379 N81 No. 3585

A STUDY OF FOUR SOLO WORKS FOR TUBA

THESIS

Presented to the Graduate Council of the

North Texas State University in Partial

Fulfillment of the Requirements

For the Degree of

MASTER OF MUSIC

Ву

Donald L. Westby, B. M.

Denton, Texas

August, 1967

TABLE OF CONTENTS

	Pag
LIST OF	ILLUSTRATIONS
Chapter	
I.	INTRODUCTION
II.	SONATA FOR BASS TUBA AND PIANO BY THOMAS BEVERSDORF, 1956
	Movement I Movement II Movement III
III.	SONATA FOR TUBA AND PIANO BY PAUL HINDEMITH, 1955 2
	Movement II Movement III Movement III
IV.	SERENADE NO. 12, FOR SOLO TUBA BY VINCENT PERSICHETTI, 1963 4
	Movement I Movement II Movement III Movement IV Movement V Movement VI
Λ.	SONATA FOR TUBA AND PIANO BY ALEC WILDER, 1963
	Movement I Movement II Movement III Movement IV
VI.	conclusions
	Structure Melody Harmony
BIBLIOG	RAPHY

LIST OF ILLUSTRATIONS

Figure					Pa	g e
1.	Beversdorf, Sonata, First Subject, Measures 15-18.	Movement, First	•	•		4
2.	Beversdorf, Sonata, First Subject, Measures 40-46.	Movement, Second	•		•	5
3.	Beversdorf, Sonata, First Introduction, Measures 1-8	Movement,	•	•	•	7
4.	Beversdorf, Sonata, First Pause, Measures 78-80	Movement, Use of a	i •	*	•	9
5•	Beversdorf, Sonata, Second Subject, Measures 1-8	d Movement, First	•	•		10:
6.	Beversdorf, Sonata, Second Subject, Measures 40-47.	d Movement, Second	•	•	•	11
7.	Beversdorf, Sonata, Second Imitative Accompaniment, 1			•	•	12
8.	Beversdorf, Sonata, Second Chordal Accompaniment, Mes	d Movement, Static asures 16-19	•	•		13
9.	Beversdorf, Sonata, Second Imitative Interlude, Measu	d Movement, ures 21-26		•		14
10.	Beversdorf, Sonata, Second Harmonic Progressions, Mes	d Movement, Quartal				15
11.	Beversdorf, Sonata, Second Melody, Measures 61-64.	d Movement, Return	•	•		16
12.	Beversdorf, Sonata, Third Subject, Measures 1-9			•		18
13.	Beversdorf, Sonata, Third Pitch, Measures 168-173.	Movement, Repeated	i	·		19
14.	Beversdorf, Sonata, Third Subject, Measures 102-109	Movement, Second				20

Figure		P	ag e
15.	Beversdorf, Sonata, Third Movement, Light Texture in Piano, Measures 11-18	•	2 2
16.	Beversdorf, Sonata, Third Movement, Heavier Texture in Piano, Measures 205-209	•	23
17.	Beversdorf, Sonata, Third Movement, Use of a Brief Pause, Measures 222-224	•	23
18.	Beversdorf, Sonata, Third Movement, Piano Interlude, Measures 248-265	*	25
19.	Beversdorf, Sonata, Third Movement, Final Cadence, Measures 315-321	•	26
20.	Hindemith, Senata, First Movement, First Subject, Measures 1-15	• .	28
21.	Hindemith, Sonata, First Movement, Second Subject, Measures 28-31	•	31
22.	Hindemith, Sonata, First Movement, Second Subject Expanded, Measures 51-60	•	31
23.	Hindemith, Sonata, Second Movement, First Subject, Measures 1-18	•	33
24.	Hindemith, Sonata, Second Movement, First Subject in Piano, Measures 19-29	•	34
25.	Hindemith, Sonata, Second Movement, Second Subject, Measures 43-47	•	34
26.	Hindemith, Sonata, Second Movement, Recapitulation, Measures 71-75		35
27.	Hindemith, Sonata, Third Movement, First Subject, Measures 1-10	•	36
28.	Hindemith, Sonata, Third Movement, First Subject Accompaniment, Measures 1-3	•	37
29.	Hindemith, Sonata, Third Movement, Scherzando, Measures 37-40	•	38
30.	Hindemith, Sonata, Third Movement, Tuba Interjection of Scherzando, Measures 45-48	•	39
31.	Hindemith, Sonata, Third Movement, Cadenza, Measures 80-85	•	40

Figure		1	Page
32.	Hindemith, Sonata, Third Movement, Cadenza Accompaniment, Measures 80-81	٠	41
33.	Hindemith, Sonata, Third Movement, Recapitulation Accompaniment, Measures 87-88	•	42
34.	Persichetti, Serenade No. 12, First Movement, Introduction and First Subject, Measures 1-11.	•	44
35.	Persichetti, Serenade No. 12, First Movement, Interlude, Measures 19-26	•	45
36.	Persichetti, <u>Serenade No. 12</u> , Second Movement, Theme, Measures 1-7	•	46
37.	Persichetti, <u>Serenade No. 12</u> , Second Movement, Closing Extension, <u>Measures</u> 20-23	•	47
38.	Persichetti, <u>Serenade No. 12</u> , Third Movement, Subject, Measures 1-10	•	49
39•	Persichetti, <u>Serenade No. 12</u> , Third Movement, Extension of <u>Melodic Material</u> , <u>Measures 17-21</u> .	•	49
40.	Persichetti, <u>Serenade</u> <u>No. 12</u> , Fourth Movement, Subject, Measures 1-2	•	50
41.	Persichetti, <u>Serenade</u> <u>No. 12</u> , Fourth Movement, Development, <u>Measures</u> <u>28-35</u>	•	51
42.	Persichetti, <u>Serenade No. 12</u> , Fifth Movement, Entire Fifth Movement, Measures 1-25	٠	53
43.	Persichetti, Serenade No. 12, Sixth Movement, Introduction and Subject, Measures 1-10	•	55
44.	Persichetti, <u>Serenade No. 12</u> , Sixth Movement, Final Cadence, <u>Measures 61-69</u>	•	56
45.	Wilder, Sonata, First Movement, Introduction to First Subject, Measures 1-3	•	58
46.	Wilder, Sonata, First Movement, First Subject, Measures 3-8	•	58
47.	Wilder, Sonata, First Movement, Introduction to Second Subject, Measures 26-27	•	59

Figure		Pa	ıge
48.	Wilder, Sonata, First Movement, Second Subject, Measures 28-33	•	60
49.	Wilder, Sonata, First Movement, Middle Sections, Measures 51-53	•	61
50.	Wilder, Sonata, Second Movement, First Subject, Measures 1-14	•	62
51.	Wilder, Sonata, Second Movement, Second Subject of First Movement, Measures 56-57	•	63
52.	Wilder, Sonata, Second Movement, Octave Doubling, Measures 17-19		64
53.	Wilder, Sonata, Second Movement, First Subject in Piano Part, Measures 7-8	•	64
54.	Wilder, Sonata, Second Movement, Second Subject, Measures 28-35	•	65
55•	Wilder, Sonata, Third Movement, Introduction, Measures 1-4.	•	66
56.	Wilder, Sonata, Third Movement, First Subject, Measures 9-22	•	67
57•	Wilder, Sonata, Third Movement, Second Subject, Measures 55-61	•	68
58.	Wilder, Sonata, Third Movement, Piano Part Based on Introduction to First Movement, Measures 26-27 and Measures 104-105		68
59•	Wilder, Sonata, Fourth Movement, Introduction and First Subject, Measures 1-4.	•	
60.	Wilder, Sonata, Fourth Movement, Second Subject, Measures 30-33		

CHAPTER I

INTRODUCTION

This study will include four compositions which were composed between the years 1955 and 1963. With the exception of the <u>Serenade No. 12</u>, for solo tuba, by Vincent Persichetti, all of the works are for the tuba and piane.

The purpose of this thesis is to study each composition to determine the essential features of the music in regard to the composers' structural, melodic, and harmonic stylistic characteristics. The conclusions of the study will be found in the final chapter.

