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THE BENEFITS OF ORCHESTRATION
FOR THE
HIGH SCHOOL ORCHESTRA CONDUCTOR

-*-

An Independent Paper
by

Robert D. Climer

THE BENEFITS OF ORCHESTRATION
FOR THE
HIGH SCHOOL ORCHESTRA CONDUCTOR

by
ROBERT D. CLIMER

An Independent Paper
Submitted in Partial Fulfillment
of the
Requirements for the Degree
of
Master of Science in Education
at the
Eastern Illinois State College

Charleston, Illinois

April 24, 1953

PREFACE

In partial fulfillment of the requirements for the degree, Master of Science in Education, the author has prepared the following paper which surveys the high school orchestra and points out the benefits of a program of orchestration study for the high school orchestra conductor.

Accompanying this paper is an orchestration, "Lotus Land," Cyril Scott, which is also submitted. Originally conceived by the composer for piano, "Lotus Land" has been transcribed by the writer for the orchestra. The first transcription was prepared for an orchestra of semi-symphonic proportions such as would be found only in the larger and the more progressive prosperous high schools.

Realizing that such a transcription -- involving the use of harp, celeste, English Horn, bass clarinet, and contra-bassoon -- would not be of much value for the usual high school orchestra, the writer rescored the project, adapting it for usage by the average high school orchestra.

*not in
copying
library*

Parts have been copied for the revised transcription, and the orchestration is now being prepared for presentation on the 1953 Spring Concert of the Eastern Illinois Symphony Orchestra.

Table of Contents

Preface -----	Page 111
Introduction -----	Page 1
I. Literature Problems of the High School Orchestra -----	Page 3
II. The Orchestra's Role in Education -----	Page 13
III. Orchestration as a Beneficial Skill ---	Page 21
IV. The Techniques of Rescoring -----	Page 26
Summary -----	Page 33
Bibliography -----	Page 36

INTRODUCTION

In writing this paper, it is the author's purpose to correlate the written skill of orchestration with the high school orchestra. As is pointed out in the first part of this paper, there ^{is} ~~was~~ a considerable lack of materials that were suitable for usage in the average high school orchestra. The unsuitable practices in these arrangements of unsuitable materials are mentioned, and the qualities of well prepared literature for the high school orchestra are pointed out. The impracticability of much of the standard orchestral repertory for usage in the high school is discussed. It was with these ideas in mind that the writer rescored and prepared his orchestration of "Lotus Land" by Cyril Scott for usage by the high school orchestra.

The value of school orchestral participation makes the orchestra a worthy part of the musical activities of the school. The decline of the high school string program is briefly analyzed. Since the orchestral movement is again gaining impetus in the musical scheme of today's schools, brief recommendations are made concerning the betterment of the orchestral program.

The practical values of preparing an orchestration are discussed in the third section of this paper. As a conductor prepares a transcription, he develops his aural imagination. As he orchestrates, he also develops his awareness of balance, of phrasing, of dynamics, of the suitability of the instruments to various types of parts and gains facility in score understanding, the handling of transposition, and in reading the various clefs demanded.

The final aspect of ^{the} orchestration dealt with, ~~and~~ discusses a valuable skill for the high school orchestral conductor -- that of rescoring, adapting, and editing parts for the high school orchestra. The standards and objectives, as well as the problems of this skill, are discussed.

I

Literature Problems of the High School Orchestra

A survey of the orchestral literature shows the need for new and more suitable teaching materials. Theodore F. Norman writes that there is actually no lack of materials of all grades of difficulty for the amateur and the school orchestra, but that much of the available material is unsuitable and not adaptable for use in the public schools.¹

In the past, there have been practices in the publication of music that have rendered many orchestral selections and folios unsuitable. Publishers, in an attempt to save expense or in an attempt to appeal to a wider market of conductors, have published a considerable amount of band music to which string parts have been added for orchestral purposes. Such material puts the strings at a disadvantage and fails to exploit the tonal resources of the orchestra. Other publishers published folios to be used either in the band or the orchestra. Another third type of folio lacked second violin parts

