THE CREATION OF HARMONIC AND RHYTHMIC TENSION IN THE SONATE FOR CLARINET AND PIANO, FIRST MOVEMENT, OF PAUL HINDEMITH

by 680

JAMES EARL DILLEY

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Approved by:

Thomas B. Stumberg

Major Professor

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INTRODUCTION

The purpose of this paper is to study the means by which Hindemith creates harmonic and rhythmic tensions in a typical work. The Sonata for Clarinet and Piano not only qualifies, but the author has gained familiarity with the work through performance.

Paul Hindemith was born in Hanau, Germany, in 1895. He received his early musical education under Arnold Mendelssohn and Bernhard Sekles at the Hoch Conservatory. In 1915 Hindemith became concertmaster of the Frankfurt Opera. He joined Licco Arma in 1921 to organize the Arma String Quartet in which Hindemith played viola for eight years. He was first recognized as a composer through his compositions for the Quartet. Hindemith was promoted to conductor of the Frankfurt Opera in 1923. From 1927-37 he taught master classes in composition at the Berlin Hochschule. Hindemith's music was considered subversive by the Nazi government. He was labeled as a cultural Bolshevist; and, as a result, his music was banned in Germany. Alfred Rosenberg, Chief of the Nazi Foreign Affairs Bureau, stated in Die Musik (January, 1935) that: "When a man like Hindemith commits the foulest perversion of German music we have the right to reject him. The accomplishments of such an artist . . . and the laurels received by him in that now-overthrown Republic, are by right of no value to our movement."[1] In 1935 Hindemith was

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[1]Milton Cross, David Ewen, Encyclopedia of the Great Composers and Their Music, p. 386.

commissioned by the Turkish government to reorganize the musical life of that country. From 1935-37 he spent a great deal of time in Turkey drawing up the blueprints for a complete system of music education from the elementary to the college level. His accomplishments included the formation of several orchestras. From 1935-37 Hindemith taught composition alternately at both the Berlin Hochschule and the Conservatory of Ankara in Turkey.[2] He left Germany permanently in 1938, settled first in Switzerland, then in the United States in 1940. Hindemith joined the music faculty of Yale University and continued his activities as a composer, theorist, teacher, historian, conductor, and violist. In 1949 Hindemith returned to Germany for a brief visit, and at that time he received wide acclaim. He established his permanent residence in Zurich, Switzerland in 1953. Hindemith joined the University of Zurich as a member of the music faculty and made many appearances as a guest conductor. In 1954 he was the recipient of the $35,000 Sibelius Award. Hindemith returned to the United States in 1959 to conduct a series of concerts featuring his works. He died in Frankfurt, Germany on December 28, 1963.

Hindemith composed in all musical forms. Because he was quite proficient on many instruments, Hindemith chose to write for a variety of musical instruments.[3] He generated a style of music designated as Gebrauchsmusik, a term which means "music

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[2] "Paul Hindemith." Encyclopedia Brittanica.

[3] John T. Howard, This Modern Music, p. 159.

for use." This new and simplified music was intended to search out and involve musical listeners and performers wherever they might be found.[4]

Composers during the early part of the century lacked a systematic approach to their work. Hindemith found it necessary to establish a standard by which he could judge the compositions of his students. As a result, he wrote various texts on theory and composition. His most important text is The Craft of Musical Composition, a two volume work published in 1937. Leonard G. Ratner states this:

> Hindemith, in his theoretical work, The Craft of Musical Composition, has made a notable contribution toward a harmonic system in which traditional and contemporary values can be reconciled and evaluated in relation to each other. In his idea of the two-voice contrapuntal framework he has proposed a norm for texture; in his idea of harmonic fluctuation he has provided a harmonic scheme for organizing basic structural units.[5]

This paper is based on the material found in The Craft of Musical Composition.