The labeling of the structural aspect of each movement will be made in reference to the conventional terminology which may be found in almost any textbook on formal analysis. Due to the nature of the contemporary trend toward modifying the traditional structural principles, some labels will be altered to better identify these modifications, yet they will remain within the conventional terminology.

The element of melody will be studied to determine the composers' uses of scale lines and intervals, rhythmic patterns, formal structures, harmonic backgrounds, and the

use of nonharmonic tones. The outstanding factors that contribute to the composers' overall style will be investigated in detail.

The harmonic elements of each individual movement will be studied to determine the composers' uses of basic harmonic structures (ternary, quartal, modal), textures, rhythms, and nonharmonic tones in relation to the harmonic implications. In the three chapters that contain compositions which are composed for tuba and piano, the composers' use of the two instruments as duet-partners (rather than as a sole instrument with accompaniment) will be subject to intense investigation.

CHAPTER II

SONATA FOR BASS TUBA AND PIANO BY THOMAS BEVERSDORF, 1956

MOVEMENT I

Structure: Five-part Rondo Form

Measures

1 - 14 Introduction

15 - 39 A

40 - 59 B

60 - 95 A

96 - 109 B

110 - 131 A

Two downward leaps of a perfect fourth establish the principal motive of the first subject of this movement, as shown in Figure 1.





Fig. 1--Beversdorf, Sonata, First Movement, first subject, measures 15-18.

In the exposition, this subject is stated three times (each becomes longer than the previous statement, due to expansion). Both the melody and the harmony of this movement are built on the combinations of intervals of the fourth (quartal harmony) as opposed to the more traditional music built on the third (tertian harmony). It is easy to observe that the more important notes of this melody (the highest, lowest, and those with longer time value) are usually found in the quartal harmony as chord members or are either a perfect fourth or a seventh above the sounding pitch of the piano when single tones are heard in the piano part.

The second subject of this movement (Figure 2) is much smoother and more relaxing, with the eighth note as the primary rhythmic element and with most of the phrases slurred, whereas the first subject requires a great deal of rapid tonguing.



Fig. 2--Beversdorf, Sonata, First Movement, second subject, measures 40-46.

Again the interval of a fourth is the principal interval, but for this subject it is often filled in with notes from the scale of Eb major. When playing this melody without the piano part one might feel that it was composed in the more traditional style of tertian harmony, but when the piano part is added the quartal harmony is heard. This is perhaps one of the examples of which one critic wrote:

". . . there are times when one wonders whether the piano

is supposed to have any relation to the tuba, as both pursue their own independent ways." and also; "It is a somewhat schizophrenic piece, the piano part becoming quite quartal and dissonant, while the tuba part is more tertian in its melodic lines and generally more conservative." This critic seems to overlook the fact that perhaps this is exactly what the composer was intending to do.

The use of quartal harmony proves to be very effective in the introductory fanfare, as shown in Figure 3.



¹Mary Rasmussen, "Reviews," Brass Quarterly, II, No. 4 (June, 1959), 178.

attacca



Fig. 3--Beversdorf, Sonata, First Movement, introduction, measures 1-8.

The element of syncopation creates additional emphasis on the chords of the right hand, while the left hand plays quite forceful octaves on the stronger beats.

With the entrance of the tuba in the fifth measure, the plane becomes more subdued and when the first subject enters in measure 15 the plane becomes even less pronounced. With each of the three statements of the first subject, before the entrance of the second subject, one may observe a different treatment of the plane part. This variety at no time lessens the importance of the tuba line. The planist's part of the second subject takes on a contrapuntal texture in two voices which at times combine with the tuba line to form a three-voiced counterpoint.

The return of the first subject is again divided into three presentations. A startling pause occurs between the first two parts of this section, when the triplet quarter notes of measure 78 are followed by a measure of silence (two beats) before the piano sounds the same chord which was heard in the opening statements of this movement, as shown in Figure 4.

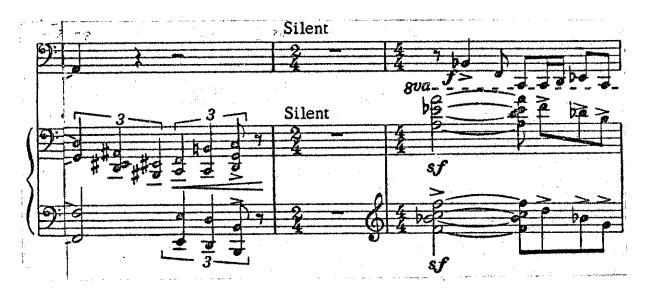


Fig. 4--Beversdorf, Sonata, First Movement, use of a pause, measures 78-80.

After a return of the contrasting second subject the movement closes with a section based upon not only material from the first subject but also material from the fourteen-bar introduction.

MOVEMENT II

Structure: Ternary Form

Measures

1 - 39 A

40 - 62 B

63 - 114 A

There are many similarities between the subjects of the second movement and the first movement. The types of melodies are presented in a reversed order for the second movement.

This first melody (Figure 5) is slurred and smooth, like the second subject of the first movement.

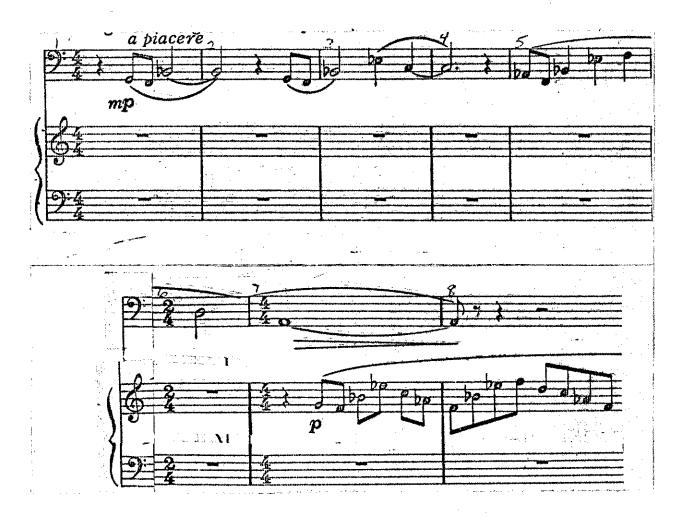


Fig. 5--Beversdorf, Sonata, Second Movement, first subject, measures 1-8.

The contrasting melody (Figure 6), in 4 time, starts with a dotted quarter note followed by an eighth note and has a similar "driving" rhythm (as did the first subject of the first movement).



Fig. 6--Beversdorf, Sonata, Second Movement, second subject, measures 40-47.

Although the second melody of this movement is accompanied by mostly quartal harmony (See Figure 6, page 11.), as was the entire first movement, the first melody of this movement is treated in a variety of different ways. At first accompanied by a subject which is developed out of the opening figure of the subject given to the tuba, it is then given in canonic imitation. (Figure 7.)

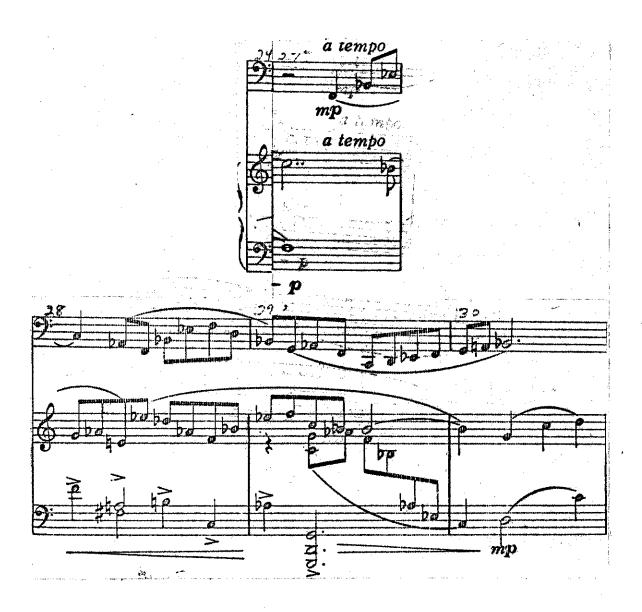


Fig. 7--Beversdorf, Sonata, Second Movement, imitative accompaniment, measures 27-30.

The theme of this imitation is built on the interval of a fourth, as are the melodies played by the tuba.