1. Norman, T. F., Instrumental Music in the Public Schools, p. 175.

because the arrangers believed that no one liked to play the purely rhythmic parts of the second violin part. The viola part was often considered unimportant and was omitted. These unsatisfactory materials were published because conductors did not demand anything better.²

The lack of desirable materials may be traced further to another factor. The instrumental music program gained impetus suddenly and swept through the country catching the teachers of music and the publishers of educational music materials totally unprepared. When this sudden growth took place, instrumental methods and special editions for the school orchestra were nonexistent. The conductor was forced to depend upon the so-called "studio methods" as instructional material and upon the folios and single numbers designed for cafe and theatre orchestras as well as the materials previously described. These had to be used not only as ensemble training materials, but also for program purposes. These did not serve the needs of the developing orchestral program, but were made to suffice.³

2. Righter, C. B., Success in Teaching School Orchestras and Bands, p. 67.

3. Ibid., p. 67.

Since much of the literature published for the school orchestra is not suitable, the solution seems to be to turn to the great classics of orchestral literature. This is not an entirely satisfactory solution. The standard orchestration is not suitable because of the excessive demands of the instrumentation which is rarely available except in the largest high schools. The standard orchestration calls for the following instruments: two flutes, piccolo, two oboes, English Horn, two clarinets, bass clarinet, two bassoons, contrabassoon, four horns, usually in F but in many older works in varying keys, three trumpets, three trombones, tuba, timpani, harp, piano, miscellaneous percussion, first and second violins, violas, violoncellos, and string basses. The average high school orchestra will probably lack some of the following: piccolo, English Horn, possibly a second oboe, bass clarinet, possibly a second bassoon, contrabassoon, possibly two of the horns, harp, and timpani. Standard orchestrations, such as those of Beethoven, Mendelssohn, Brahms, Tchaikovsky, and Mozart, are not provided with cues making substitutions possible. It will be impossible to play these orchestrations because of missing instruments and instrumentalists.

It may also be pointed out that the classic orchestra is not so full in that parts are not consistently written for clarinets, trombones, and trumpets. Generally the contrabassoon, the piccolo, bass clarinet, and the English Horn are omitted. Even if the classic orchestra might have been smaller, other performance techniques such as clarity and finesse of technique compensate for the smaller and reduced instrumentation.

Within the woodwind parts of the standard orchestration certain problems are present when a high school student is expected to perform the parts. Generally speaking, his technique is such that he is not able to perform some of the notes without difficulty. While concentrating on his technical limitations, he can not devote sufficient attention to the interpretation of the music. The parts were originally intended for mature players who have control of their instruments in every respect; the younger players lack a mature tone, a mature technique, and the assurance needed for performing the standard works.

The flutists will need to rest their lips often and will probably have difficulties in regard to range. Articulations will present difficulty. The oboist will experience difficulties in breathing tech-

niques as he attempts long phrases with little opportunity to expel unused quantities of air. Control of dynamic levels will confuse the oboe player. Transposition difficulties will disturb the clarinet player, for many of the standard clarinet parts are written for A Clarinet rather than for the B Flat Clarinet. Clef problems will perplex the bassoon player, for the bassoonist is expected to have command of the bass, tenor, and treble clefs. Flexibility in the extreme upper and lower range as well as articulation problems -- the legato and staccato style of bassoon playing -- will tax the high school bassoonist.

After the classic period, four horns are usually specified in most orchestras. In many of the older orchestrations these horn parts are specified for horns built in keys that are obsolete in the present day. The young horn player will need a complete knowledge of transposition techniques. The high school horn player will have much difficulty in hearing the intervals of an unconventional nature that are found in modern music. Furthermore, the high school horn player does not always have command of special effects such as muting, stopping, or brassy effects. Modern music demands more than four horns occasionally; Stravinsky writes for as many as

eight horns.

