broadening musical sensitivity and taste in the development of meaningful aesthetic response within the individual student. An extensive discussion of factors that influence the development of musical taste and measures of attitude, taste, and preference is presented. A further purpose is to establish through a review of the literature that elementary general music education as aesthetic education may shape and broaden musical sensitivity and taste through the use of a wide variety of musics in the teacher-selected curriculum.

A research project was initiated to identify the variety of musical styles used in the classroom by elementary general music educators. The areas of investigation included the use of basal music textbooks and supplementary music materials, music genres in actual use in the classroom, and primary curricular objectives.

Based on the results of a survey of Missouri elementary general music teachers, the following conclusions were reached: (1) Textbooks and

Supplemental materials which provide a variety of musical styles are available to practicing music educators for classroom use; (2) A variety of music genres is in current use by the music educators in the elementary general music classroom. American Folk, Western Classical, and Pop/Rock are most frequently presented by the teacher, while music of Southeast Asia, Australia/Pacific, and Medieval Europe are least used; (3) More than three quarters of elementary general music educators use a moderate to high amount of music variety in the classroom; (4) Over half of the teachers surveyed consider the development of aesthetic responsiveness as a more important curricular focus than the development of musical skills; (5) There is no significant relationship between the most important music curricular objective as perceived by music educators and the amount of musical variety used in the elementary general music education classroom.

ABSTRACT

NON-PARTICIPATION OF FRESHMEN AND SENIOR BOYS IN HIGH SCHOOL CHOIRS

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The problem of this study was to investigate reasons why high school boys do not join choir. The purpose of the study was to determine the rank order of a list of reasons for not joining choir from ratings of these items by freshmen and senior boys who were not in choir at six Kansas City suburban high schools. A descriptive design was used for the study.

During an interview with the researcher, the subject was first asked to rate the

importance to him of each of a list of eight reasons in relationship to his decision not to join choir. Next the subject was asked a set of questions probing his background musical experience. Finally, the subject was given a new copy of the list of reasons and asked to rate the items an additional time.

The sample was a random selection of 72 freshmen and 72 senior boys (12 freshmen and 12 seniors from each school). Primary data were the importance rating given each item by the subject. Grade level, previous choral experience, and influence of someone else constituted the secondary data. Additional secondary data included the subject's responses to questions about his musical background and attitudes about singing.

Data were analyzed for frequency distributions and crosstabulations. The Kruskal-Wallis One-Way Analysis of Variance was used to test for statistical significance.

There was no significant difference in the rank order of reasons as given by freshmen and seniors. No significant difference was found in the rank order of reasons related to whether the subject had a previous choral experience or not.

ABSTRACT

A PILOT STUDY COMPARING GROUP AND INDIVIDUALIZED INSTRUCTION FOR TRAINING OF VOCAL PITCH MATCHING ACCURACY

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The problem of this study was to obtain

evidence that achievement of vocal pitch matching accuracy can be increased with training. The purpose of this study was to compare the achievement of vocal pitch matching accuracy of seventh and eighth graders who were trained with group and individualized instruction.

The study was limited to the effect of treatment on one task--vocal pitch matching accuracy. Training tapes, pre-tests and post-tests used a synthesizer for consistent sound with equal amounts of time between items for student repetition.

A quasi-experimental design was used in this study. The sample was drawn from two parochial schools. All seventh and eighth graders were involved in group instruction. A smaller sample was drawn for individualized instruction.

The primary data consisted of the pre- and post-test scores. Sex, type of instruction, grade level, and school constituted the secondary data.

Frequency distribution, t-test, analysis of variance and mean scores were used to test for significant differences in achievement between groups.

The findings in this study indicate that vocal pitch matching achievement can be improved with training. In this study, students trained with individualized instruction achieved statistically significant gains than those trained with group instruction, although both groups showed significant gain. School, grade level, and sex did not make a significant difference in achievement.

Subject to the circumstances and

limitations of this study it was concluded that vocal pitch matching accuracy can be improved with training.

ABSTRACT

A STUDY OF SELECTED CULTURAL, SOCIOLOGICAL, AND PSYCHOLOGICAL FACTORS IN THE MUSIC EDUCATION OF MEXICAN-AMERICAN CHILDREN

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The main objective of this study is to elucidate ways of improving public school music instruction for children of Mexican or Mexican-American descent. Specifically, the study is designed to present ways in which cultural differences and Hispanic musical heritage can be understood and capitalized on by teachers in the United States who may be working with immigrant children in their classrooms.

Chapter one states the intent and scope of the study and explains sociological terms such as Tejano, Chicano, and La Raza. Chapters two through six analyze the musical heritage of Mexico according to major cultural periods: pre-Conquest period, Colonial period, period of Independence, and Twentieth Century.

Chapter seven analyzes current trends in Mexican music education, based on direct observation of class sessions and library facilities, and personal interviews with educators in Mexico City and Puebla.

Chapters eight and nine discuss distinctive aspects of the Mexican mind-set and particular obstacles to teaching which arise from differences between typical Mexican and Anglo

life-styles.

Chapter ten offers practical pedagogical suggestions based on the information discussed in chapters one through nine. Music and dance materials for elementary and secondary school classes are presented, along with specific instructions for effectively utilizing these materials.

Chapter eleven analyzes current trends in music education with immigrant children in the United States. Results of a survey of music educators and administrators in Florida, Texas, Colorado, and California are presented. This survey deals with distinctive disciplinary problems, motivational techniques, curricula, and materials.

Conclusions in chapter twelve focus on implications of this study for the general education and the music education of Mexican-American children.

The study includes a bibliography, discography, list of record distributors, and five appendices which contain newspaper and magazine articles, definitions of Spanish musical terms, descriptions of Mexican instruments, musical excerpts for classroom use, and survey forms and questionnaires pertaining to chapter eleven.