When the tuba enters in measure 16 the two-voiced canon has a third voice added, but the pitches in the piano part remain the same pitches sounded in the last half of measure 15 and do not change, except for accented pulsations at various times between measures 16 and 20, as shown in Figure 8.



Fig. 8--Beversdorf, Sonata, Second Movement, static chordal accompaniment, measures 16-19.

After another imitative interlude on the piano (Figure 9) the first melody re-enters in measure 27, but with a melody played with the right hand of the pianist which resembles the theme of bars 27-30. (See Figure 7, page 12.)



Fig. 9--Beversdorf, Sonata, Second Movement, imitative interlude, measures 21-26.

For the next interlude and appearance of the tuba melody, the piano part is constructed along the principles of quartal harmony, as shown in Figure 10.



Fig. 10--Beversdorf, Sonata, Second Movement, quartal harmonic progressions, measures 34-36.

Thus in the first section of this three-part form the tuba is accompanied by static chords (measures 16-20), contrapuntal-like material (measures 27-30), and changing

harmonic progressions in a chordal manner (measures 34-39). However, for the first six measures, the tuba is unaccompanied.

The second melody of this movement (See Figure 6, page 11), calls for a range of two octaves with the extreme ends of the octaves usually approached and left by intervals no larger than the leap of a fifth so that they do not offer any technical problems. As the cadential notes lead directly into the return of the first melody (Figure 11), one observes the slowing of the "driving" melody, whereas in the first movement the "driving" melody continued to keep moving at its fast pace until the end of the movement.



Fig. 11--Beversdorf, Sonata, Second Movement, return melody, measures 61-64.

Beversdorf accompanies his similar melodies with similar accompaniments. The smooth, slurred melody of the first section of the second movement is accompanied primarily by a contrapuntal texture which the composer started in the piano in measure 7 (See Figure 5, page 10). As stated earlier, when the tuba enters in measure 16 the piano remains static on a three-note chord for over four measures, after which the

piano enters into a two-voiced counterpoint again. This type of piano part is contrasted with a chordal piano part when the middle section of this movement begins in measure 40. The treatment is similar to that given the similar melody of the first movement. (See Figure 1, page 4, and Figure 2, page 5.) When three or more pitches form the chords in the piano they are usually built on fourths or fifths (inverted fourths).

The movement ends with the slower melody being harmonized with very soft chords which do not progress with the rapidity of the earlier chordal piano part.

MOVEMENT III

Structure: Five-part Rondo Form

Measures

1 - 101 A

102 - 136 B

137 - 247 A

248 - 265 B

266 - 321 A

The principal melody of the last movement is one of the most etude-like melodies in the literature of the tuba.

(See Figure 12.)



Fig. 12--Beversdorf, Sonata, Third Movement, first subject, measures 1-9.

It contains a series of repeated notes and sequences which are both a challenge to the tonguing technique of the performer and a challenge to the patience and tolerance of the listener. An example of one of the more persistent areas in the movement may be seen in the tuba melody from measures 168 to 173 (Figure 13) where the tuba plays a single pitch for a total of thirty-one times.

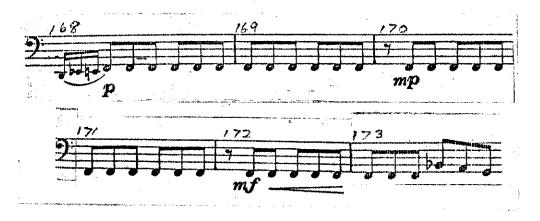


Fig. 13--Beversdorf, Sonata, Third Movement, repeated pitch, measures 168-173.

One wonders whether this is to be labeled a meledy or something else. When the other sections of the rondo break the monotony of this first section it is only for a brief time; out of the total of 321 measures, only 53 contain the contrasting melody. Again the interval of the fourth is the primary interval upon which the melody is built. When scale passages are played by the tubaist they usually are major intonality; when the pianist plays a scale it usually is in one of the church modes.

The interval of a fourth is evident in the meledy of the second section of this movement too, as shown in Figure 14.



Fig. 14--Beversdorf, Sonata, Third Movement, second subject, measures 102-109.

The most apparent contrast is the result of the emphasis on meter as the $\frac{2}{4}$ replaces the $\frac{6}{8}$ in the first section. (See Figure 14, page 20.) Here the quarter note is the principal rhythmic figure (in the previous section the eighth note was the more predominant rhythmic figure). The use of slurred

notes furthers the contrast achieved between the sections of the rondo just as these did in the smoother melodies of the two previous movements.

The same approach to the element of harmony is used in the last movement by Beversdorf except that due to the tempo indicated, allegro con brio, the harmonic progressions do not usually change more than twice per measure. During many of the interludes (Figure 15), the pianist plays the melody in the right hand in the middle register while the left hand plays a two-note intervallic piano part.



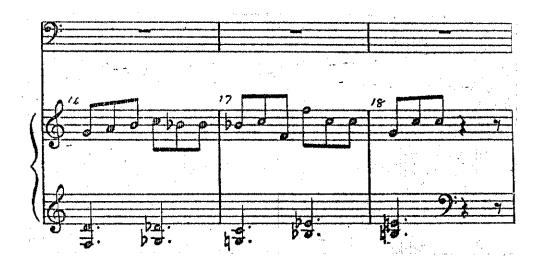


Fig. 15--Beversdorf, Sonata, Third Movement, light texture in piano, measures 11-18.

The texture of the piano part varies from just single pitches (See Figure 12, page 18) to a heavier texture. (See Figure 16.)

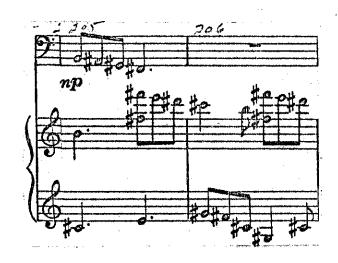




Fig 16--Beversdorf, Sonata, Third Movement, heavier texture in piano, measures 205-209.

The use of a brief pause is once again seen in Figure 17.



Fig. 17--Beversdorf, Sonata, Third Movement, use of a brief pause, measures 222-224.

This technique was used in the first movement and once again is limited to one half $(\frac{3}{8})$ of a measure.

When the second subject enters in measure 102 the piano plays subito pp in block-like chords in quartal harmony for the first half after which a brief counterpoint is heard, but not to the extreme that it was used in the other movements. With the return of this section between measures 248 and 265 (Figure 18) the tubaist does not play at all.



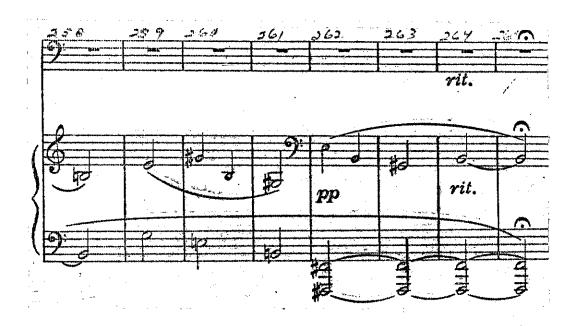


Fig. 18--Beversdorf, Sonata, Third Movement, piane interlude, measures 248-265.

The melody and mood of the slower $\frac{2}{4}$ section are heard, but only in the piano. The piece ends with big chords built on the interval of a fourth in the piano, and an augmentation (quarter notes instead of eighth notes) of the principal melody in the tuba starting in measure 315 and building dynamically until the last measure, where four heavily accented and loud eighth notes end the work, as shown in Figure 19.

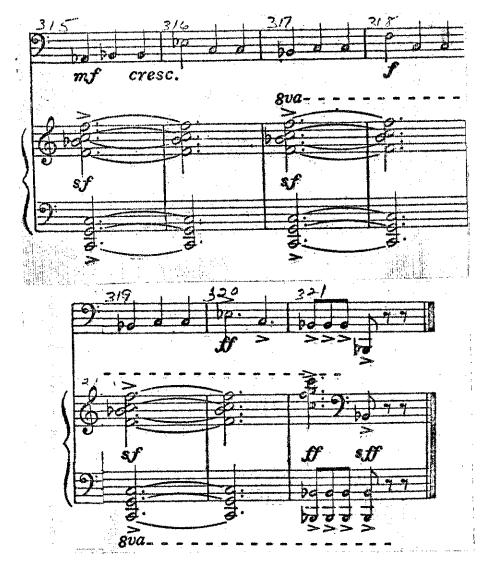


Fig. 19--Beversdorf, Sonata, Third Movement, final cadence, measures 315-321.