Within the high school trumpet section a problem arises that is consistently found. The high school trumpeter often lacks a conception of orchestral playing. The high school trumpet player is prone to have formed his conception of playing on the lyric style as used in the dance band and the concert band. This is true to a lesser degree of the trombone players.⁴ Also, the trumpet parts are often scored for unusually pitched trumpets necessitating a knowledge of transposition.

Clef difficulties arise out of the fact that the trombonist is not acquainted with the tenor clef. Many trombonists do not have adequate command of the legato style of playing.

Because of the bigness of the brass tone and the immaturity of the high school string tone, balance problems may result between sections. Less experienced brass players, especially, will not have control of the dynamic levels.

High school brass players must be given opportunities to work up to the higher notes and can not be

4. Kennan, K., The Techniques of Orchestration, p. 133.

expected to make quiet entries on the higher notes. Their range is often acquired at the expense of tone and control.

Thus far, the discussion of wind playing in the high school orchestra has avoided one of the most important problems--that of playing in tune. If standard orchestrations are to be used, the players must have sufficient technique. Too often this technique is gained at the expense of intonation. The important thing seems to be playing the notes, not how they sound.

Rhythmical problems of standard works and the counting of measures of rests provide additional problems. However, if there are many factors which discourage the use of standard orchestrations from the standpoint of the wind player, there are even more short-comings from the standpoint of the string players.

Within the standard string parts many study and performance problems are found; following is a list of such difficulties:

- I. Much left hand technique is demanded.
 - A. Smooth shifting into positions.
 - B. Rapid fingerings.
 - C. Fingering for double, triple, and quadruple stops.
 - D. Performance of natural and artificial harmonics.

- 10
- II. The standard string part is unedited so there are not fingerings or positions indicated.
 - III. Bow techniques that students have not yet mastered are called for in the writing.
 - IV. Since the parts are technically difficult, there will be many problems of intonation arising from the fact that the player does not have proper control of position work or shifting.
 - V. The bass player will have difficulty in playing clearly and correctly rapid parts that double the cello section.
 - VI. The string parts in the standard orchestration are usually of equal strength. Since the high school orchestra may be weak in second violins, in the viola section, or the cello section, problems of balance and prominence of parts may arise.

Aesthetically speaking, music that is to be played effectively must be understood by the students performing it. Much of the materials found in the standard orchestrations is above the comprehension of the students.

The preceding discussion of the difficulties of performing standard orchestrations in the high school does not mean to imply that there are no standard orchestrations suitable for use. The conductor may select standard works and use parts of them to develop sight-reading and to develop certain styles of playing. In playing the standard orchestrations the conductor may

feel that the level of public performance is never reached; however, valuable experience in meeting the demands of certain styles of playing will have been gained. Any choice of materials, standard or otherwise, must be made with the technical limitations of the players in mind. Material used should be selections that can be performed well.

Horace Jones states that it is far better to develop some simple piece to the utmost of your technical and artistic capacity than to strive after some great work far beyond the reach of the group.⁵ High school groups often try to play materials far beyond their ability both technically and interpretatively. An easy looking piece of Haydn or Mozart may look thus to the eye, but demand extremely high technical finesse and control.

What then is the conductor to do for suitable materials? Arthur Fiedler answers the questions by saying that the musical director must look among two kinds of music available--original music to be played

5. Jones, H., "Creating a School Orchestra," Etude, February, 1951, p. 19.

as the composer intended, and arrangements or simplifications of practically any symphonic work. Either, he believes, is good as long as the original works are of sufficient interest to hold youthful attention, and the arrangements are valid musically and not merely cheap editions of the themes or tunes. He feels that young people should be pleasantly introduced to fine music in such a manner.⁶

In summary, the following qualifications for the selection of literature are of importance:

1. Is it interesting melodically, harmonically, and rhythmically?
2. Is it within the technical limitations of the people to play it?
3. Does it seem to have balance and proportion?
4. Does it have basic unity and cohesion?
5. Are instrumentation and arrangement satisfactory?
6. Does it fit the occasion or purpose for which it is to be used?
7. Is it the right length?⁷

6. Fiedler, A., "Let's Help Our Young Orchestras", Etude, November, 1949, p. 13.

7. Righter, C. B., op. cit., p. 67.

II

The Orchestra's Role in Education

The orchestra enjoys a unique place in the educational scheme of today; the effect of good music and the lasting impressions of good music upon the character have long been recognized. Carleton Lee Stewart, in his article, "A Word for the High School Orchestra," lists six advantages that accrue to the participant from his playing a musical instrument in an orchestra:

1. The orchestra offers the student an outlet for his emotions. This release of emotions is necessary for healthful and well-balanced living.
2. Music is a cultural force, and through participation in the orchestra, the student forms habits of living with music that make him turn automatically to it in later years.
3. Orchestral participation offers social benefits.
4. The orchestra trains an individual in self discipline -- adherence to practice schedules and rehearsal schedules are examples.
5. Orchestral participation gives the individual experiences in working with others subjugating his personal desires to the desires of the majority.
6. Orchestral participation develops self reliance.¹

1. Stewart, C. L., "A Word for the High School Orchestra," Music Educators Journal, January, 1944, p. 31.

The writer feels that both the band and orchestra have an important place in the musical program of the schools. It is readily understood that the band is a more spectacular organization with its showy uniforms and bright shining instruments. An appeal is made to great numbers of children and adults alike through the pageantry and show of the football band. The concert band, however, is an artistic organization just as is the orchestra; it is another type of organization that makes its appeal through a different musical medium than does the orchestra. Each organization serves different functions within the school, and both the band and the orchestra obtain musical effects that the other can not.

The literature for orchestra, written by master composers, is some of the very best that music has to offer. This is explained by the fact that in 1759 the Mannheimer Orchestra established an instrumentation that has been basic ever since. Since composers were writing for the same type of orchestra composition has matured in almost two hundred years of the orchestra's existence. The many varieties of tonal color in the orchestra make every selection played a new and different experience for the performer. The many

varieties of tone and the presence of every dynamic shading from a very subdued soft shading to a boisterous loud level gives great aesthetic value to the music being played.²

The band, on the other hand, was forced to depend upon transcriptions from orchestral literature for a great number of years. The band originally was not a concert organization. Consequently, no serious composer would consider it as an artistic medium. In 1830 the band's instrumentation was systematized by the German, Wilhelm Wieprecht. However, at that time the orchestra was still labelled with the greatest dignity and prestige. Composers, up until recent times, were often trained in Europe and trained in composition for the orchestra, piano, string quartet, or violin; they learned to compose for something other than the band. Only recently in the twentieth century have great composers come to think in terms of original compositions for the band. The literature of the band is becoming more worthwhile because serious composers like Gustav

2. Riehl, J. O., "Band and Orchestra Values Contrasted," Instrumentalist, March-April, 1949, p. 28-29.

Holst, Ralph Vaughan Williams, William Schumann, and Percy Grainger respect and treat the band as an artistic medium of musical expression.

One of the most disturbing factors has been the gradual disappearance of the high school orchestra from the musical scene. In a study of the decline of the string situation, Quaintance Eaton gives the following statistics concerning the string shortage:

"Taking the period just before the depression of the early thirties as a norm, 100 percent, string teaching and study dropped 80 percent, to 20 percent of the normal in the next few years."³

The musical need today for the high school amateur orchestra is great. Students entering college are often under the influence of the showy marching band's music and believe that a noisy march is about the world's greatest music and that a triple-tongued solo on the cornet is the ultimate in music. They actually believe the word orchestra to be synonymous with dance band.⁴

Why has the high school orchestra failed to develop? There are numerous reasons which will be

3. Eaton, G., "S.O.S. for Symphony Strings," The Instrumentalist, March-April, 1949, p. 14.

4. Waller, G. R., "Good String Class Teaching," Music Educators Journal, November-December, 1944, p. 36.

discussed in the paragraphs that follow.