Beversdorf uses the quartal system for both the harmonies and the melodies in this work. In every movement the structure and the piano part remain within a conservative framework. Considering the length of time which this piece covers, only a limited amount of new material is presented.

CHAPTER III

BY PAUL HINDEMITH, 1955

MOVEMENT I

Structure: Two-part Form

Measures

1 - 27 A 28 - 73 B 74 - 87 A 88 - 105 B

The two-part structure of this first movement demonstrates that Hindemith, while being independent enough to compose an opening movement in a two-part form, does link himself with the formal heritage of the past by recapitulating both subjects. In the recapitulation the subjects are presented one half step higher than earlier and only fragments of the subjects appear.

Since the composer has written many books and articles about composition, it might be interesting to review some of his comments. In the first volume of <u>The Craft of Musical Composition</u>, the construction of good melodies is discussed. The first subject of this movement is a fine example of what Hindemith was referring to when he wrote:

In a rising interval, the energy of the performer gathers impulse, and the fact that a certain space has to be transversed and a certain physical resistance overcome frees that energy, and exercises an effect of gathering excitement and tension on the listener. The larger the interval, the greater this effect-particularly, again, in singing, or on instruments which show the necessity for additional physical and mental energy more easily than do the keyboard instruments.

The first subject is shown in Figure 20.



Fig. 20--Hindemith, Sonata, First Movement, first subject, measures 1-15.

¹ Paul Hindemith, The Craft of Musical Composition (New York, 1941-1942), p. 188.

This subject not only has some very large rising intervals but also has the more important tones (the highest, the lowest, and those of outstanding metric position) outlining the interval of a second. In conformance with this element of melodic construction, Hindemith wrote, "The primary law of melodic construction is that a smooth and convincing melodic outline is achieved only when these important points form a progression in seconds."2

In regard to the previous quotation, this subject seems to be a textbook model. The leaps are wide (ninths and tenths) and upward, and usually outline the interval of a second. This is not the traditional melody to be found in the tuba literature and is very effective to alert the listeners to the fact that they are about to hear an unusual composition for an unusual instrument, requiring unusual ability in performance.

This subject is quite rigid in the rhythmic placement of the more important tones. They all occur on the beats of the measures, even when the number of beats per measure changes from \(^6_4\) to \(^4_4\). When the tuba has a meter of \(^6_4\), the piano is playing in \(^2_2\); and at the \(^4_4\) in the tuba part we see the piano part written in \(^5_8^6\) with \(^1_{\text{Ungefähre}}\)

Taktvorschrift, \(^1_{\text{dem Metrum des anderen Instruments angepasst.}\), written as directions for the pianist. This also refers to

²Ibid., p. 188.

the $\frac{\pi}{4}$ measures played by the soloist which are accompanied by $\frac{\pi}{4}$ in the piano score.

This melody, like most melodies composed by Hindemith, ends with a downward melodic movement. He was quite concerned with the feelings implied by music, often using the terms tension and relaxation to describe these feelings. "The step from a higher tone to a lower is always felt as a relaxation of tension."

Figure 21 shows the second subject of this movement, starting in measure 28.



³Ibid., p. 188.



Fig. 21--Hindemith, Sonata, First Movement, second subject, measures 28-31.

Although the first subject is a real "ear opener," the second subject is heard more often (it is heard in 64 of the total 105 measures). The tubaist must be content to play fragments of the first subject for 26 measures as the planist dissects and develops the second subject until it is transformed into a much longer melody. (See Figure 22.)



Fig. 22--Hindemith, Sonata, First Movement, second subject expanded, measures 51-60.

When the soloist does enter with the complete second subject, the melody is in the middle register of the tuba and has many accents at a <u>forte</u> dynamic level, and has a driving character which demands complete control. The next entrance by the tubaist starts a ninth above the earlier entrance and is followed by another entrance a second above the second entrance. This places the melody in the highest register of the instrument and permits the tubaist to display some of the rewarding, yet most neglected, sounds available.

When the second subject appears in the recapitulation it is again broken into fragments, as if this material has an A B A form within itself. This ternary form within each melody is typical of most melodies by Hindemith.

MOVEMENT II

Structure: Ternary Form

Measures

1 - 36 A

37 - 67 B

68 - 101 A

Another highly structured melody is the first subject of this movement. It is divided into three sections, as shown in Figure 23.



Fig. 23--Hindemith, Sonata, Second Movement, first subject, measures 1-18.

The tubaist and the pianist exchange functions when the first two sections of this thematic material are played a second time. (See Figure 24.)





Fig. 24--Hindemith, Sonata, Second Movement, first subject in piano, measures 19-29.

Hindemith assigns the tubaist the part of a <u>basso</u>
<u>estinato</u> (ground bass) in the contrasting section of this
movement. The tubaist plays a melody (Figure 25) and
repeats it four times while the pianist plays varying
superstructures over it.



Fig. 25--Hindemith, Sonata, Second Movement, second subject, measures 43-47.

The piano part remains in and above the treble clef for most of this section, as it does for most of the entire work. Rasmussen observes that Hindemith "... approached the problem by writing very thinly for the piano, and confining it to the upper part of the keyboard most of the time when the tuba is playing, a procedure he also used in his string bass sonata." The return of the first subject is scored very "thinly," as shown in Figure 26, where the interval of a seventh (inverted second) is used as the material for the piano part.



Fig. 26--Hindemith, Sonata, Second Movement, recapitulation, measures 71-75.

⁴Mary Rasmussen, "Reviews," Brass Quarterly, I, No. 4 (June, 1958), 240.

MOVEMENT III

Structure: Ternary Form

Measures

1 - 36 A

37 - 86 B

87 - 127 A

Figure 27 shows the first subject of this movement.

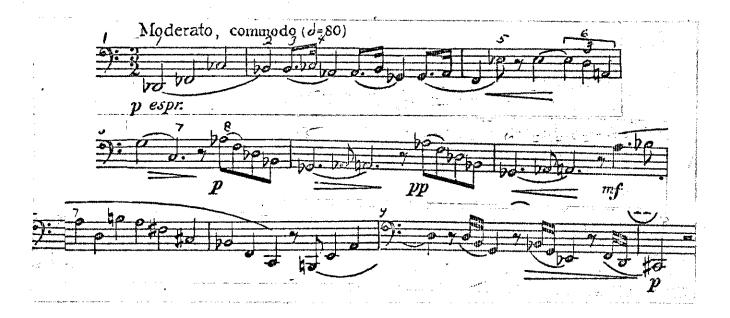


Fig. 27--Hindemith, Sonata, Third Movement, first subject, measures 1-10.

The first four measures provide eight different rhythms (as illustrated with the small numbers in Figure 27). In the beginning, the pianist plays only single pitches from the lowest register of the piano which do not clutter the overall sound that closed chords at this low register would produce. (See Figure 28.)



Fig. 28-Hindemith, Sonata, Third Movement, first subject accompaniment, measures 1-3.

When chords are added to the accompaniment, Hindemith relocates the accompaniment to a higher register of the piano.

After the tubaist has presented and developed parts of the first subject for a total of 36 measures, the pianist abruptly enters into a vigorous scherzando. (See Figure 29.)



Fig. 29--Hindemith, Sonata, Third Movement, Scherzando, measures 37-40.

This scherzando lasts for 38 measures and is played entirely by the pianist, with the exception of a brief interjection by the tubaist, during which time the pianist stops playing. (See Figure 30.)



Fig. 30--Hindemith, Sonata, Third Movement, tuba interjection of Scherzando, measures 45-48.

The pianist continues alone until the tubaist enters with an exact melodic restatement. This time the last note of the melody is marked by a fermata, after which the tubaist begins the middle section of the movement, an accompanied cadenza.

The cadenza (part of which is shown in Figure 31) demands a tubaist capable of rapidly changing his tempo, embouchure, dynamics, tonguing, and phrasing.