Contributing greatly to the collapse of the high school orchestra was the lack of suitable materials with which to develop, train, and sustain the orchestra. These materials were similar to those mentioned in Chapter I and were wholly inadequate. As a result of the use of these unsuitable materials, there was no attempt or stress put upon the acquisition of a good orchestral tone or upon balance between strings and winds; it was no wonder that the students did not play willingly this literature that was not interesting or satisfying.

The high school orchestras further failed to achieve what should have been their unique place in the musical pattern of secondary education because their conductors tried to imitate the programs of professional orchestras. The music of the professional orchestra was totally unsuitable to the amateur high school orchestra. (This reverts back to the problems of materials and literature again.)

Students were further discouraged from playing stringed instruments by teachers who stressed a soloistic career and drilled them on a few concertos and several display pieces while their general musical

development was neglected totally. These "would-be-soloists" had little chance as soloists and their musical equipment was inadequate for effective amateur or professional orchestral participation.

The lack of well-trained instrumental teachers in the public school orchestra also discouraged the string programs. The superintendents did not check the orchestral qualifications of the person being employed, and many people who could direct an orchestra rather than develop an orchestra were employed. The teachers, too, held the idea that stringed instruments are much more difficult than the winds to teach and that students must spend years of drudgery on a stringed instrument before he is actually ready to play. They did not accept anyone for instruction except the student showing unusual progress in music. Affiliated with the lack of the enthusiastic string instructor was the lack of interest on the part of the superintendent, musical director, and the parents. Interest was concentrated on the show and pageantry of the attractive band; therefore, the orchestra was neglected. Before any program can ever gain impetus, it must have the wholehearted support of the people in the administration.

This belief, just mentioned, that strings

were more difficult to teach than winds, led to the over-emphasis of the band and the under-emphasis of the orchestra. The public school teacher, furthermore, was not required to take courses for preparation of teaching stringed instruments, but was required to take instruction on the wind instruments.

One of the principal factors in the decline of the string program was the fact that students on the stringed instruments were subjected to years of drudgery and unsatisfying musical experiences. Students do not endure and attend to something that is not satisfying, purposeful, or meaningful to them.

How can the string situation be improved and made more effective? Many schools are improving their string program by following some of the following principles:

1. By teaching classes of strings, the instructors are developing players that are able to play well in an ensemble. The instructors are making their experiences in these classes meaningful, purposeful, and enjoyable. String playing is made interesting and not a task of drudgery.

2. Orchestra conductors are now using literature that is more suitable than was the former literature. They are trying to choose literature within the technical and aesthetic limits of their group. The standards of repertory and the breadth of the scope of their repertory are being raised.

3. The orchestra is being put on the same

footing as the band, even to the point of uniforming, if necessary. The program must be glamorized and sold. The orchestra must become functional within the music department and must become a vital part of the school's activities.

4. If a string program is to flourish, the administration must be actively interested and encourage it.

5. Motivation for the orchestra has been broadened further than just preparing for the next concert. The orchestra has become a part of the school's functions and plays an integral part in the life of the school.

6. Administrators are checking the qualifications of the personnel employed for string teaching.

III

Orchestration as a Beneficial Skill

A knowledge and command of the techniques of orchestration are an asset for the orchestral conductor. Since orchestration is essentially a type of tonal painting, the orchestrator can receive much satisfaction from the completion of the creative activities involved in doing an orchestration and its subsequent performance. By studying a selection written for some other medium and then conceiving it as an orchestral composition, or by adapting an orchestral composition, the conductor acquires insights into the music.

By producing a score, the conductor gains an understanding of score reading. First of all, in the production of a score, the arranger becomes familiar with the mechanical aspects of scoring, i.e. he becomes acquainted with the type of parts that instruments play, the capacities of instruments, the line-up of parts on the score, the transpositions used, and the various clefs used.