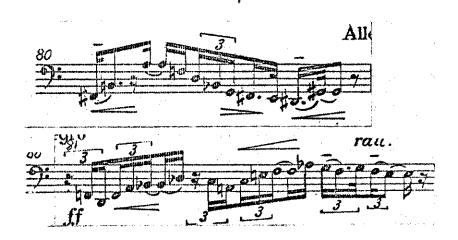




Fig. 31--Hindemith, Sonata, Third Movement, cadenza, measures 80-85.

It is a truly virtuosic passage. The pianist must play an arpeggio with two hand crossings per chord, as shown in Figure 32.



Fig. 32--Hindemith, Sonata, Third Movement, cadenza accompaniment, measures 80-81.

The recapitulation offers a challenge of a different nature to the pianist.

The smooth yet rhythmically complex first subject is accompanied by extremely high sixteenth notes demanding a delicate touch on the keyboard. (See Figure 33.)

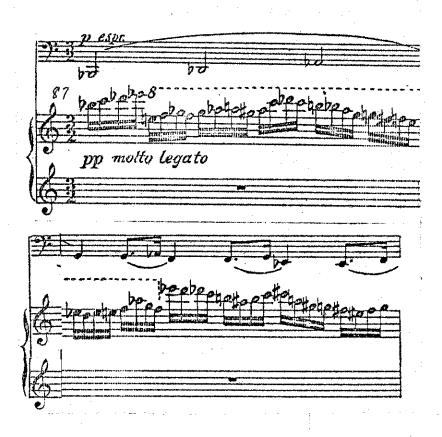


Fig. 33--Hindemith, Sonata, Third Movement, accompaniment to the recapitulation, measures 87-88.

These sixteenth notes continue until the end of the movement and provide an accompaniment unlike any other in the literature of the tuba. It seems that, among the piano scores of all the composers who have written solos for tuba and piano, Hindemith's scores are some of the most sophisticated.

CHAPTER IV

SERENADE NO. 12, FOR SOLO TUBA BY VINCENT PERSICHETTI, 1963

MOVEMENT I

Structure: Interrupted Binary Form

Measures

- 1 3 Introduction
- 4 9 Beginning of Subject
- 10 19 Interruption (development)
- 20 23 Subject Concluded
- 24 35 Recapitulation (interruption not included)

In Persichetti's book, <u>Twentieth-Century Harmony</u>, the creative aspects and practices of twentieth-century composition are discussed. In the section concerning theme and form ideas, Persichetti wrote:

Conflicting formal elements often result in free and imaginative forms, and the whole course of a major work is altered. The impulse that incites the composer to deviate from the predictable must at the same time create a feeling of inevitability of form. 1

In this movement, Persichetti demonstrated that he was sincere about his opinion regarding structure. By interrupting the subject before it was fully presented he was

¹ Vincent Persichetti, <u>Twentieth-Century Harmony</u> (New York, 1961), p. 276.

able to introduce humor into this passage. Figure 34 shows the introduction and the subject, including measure 9, where the development (interruption) starts.



Fig. 34--Persichetti, Serenade No. 12, First Movement, introduction and first subject, measures 1-11.

The fact that this introduction is both very short and quite non-tonal represents some of the main elements of this composer's style. Persichetti's use of modes will be discussed in detail later in this chapter when the fifth movement is studied. A critic's comment on Persichetti's brevity of musical ideas when applied to the tuba was:

. . . the tuba is not the instrument for sustaining long, drawn-out ideas, and that what is to be said must be said quickly. . . . This kind of writing presents a special challenge to the performer, who must be able to change mood, register, and style quickly and convincingly. 2

Syncopated slurred notes, wide leaps, and staccato eighth notes are the three technical problems which must be mastered before this movement may be performed properly. The range is quite high, including many high E's (e, one line E) but it seldom reaches below the E below the bass clef (E₁, Great E).

Fig 35 shows the measure during which the development stops and the subject continues (measure 19) and also the measure where the recapitulation occurs (measure 23).



Fig. 35--Persichetti, Serenade No. 12, First Movement, interlude, measures 19-26.

²Mary Rasmussen, "Reviews," <u>Brass Quarterly</u>, VI, No. 3 (Spring, 1963), 142.

MOVEMENT II

Structure: Theme and Variation

Measures

- 1 7 Theme
- 8 14 Variation I
- 15 23 Variation II

The second movement is titled "Arietta" and is a mere 23 measures long. The expressive melody (Figure 36), contrasts with the "Intrada" (the first movement).

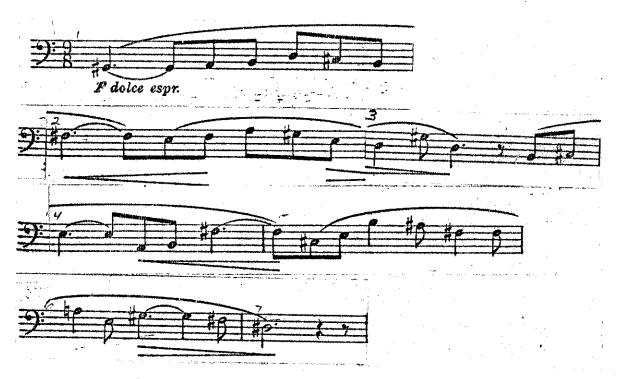


Fig. 36--Persichetti, Serenade No. 12, Second Movement, theme, measures 1-7.

This contrast is necessary when the movements are so short. The theme is varied only two times, once a half step higher

than the original and once a whole step lower than the original. Each presentation of the melody becomes longer than the previous because of extensions within the melody.

Because of the underlying triplet beat and the long dolce expressive slurred lines, this is one of the most lyrical melodies written for the tuba. It lies in the register of the instrument most comfortable for the mellow tone desired (entirely in the bass clef). Figure 37 shows the last four measures, which include some of the extension of the melodic material.



Fig. 37--Persichetti, Serenade No. 12, Second Movement, closing extension, measures 20-23.

The triplet pattern established earlier subsides into longer note values while the sounds diminish and fade into silence.

MOVEMENT III

Structure: Ternary Form

Measures

- 1 10 Melodic Statement
- 11 26 Extended Melodic Statement
- 27 30 Recapitulation

Again, Persichetti has written a movement which implies a number of different types of structural form. The recapitulation is an exact duplication of the original melody (Figure 38) except that a fermata is placed above the last note of the fourth measure and a diminuendo to "ppp" and a gradual ritardando end the movement without the second half of the melody being heard.





Fig. 38--Persichetti, Serenade No. 12, Third Movement, subject, measures 1-10.

He labeled this movement a "Mascheratta," which is similar to a villanella or rural song.

The staccato sixteenth notes of the first half of the melody become slurred in the second half of the melody. In the middle section, the original melody is transposed up a perfect fourth but becomes extended and is followed by seven bars of melodic material derived from the second half of the original melody. (See Figure 39.)



Fig. 39--Persichetti, Serenade No. 12, Third Movement, extension of melodic material, measures, 17-21.

This occurs immediately before the recapitulation and might be interpreted as part of the recapitulation if the two halves of the melody were presented in reversed order.

MOVEMENT IV

Structure: Double Statement and Development

Measures

- 1 10 Statement of Melody
- 11 15 Incomplete Restatement
- 16 35 Development

"Capriccio" is the title of this movement, a very appropriate title when one is studying the formal structure. It appears to be a ternary form with the last two sections reversed. Although the exact form is vague, the two melodic motives which make up the subject are easily recognized, as shown in Figure 40.



Fig. 40--Persichetti, Serenade No. 12, Fourth Movement, subject, measures 1-2.

In his book <u>Twentieth-Century Harmony</u>, Persichetti mentioned some details about melodic motives: "A melodic kernel of two or more tones may form the neucleus from which the subject matter of an entire work is shaped and harmony derived." 3

³Persichetti, Twentieth-Century Harmony, p. 275.

Also, "If a theme is not nourished by its motivic constituents it will lack significance." The two "kernels" or motives of this melody are the slurred triplets and the staccato eighth notes. As the movement progresses these "kernels" are not found as often as they were in the earlier statements of the theme. Figure 41 shows the last eight measures where the triplets are no longer found in pairs and the eighth notes are no longer staccato.

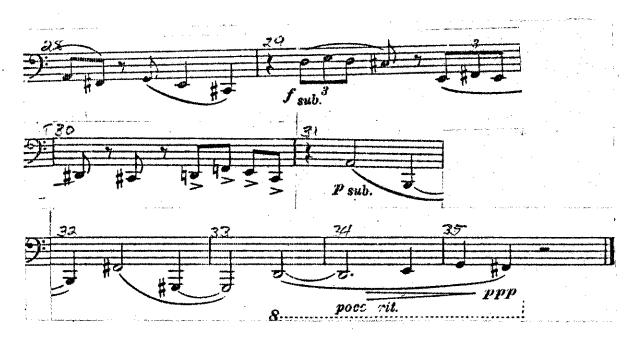


Fig. 41--Persichetti, <u>Serenade No. 12</u>, Fourth Movement, development, measures 28-35.

This movement is <u>vivace</u> and contains more chromatic motion than any of the other movements. The triplets as shown in Figure 41 are always slurred and are always limited

⁴Ibid., p. 276.

to the interval of a minor third. Once again the movement ends "ppp," as do all the movements except the last one.

MOVEMENT V

Structure: Ternary Form

<u>Measures</u>

- 1 4 Melodic Statement
- 5 16 Extended Melodic Statement
- 17 25 Recapitulation

This "Intermezzo" has the same type of structure as that of the second movement. They are both very dolce and expressive and are the slowest and the shortest movements of the work.

Figure 42 is the entire fifth movement.





Fig. 42--Persichetti, Serenade No. 12, Fifth Movement, entire fifth movement, measures 1-25.

It will be used to demonstrate Persichetti's modal style.

In his book <u>Twentieth-Century</u> <u>Harmony</u>, Persichetti states:

A single mode is not necessarily used throughout an entire section. As working materials for compositions the modes may be arranged effectively according to their tension relationships. The greatest number of flats that can be applied to a modal section on a particular tone will produce the 'darkest' mode, the locrian. Subtracting flats (and then adding sharps) in diatonic signature order will produce an arrangement of modes from 'darkest' to 'brightest.' The dorian mode is the middle point and sets the norm.

By applying this statement to a spectrum, one might place the "darkest" to the "brightest" modes in the following order: Locrian, Phrygian, Aeolian, Dorian, Mixolydian, Ionian, and Lydian. These are the seven most common modes used.

This movement is written in two modes, Aeolian and Dorian. The middle section, from measures 10-16, is in the Dorian mode (on E). The first and last sections are in the Aeolian mode (on C#). With the addition of the A# in measure 9, one anticipates hearing B major but this is not what happens. By progressing from the Aeolian into the Dorian mode the modal sequence is from a "dark" mode into a "lighter" mode. Due to the brevity of this movement, this example is quite uncomplicated; usually Persichetti implies more modal changes.

⁵Ibid., p. 35.

MOVEMENT VI

Structure: Modified Sonata Allegro Form

Measures

- 1 10 Introduction
- 11 32 Exposition
- 33 45 Development
- 46 69 Recapitulation

Because of the harmonic relationships which are implied when one refers to the traditional sonata allegro form, the label of the structure of this movement is perhaps a misnomer. However, the melodic material is presented and developed in the same manner that is found in the sonata allegro form.

Figure 43 shows the introduction to the last movement.



Fig. 43--Persichetti, <u>Serenade</u> <u>No. 12</u>, Sixth Movement, introduction and subject, measures 1-10.

It contains most of the motivic material used in this "Marcia." The leaps are great, the rhythm is extremely varied, and the dynamics and accents are contrasted with smooth, slurred passages.

This movement contains such variety that when Rasmussen wrote: "The most striking impression made by the work is of quick shifts of mood, style, dynamics, and articulation." be she might have been speaking of this movement in particular.

Technically, the slurred leaps and the fast accents require flexible embouchures and precise tonguing, respectively. Figure 44 shows the last nine bars of the work when the "FFF" accented notes place a smashing finish to a fine work.



Fig. 44--Persichetti, Serenade No. 12, Sixth Movement, final cadence, measures 61-69.

⁶Rasmussen, "Reviews," VI, No. 3, 142.

CHAPTER V

SONATA FOR TUBA AND PIANO

BY ALEC WILDER, 1963

MOVEMENT I

Structure: Ternary Form

Measures

1 - 48 A

49 - 58 B

59 - 74 A

In music composed by Alec Wilder, one can find many instances of recurring motives. Like the germ motive which can be found in the symphonies of Brahms, Wilder's music often contains a certain amount of "inaudible order" which appears in its full context only after an intense intellectual investigation of the music has taken place. The melody of the first measure of this work is one of the motives which reappears in a later movement. (See Figure 45.)

¹ Manfred F. Bukofzer, <u>Music in the Baroque Era</u> (New York, 1947), p. 366.

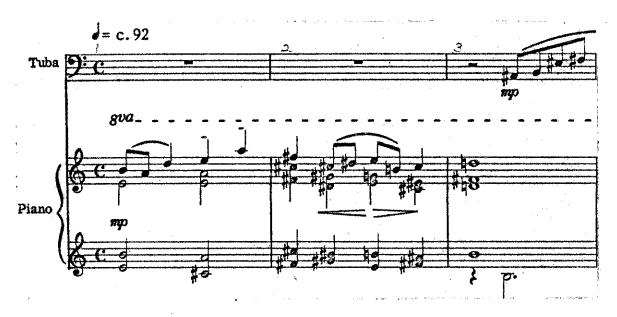


Fig. 45--Wilder, Sonata, First Movement, introduction to first subject, measures 1-3.

A balance between the wide leaps and stepwise motion can be found in most melodies composed by Wilder. This balance may be seen in Figure 46 which shows the first subject of this movement.



Fig. 46--Wilder, Sonata, First Movement, first subject, measures 3-8.

The second measure of the first subject contains the prime motive of the entire work on the first two beats.

These notes (g, a, f#, d) have the primary intervals which may be found, sometimes hidden, sometimes exposed, throughout the entire work.

The second subject has a brief piane introduction. (See Figure 47.)



Fig. 47--Wilder, Sonata, First Movement, introduction to second subject, measures 26-27.

This is played immediately after the introduction to the first subject at the end of the first section of the ternary form, but it is not presented in the last section because the recapitulation presents only fragments of the two subjects.

Figure 48 shows the second subject which contains numerous melodic skips of the interval of the fifth.



Fig. 48--Wilder, Sonata, First Movement, second subject, measures 28-33.

Wilder often emphasizes the interval of the fifth in both the piano part and the tuba melody. Open fifths in the piano part are quite common in the first movement. (See Figure 45, page 58.) In each movement, Wilder composes with a different harmonic style. Unlike the three composers studied previously, he does not favor one particular harmonic style; instead, he changes his style to fit the mood of each movement.

This movement would not have been analyzed as being in ternary form had not the middle section had the same chord progression repeated for forty beats (the D# on the second beat of measure 52 is necessary because the tuba also plays a D#). Figure 49 shows three bars of this section.



Fig. 49--Wilder, Sonata, First Movement, middle sections, measures 51-53.

The tuba melody is so closely related to the previous melodies that only the static harmony in the piano part separates it from the two outer sections.

Wilder, like Hindemith, often places the piano part in its upper register and makes liberal use of octave doubling as can be seen in Figure 45, page 58.

MOVEMENT II

Structure: Ternary Form

Measures

1 - 36 A

37 - 59 B

60 - 75 A

This movement is one of the most enjoyable movements found in the literature for tuba. Both the tuba melodies

and the piano parts contain contrasting elements which add interest for the performer and the listener. The contrast between the staccato eighth notes and the slurred eighth notes is evident in the first subject as shown in Figure 50.



Fig. 50--Wilder, Sonata, Second Movement, first subject, measures 1-14.

In the middle section, when the second subject is being divided between both performers, the second subject of the first movement appears, as is shown in Figure 51.



Fig. 51--Wilder, Sonata, Second Movement, second subject of first movement, measures 56-57.