In the production of a score, the orchestrator develops his aural imagination. He must conceive single instruments in soloistic passages as well as in families

of instruments and full ensemble. The orchestrator must be able to conceive proper balance and the tone colors. Practice, such as involved in orchestrating, makes the printed score of an unheard work become more audible mentally while it is studied.¹

A third insight gained by the orchestrator is that the orchestrator-conductor becomes more conscious of clarity of lines, blends, and balance in the score that he is conducting. More will be said about this insight into clarity of line later in this chapter.

Another benefit that is gained from the preparation of scores is that the conductor will be able to look at the score and see and hear it as a whole, hearing its special effects and sounds rather than seeing it as a group of isolated lines. The orchestrator must be able to hear parts that he is writing as they go together to make up the total effect.

Insight into the very nature of music is another contribution of orchestration. The arranger becomes more conscious of the nature of the phrase. He

1. Jacob, G., Orchestral Technique, p. 1.

develops a feel for the phrase and becomes conscious of the style of performance given it, noting whether it is carried through and ended gracefully or abruptly.²

By actually orchestrating, the conductor realizes the problems of the melodic line and the accompaniment line. Thinking in terms of the carrying power of instruments, the orchestrator-conductor realizes that stress must be placed on the melody so that it predominates. The accompaniment must be treated in such a way that the theme will always be clear and effective. Conductors and students alike must realize the necessity of appropriate emphasis in each part. Through a study of orchestration, the conductor notices these problems of line while they are conceiving tonal balance.

As the orchestrator arranges, he becomes increasingly aware of the subtleties of harmony. As Frank Mannheimer, an eminent concert pianist, pointed out in a lecture recently, each chord has a particular note that gives it its characteristic color; for

2. Righter, C. B., Success in Teaching School Orchestras and Bands, p. 181.

example, in a tonic major chord, the major third gives the characteristic color; the same is true of other chords. As he doubles parts and notes, the orchestrator becomes increasingly aware of harmonic color. The resolution or progress of these color tones must be stressed as they proceed or resolve. As the orchestrator gains this knowledge, he is able to convey this subtleness to his orchestra thus enriching the harmonic color of the composition.³

The orchestrator must think in terms of dynamics and balance to orchestrate effectively since all of the instruments vary in power and dynamic levels. This will carry over to his musical growth and work as a conductor. He will gradually become more conscious of the balance and blend between parts; e.g. a flute solo in the ~~lower~~ register cannot be heard if the accompaniment is very loud. The conductor must recognize this, and, if need be, change the dynamic markings in the accompanying parts. Technical facility and beauty of expression mean nothing unless

3. Ibid, p. 172.

presented in an audible and understandable combination of instruments.

By actually writing and imagining contrasts in volume, the orchestrator-conductor realizes the importance of dynamic levels in making music effective and in helping music convey meanings to the listeners.

Since the orchestrator thinks in terms of tonal blend and tonal contrast, the conductor-orchestrator will recognize that certain parts must be marked and played at a dynamic marking higher or lower in order to balance with other instruments. Thinking in terms of tonal contrast, the role of color becomes of prime importance. Dynamic levels must be observed if any particular sound is to predominate.

As pointed out before, orchestration is a creative experience and results in great satisfaction to the orchestrator. A keen feeling of satisfaction is felt by the conductor when his arrangements are played by his organization. The players will respect and hold the conductor in higher esteem when they have performed his works in the organization. The high school orchestra offers an excellent outlet for creative activities of the high school orchestra conductor and at the same time enables him to grow musically.

IV

The Techniques of Rescoring

An important and vital phase of the school orchestra conductor's training is developing the ability to edit and to adapt scores and parts for usage by this particular group. C. B. Righter writes in his book, Success in Teaching School Orchestras and Bands, that the objective of editing scores and parts is

"securing a more satisfactory musical performance from groups of players which, as units, are not wholly adequate for the task at hand. Almost no group of amateur players is perfectly adapted to the performance of a musical work which has been arranged on the assumption that all players would be possessed of equal ability."¹

By rescoring, editing, or adapting significant music by famous composers, it can be performed by a high school orchestra. This, of course, means much work for the conductor. He will be repaid when the immature, though ambitious player gains a new sense of satisfaction and accomplishment instead of frustration and discouragement when he is given a part that

1. Righter, C. B., Success in Teaching School Orchestras and Bands, p. 80.

he is capable of performing.

The fact that variability in instrumentation is so great between one group and another emphasizes the need for editing scores and parts. At one extreme, small groups with limited abilities performing on an assorted group of instruments form the orchestra. At the other extreme, in the more progressive and prosperous high schools, there are orchestras that have almost reached the proportions of semi-symphonic in size, instrumentation, and ability.

Kent Kennan states that arrangements and compositions are usually prepared for these two different types of orchestras with the instrumentation similar to the lists that follow:

I. Small Orchestra

1 flute
1 oboe
1 bassoon
2 clarinets
2 horns
2 trumpets
1 trombone
2 timpani
percussion
piano

strings

II. Larger Orchestra

2 flutes
2 oboes
2 bassoons
2 clarinets
4 horns
2 trumpets
2-3 trombones
2 timpani
percussion

strings²

2. Kennan, K., The Technique of Orchestration,
p. 278-279.

The two types of orchestras listed on the previous page represent the average instrumental scoring. Composers, in order to gain particular effects, often score for unusual or less popular instruments, such as the English Horn or E Flat Clarinet. Because such parts are written, the director must make appropriate substitutions if the situation does not offer these instruments. Considering these two lists as a standard instrumentation, it is evident that considerable editing must be done to adapt a standard orchestration that is written for the entire woodwind family, the entire brass family, and the harp.

In rescoring or editing, numerous techniques are involved. One of the first is the reinforcement of parts. Parts need to be reinforced if a single instrument or a section is incapable of securing the proper balance. In scoring for the high school orchestra it is advisable not to do too much solo writing; independent parts are used with discretion. Doublings between strings and winds will frequently be found in the high school orchestration giving weight and solidity to the passages. However, in the use of doublings, care must be taken to avoid doublings that constantly give a thick, muddled, or undesirable mixed tone. Through the

use of reinforcing parts an arrangement should sound well with either a large or a small orchestra. In addition to actually writing out the reinforcing parts that are intended to be played consistently, cues may be used which indicate that a part is to be played if the instrument named is missing.

Connected with the subject of Cueing instruments is the problem of substitutions. Where should cues be placed for the different instruments? Some general suggestions for substitutions are as follows:

Oboe - cued for trumpet (usually muted), clarinet, flute, or violin.

Bassoon - cued for cello, tenor or baritone sax, bass clarinet, trombone, baritone horn, or horn.

Horn - cued for trombones, trumpets, bassoon, strings, or low clarinet.

Viola - cued for clarinets or the writing of a third violin part.

English Horn - cued for oboe, clarinet, or alto sax.

If it is possible that the instruments receiving the cue will be missing, a cross cue should be provided so that parts can be played or reinforced. This cross cue should be indicated in the score.

The conductor should be able to supply an entirely new part if no part is available in the

orchestration; e.g. if no trumpet parts are included in a particular composition, and the conductor feels that they should perform on this number, then he has the responsibility of writing the parts or substituting other parts.

If a standard work is to be played, the director should study it carefully, watching for the parts that might be written for instruments sounding in different keys from those that are in use today. Such parts as the A Clarinet, the A or D Trumpet, the Horn in D, should be transposed and rewritten if the player performing the part is not skilled in transposition.

Much valuable rehearsal time will be saved if the conductor studies and revises, if necessary, the dynamic scheme before rehearsing. Be attentive to the fact that the accompaniment parts and the melodic line must balance properly. Brass players often have a tendency to overblow the other instruments and the dynamic marking on their particular parts should be indicated with this in mind.