The appearance of this foreign subject is one of these hidden or inaudible motives, which Wilder places in each of the movements. Here the subject is accompanied by a variation of the original accompaniment to the second subject of this movement. The pitches in the tuba are a half step lower than in the original. (See Figure 48, page 60.)

Figure 52 shows more octave doubling, which results in a very "thin" sound for the plane.



Fig. 52--Wilder, Sonata, Second Movement, octave doubling, measures 17-19.

Here the octave doubling is used in single pitches and in thirds.

After the opening four bars, which are for solo tuba, the pianist starts a pattern which includes triplets. (See Figure 53.)



Fig. 53--Wilder, Sonata, Second Movement, first subject in piano part, measures 7-8.

These triplets contrast with the regular eighth notes in the tuba part and set the mood for the "swing" melody which is the second subject. The piano part for this movement consists of either the octave doublings mentioned earlier or a ground bass with the triplet figure above it.

The second subject (Figure 54) adds a considerable contrast due to the triplets and the slower tempo.



Fig. 54--Wilder, Sonata, Second Movement, second subject, measures 28-35.

Once again one may observe the wide leaps followed by stepwise motion; also, staccato and slurred notes contained within the same melody.

MOVEMENT III

Structure: Ternary Form

Measures

1 - 49 A

50 - 84 B

85 - 122 A

The use of similar motives in each movement is most obvious in the bass line of the piano part which is shown in Figure 55.



Fig. 55--Wilder, Sonata, Third Movement, introduction, measures 1-4.

This bass line was derived from the prime motive which was demonstrated in Figure 46, page 58. Notice that the second measure is an exact repetition of the first measure. Many more examples of repeated measures could be found in this movement. Again, Wilder uses a different type of harmonic style. This piano part has the interval of the third (tertian harmony) as the basic interval of construction.

This entire movement, like the first movement, contains a constantly recurring musical idea. The first subject, shown in Figure 56, is smooth and relaxing.



Fig. 56--Wilder, Sonata, Third Movement, first subject, measures 9-22.

The second subject of this movement, like the second subject of the first movement, has the interval of the fifth as a primary element. Also, like the second subject of the first movement, very little change is made in the piano part so that the feeling of a different section is not as apparent as is more commonly found in the ternary form. The second subject is shown in Figure 57.

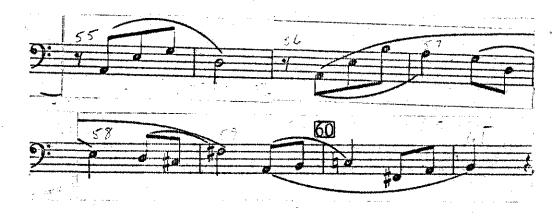


Fig. 57--Wilder, Sonata, Third Movement, second subject, measures 55-61.

Figure 58 shows two instances where the four beats of the first measure of the work are found in the piano part.

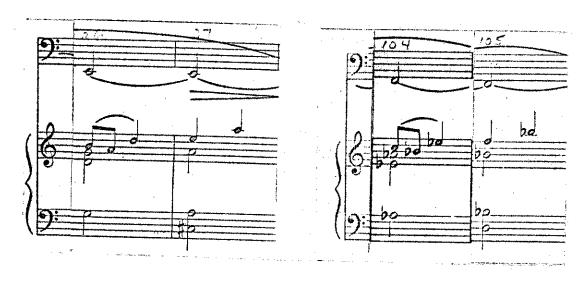


Fig. 58--Wilder, Sonata, Third Movement, piano part based on introduction to first movement, measures 26-27 and measures 104-105.

Both occur when the tubaist is playing a long note at the end of the first subject; however, due to the different piano parts, only a critical ear hears this addition to the piano part.

Once again, the last presentation of the subject is fragmented. This is necessary because most of Wilder's subjects are quite long, as is demonstrated in the first subject of this movement. (See Figure 46, page 58.)

MOVEMENT IV

Structure: Structured Ternary Form

Measures

A 1 - 29
B 30 - 45

A 46 - 57

B 58 - 75 B

A 76 - 85

B 86 - 89

A 90 - 101

The structure of this movement displays Wilder's complete organization of materials. He has organized the smallest details into the master plan of the entire work. The contrapuntal piano part of this last movement is further evidence that non-essential chord tones have been removed. Through the use of a contrapuntal texture of the piano part, wilder has presented another different harmonic style. As in the previous movements, the intervals of the third and fifth are the primary intervals used.

Figure 59 shows the first four measures of this movement which contain many of the outstanding features of the piano.

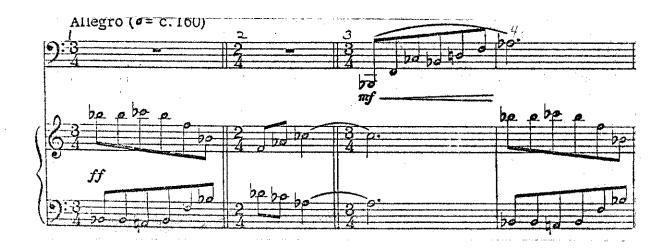


Fig. 59--Wilder, Sonata, Fourth Movement, introduction and first subject, measures 1-4.

Among the most noticeable are the contrary motion and the sparseness of the piano part. Also, the third through sixth notes (cb, bb, d, f) of the tuba melody constitute an inversion of the prime motive discussed earlier.

The two time signatures of $\frac{2}{4}$ and $\frac{3}{4}$ continue to alternate throughout the entire movement except for one measure when $\frac{1}{4}$ is added between two $\frac{3}{4}$ measures. The tempo is allegro with the quarter note equalling 160 beats per minute; embouchure flexibility by the tubaist is an important factor in obtaining a successful presentation of this particular movement.

The second subject, shown in Figure 60, contains a smaller range, no slurs or staccatos, and a repeated rhythmic figure.



Fig. 60--Wilder, Sonata, Fourth Movement, second subject, measures 30-33.

It seems to be more serious than the first subject and remains in straight $\frac{3}{4}$ time whereas the other sometimes has $\frac{2}{4}$ alternating with $\frac{3}{4}$.

This last movement is very short compared with the third movement, and ends abruptly.

CHAPTER VI

CONCLUSIONS

This chapter will summarize the findings of the study, considering the three elements used to determine the composers' musical characteristics: structure, melody, and harmony.

STRUCTURE

Using conventional terminology, the structure known as ternary form was found to be the most common type used. One of the composers chose to use this structure exclusively (Wilder). It should be noted that this use of ternary form is most often merely a framework in which the material is presented in three separate sections, the last of which is closely related to the first; however, the elements of a presupposed harmonic scheme and a middle section that has completely different and contrasting material were not always found to have been used by these composers.

The first and last movements in the work by Beversdorf were structured in five-part rondo form, but the second movement was in ternary form. The composer who deviated furthest from the common musical structures was Persichetti. He feels that composers should take advantage of placing variety in this element by being free and imaginative while

remaining within the traditionally accepted formal structures. His music has an added dimension because of the unique treatment given the structures of the movements and the suite of dances as a whole.

MELODY

In the study of melody, the composers' uses of scale lines and intervals, rhythmic patterns, formal structures, harmonic backgrounds, and nonharmonic tones were the main considerations discussed. These composers wrote melodies for the tuba which were not limited to certain notes, ranges, or rhythmic patterns. It is because of works such as these that the tubaist is becoming recognized as a performing artist.

Beversdorf was found to have composed similar melodies for both the first and second movements of this work. In the last movement the etude-like melody is contrasted with a middle section which is constructed with the primary interval used throughout the work, the interval of the fourth.

The interval of the second takes on special meaning in the compositions by Hindemith. The organization within the individual subjects demonstrates that Hindemith was constantly striving for balance and continuity of structure to the smallest detail. The cadenza in the last movement proves to be highly virtuosic and representative of Hindemith's high regard for the capabilities of the tuba performer.

In the composition by Persichetti, the melodies were built upon various modes. Persichetti preferred to compose in an individual style in this respect, too. The melodies were written in the higher range of the tuba and many slurred passages are found. Because this work is for solo tuba, the melodies contain more rhythmic variety than the other works studied. Due to Persichetti's divergent structural tendencies, the melodies change mood and style more often than do those of the other works studied.

harmonic style throughout the entire work affects the melodies in a similar manner. Any generalizations to be made in regard to his melodies would have to be restricted to each individual melody. The variety of styles in the four movements requires melodies composed in the different styles of each individual movement. These range from the explosive jazz-like melodies found in the second movement to the smooth and lyric melodies of the third movement.