Simplification will occasionally be necessary. String parts often must be simplified to suit the individuals playing them. Such simplifications as the

rewriting of sixteenth note passages into eighthnote patterns, the Alberti type filler parts, and the writing of parts in octaves for the player that can not play in the higher register are all necessary.

Fingerings, positions, and bowing must be carefully studied and then notated on the principal player's part for each section. If this is done, members of the section may consult the principal. The editor should carefully check the double, triple, and quadruple stops demanded to see if the ones used are easily obtained by inexperienced players. If they can not be obtained easily, they must be rewritten as divided parts. Arrangements that frequently call for divisi strings are not appropriate for the average high school, because the divisi weakens the tone of the string section. Parts should be edited so that they allow the player to remain in his playable range. Harmonics must be used sparingly. Above everything else, each part should be enjoyable for the player having genuine musical appeal making it challenging enough to be interesting.

If rehearsal letters or numbers are not included on the published copies, it is wise for the director to make this addition. This will save time

and facilitate rehearsals where numerous stops to rehearse difficult spots are required.

In making adaptations, the conductor must be guided by the dictates of musical artistry.³ These revisions should be made only when it is of absolute necessity. If one can avoid it, one should not deviate from the musical idea or intent of the composer. It should be firmly understood that these techniques are used only to make particular compositions playable by certain groups and not with the purpose of bettering the composer's original ideas.

Since the conductor knows his own particular organization and his performers better than anyone, he should feel secure in writing for the individuals as he knows their shortcomings and limitations.

3. Righter, C. B., op. cit., p. 80.

SUMMARY

The immature student of music often fails to take ^{the} a study of orchestration seriously. Since the student has never developed an orchestra, he not conscious of the many problems of writing for the young player. Therefore, since he is not aware of the problems, it is very difficult to point out various relations between the study of orchestration and the insights that it can give into the numerous problems of performing music satisfactorily with high school groups.

The writer strongly believes that the study of orchestration is very practical and necessary. As was pointed out, the problem of literature contributed to the decline of the high school orchestra. The literature used was not within the child's level of understanding. The levels of the reading program mature in thought gradually. Why shouldn't the music used in training and developing an orchestra mature gradually? Fourth graders certainly can't undertake to read Molière. Why then should they be expected to perform a Beethoven Symphony? Why should they play the music of the theatre orchestra? Conductors of the period

failed to realize that children needed music adapted to their needs, problems, and capacities.

The student develops a concept of the qualities of well-written and well-orchestrated literature through the orchestration program. After a study of this kind, the student will be able to examine an arrangement and evaluate its musical worthiness at once. He will be able to decide whether it is suited to his group before it is actually performed by the orchestra.

Since there is not an over-supply of good high school orchestral materials, the conductor will often discover that he can not find a selection appropriate for a special occasion. When the skill of arranging has been developed, he will be able to orchestrate selections that he can not obtain otherwise. Not only does this serve his immediate needs, but he has added to his library a piece of literature written expressly for his group. Through his study, the conductor will have acquired the skill of adapting standard orchestrations to the abilities of his group. This enables the director not only to expose his group to the very best literature written, but also to give them music that is adapted to their individual abilities.

In addition to the practical values of providing literature, the arranger also gains insight into the problems of performance. An awareness to the musical problems is developed, because he realizes the relative importance of the musical phrase, the melodic lines, the accompanying parts, the harmonic devices, the dynamic contrasts, and the problems of balance.

Furthermore, the music arranger makes extensive use of his aural imagination. The arranger knows how a particular arrangement will sound because of his training in tone arrangement and instrumentation. Therefore, he has a conception of how something actually sounds as he stands before his groups before they perform it.

The correlations between the written skills of orchestration and the problems involved in actual performance of a high school orchestra have been indicated. The skill of orchestration proves invaluable as the conductor teaches and develops the musicians in his high school orchestra.

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