HARMONY

The study of the harmonic elements included the composers' basic harmonic structures, textures, rhythms, and use
of nonharmonic tones. In this respect, three of the composers
chose to write the entire work with the same harmonic style
throughout (Beversdorf, Hindemith, and Persichetti). Wilder

varied his harmonic style with each movement, just as he did with the melodic element.

Beversderf composed his entire work with reference to the quartal harmonic system. Hindemith's entire work was composed according to his own harmonic principles as they were outlined in his book, The Craft of Musical Composition. Persichetti wrote all of his melodies in a modal style, but the work is for solo tuba and only the linear harmonic implications could be observed.

In regard to texture, the three compositions which were composed for tuba and piano (by Beversdorf, Hindemith, and Wilder) all tend to have sparse piano parts. Persichetti led this tendency to the ultimate end by writing a composition for unaccompanied tuba.

The composers represented herein apparently shared Persichetti's opinion that by being free and imaginative one may organize his work in many unique and interesting ways, while remaining within the framework of traditional formal structures. This idea was accomplished by applying slight changes in the thematic material, the meters, the accompaniment figures, or the tonalities.

It was revealed that the melodies are not limited to certain notes, ranges, or rhythmic patterns. The various

¹ Paul Hindemith, The Craft of Musical Composition (New York, 1941-1942).

melodies include many instances of imitation, fragmentation, and variation. Because they are typical of a twentieth-century idiom they are often both disjunct and angular.

The quartal harmonic system (which made its debut in earlier works by Scriabin, Stravinsky, Schoenberg, Hindemith and Bartok) was found to have been used in combination with the tertian harmonies of even earlier compositional styles. With the exception of the work by Persichetti, all of the composers chose to use both of these harmonic systems in varying degrees.

Rather than being radical and avant-garde, the elements of music studied in these works lie within the diverse range of twentieth-century compositional techniques.

The study of these works would benefit all students of the tuba because, in order to play these works in a desirable manner, the tubaist must have a range of nearly three octaves, a multiple tonguing technique which is quite advanced, and an embouchure which is under complete control at all times.

BIBLIOGRAPHY

Books

- Apel, Willi, Harvard Dictionary of Music, Cambridge, Mass., Harvard University Press, 1962.
- Baker, Theodore, <u>Baker's Biographical Dictionary of Musicians</u>, Fifth Edition, New York, G. Schirmer, Inc., 1958.
- Bukofzer, Manfred, Music in the Baroque Era, New York, W. W. Norton, 1947.
- Farkas, Phillip, The Art of Brass Playing, Bloomington, Indiana, Brass Publications, 1962.
- Grove, Sir George, Grove's Dictionary of Music and Musicians, edited by Eric Blom, Fifth Edition, (nine volumes), London, Macmillan and Co., 1954.
- Hindemith, Paul, A Composer's World, Garden City, New York, Doubleday and Co., Inc., 1961.
- translated by Arthur Mendel, revised edition, New York, Associated Music Publishers, Inc., 1941-1942.
- Ottman, Robert, <u>Intermediate Music Theory</u>, Englewood Cliffs, New Jersey, <u>Prentice-Hall</u>, Inc., 1958.
- Persichetti, Vincent, Twentieth-Century Harmony; Oreative Aspects and Practices, New York, W. W. Nerton, 1961.

Articles

- Bell, William, "The Tuba Triumphs," <u>International Musician</u>, LVIII (September, 1959), 16.
- Bobo, Roger, "Tuba: A Word of Many Meanings," <u>Instrumentalist</u>, XV (April, 1961), 65-67.
- Brown, Leon F., "Materials for Tuba," <u>Instrumentalist</u>, X (November, 1955), 37-38.

- Musician-Texas Music Educator, XXI (April, 1955), 18-19.
- Burkart, Richard, "Harvey Phillips Tuba Clinic," Southwestern Musician-Texas Music Educator, XXX (April, 1962), 8.
- Butterfield, Don, "The Tuba and Jazz," Metronome, LXXII (May, 1956), 35-36.
- Conner, Rex A., "Employing the Tuba as a Solo Instrument,"

 <u>Instrumentalist</u>, VIII, (February, 1954), 26-27.
- XII (May, 1958), 55-57.
- 1961), 49-50. "Tuba Talk," <u>Instrumentalist</u>, XVI (October,
- Fitzgerald, Bernard, "The Tuba, Foundation of the Band,"
 Instrumentalist, VII (March-April, 1953), 40-41.
- Ingalls, David M., "More Tuba Literature," <u>Instrumentalist</u>, VIII, (March, 1954), 8.
- Kuehn, David L., "Helpful Hints for Tuba Players," Instrumentalist, XVI (May, 1962), 70-71.
- Instrumentalist, XVII (December, 1962), 48-49.
- Meyer, Gerald C., "The Tuba Section," <u>Instrumentalist</u>, XV (December, 1960), 57-59.
- Novetny, Joseph J., "The Tuba," <u>International Musician</u>, L (February, 1952), 25.
- Rasmussen, Mary, "Building a Repertoire for the Tuba Student,"

 <u>Instrumentalist</u>, VII (January, 1954), 36-37.
- 1958), 240. "Reviews," Brass Quarterly, I, No. 4 (June,
- 1959), 178-179. Brass Quarterly, II, No. 4 (June,
- "Reviews," Brass Quarterly, VI, No. 3 (Spring,
- Riley, Maurice W., "A Tentative Bibliography of Early Wind Instrument Tutors," <u>Journal of Research in Music Education</u>, VI (Spring, 1958), 23-24.

- Rowe, Clement E., "The Tuba," Etude, LII (July, 1934), 405.
- Saverino, Louis, "Breathe into Your Tuba," School Musician, XXIII (February, 1952), 12.
- Smith, Glenn P., "Tuba Forum," Southwestern Brass Journal, I (Fall, 1957), 44-47.
- Stoddard, Hope, "The Tuba and Its Players in Our Bands and Orchestras, International Musician, XLVIII (January, 1950), 20-22.
- Terchinsky, Abe, "Tuba Trends," <u>Instrumentalist</u>, XVIII (April, 1964), 86-87.
- Vesely, Stanley J. Jr., "Tuba Forum," Southwestern Brass Journal, I (Spring, 1957), 33-36.
- Wall, Lafayette, "Artistic Effects on the Tuba," Band Guide, I (January-February, 1954), 31-33.
- II (Spring, 1955), 12. Band Guide,

Unpublished Materials

- Alley, Edward L., "A Comparative Study of Three Sonatas for Solo Brass Instruments by Paul Hindemith," unpublished master's thesis, School of Music, North Texas State University, Denton, Texas, 1957.
- Richey, Joseph W., "The Trumpet as Used by Paul Hindemith in Three Instrumental Groupings," unpublished master's thesis, School of Music, North Texas State University, Denton, Texas, 1965.
- Sealy, Byford G., "A History of the Bass Tuba and Its Use in the Symphony Orchestra," unpublished master's thesis, School of Music, North Texas State College, Denton, Texas, 1950.
- Segress, Terry D., "A Study of the Factors Related to Tuba Instruction and Performance," unpublished master's thesis, School of Music, North Texas State University, Denton, Texas, 1965.

Tull, Charlotte D., "A Comparative Study of Harmonic Tension in Hindemith's Piano Sonatas and in His Theoretical Writings," unpublished master's thesis, School of Music, North Texas State University, Denton, Texas, 1957.

Musical Scores

- Beversdorf, Thomas, Sonata for Bass Tuba and Piano, Interlochen, Michigan, Interlochen Press, 1962.
- Hindemith, Paul, Sonata for Tuba and Piano, London, England, Schott and Co., Ltd., 1955.
- Persichetti, Vincent, <u>Serenade No. 12</u>, for Solo Tuba, Philadelphia, Pennsylvania, Elkan-Vogel Co., 1963.
- Wilder, Alec, Sonata for Tuba and Piano, Hempstead, New York, Mentor Music, Inc., 1963.