Hindemith's style of composition is described thusly by Aaron Copland in his book entitled Our New Music:

> It wasn't until the neo-classic trend caught up with him that Hindemith knew best how to exploit his natural gifts . . . He wrote a kind of linear counterpoint that infused new life into ancient contrapuntal procedures. He composed long and intricate and pseudo-Bachlike melodies, accompanying them with unmistakably twentieth century harmonies. His natural bent for rhythmic energy attached itself to the insistent sixteenth-note motion of a Handelian "concerto

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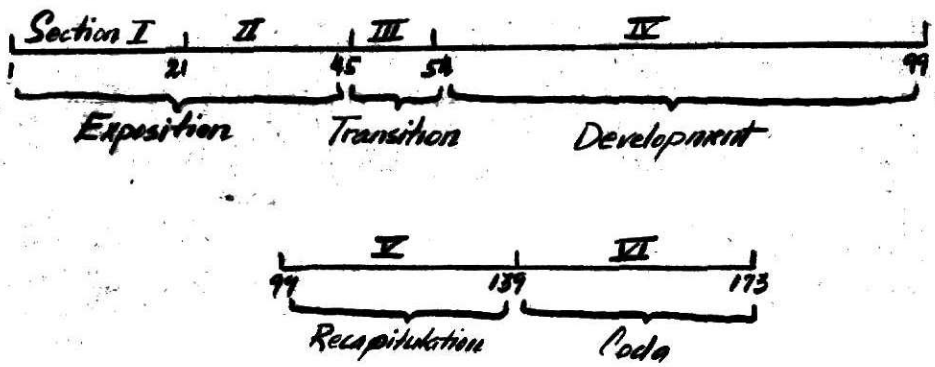
[4]Marion N. Scott, Groves Dictionary of Music and Musicians, 5th edition. 1954.

[5]Leonard G. Ratner, Music, The Listener's Art, p. 310.

> grosso." He renounced all tonal ambiguity, beginning and ending pieces squarely on the tonic. His forms were sharply defined, each section of each piece having its own clear meaning as in the works of the eighteenth century masters.[6]

This description fits the Sonata for Clarinet and Piano perfectly. The first movement is written in a sectional manner paralleling the sonata-allegro form except for a transition between the exposition and the development.

Fig. 1.



Hindemith states that harmonic development occurs, and is molded within, a linear framework.[7] This framework is established by the contrapuntal interaction of the bass line and the most important upper voice. The bass line constitutes the foundation upon which the entire harmonic structure is based, and, as such, it shows the full expanse of the composer's

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[6]Aaron Copland, Our New Music, p. 111-12.

[7]Paul Hindemith, The Craft of Musical Composition, p. 113.

thoughts.

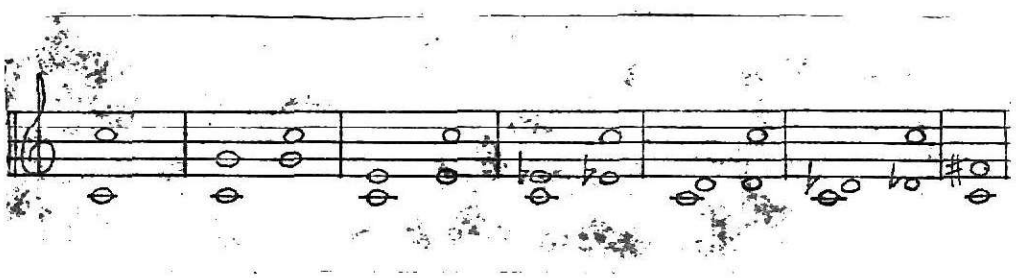
Copland makes this comment on Hindemith's melodic lines:

> The bounding melodic line, the contrapuntal texture, the lack of any sentimental hubbub--the general build-up of the music on classical principles, all indicate that the Latin ideals of Busoni have taken hold in the most talented representative of young German music.[8]

Regarding the use of dissonance, Joseph Machlis says this: "Consonance unites, dissonance separates. Composers began to use dissonance to separate the independent lines, to set them off against one another."[9]

Hindemith uses this dissonance to build harmonic tension in his music. Of special importance to this study is the graduated scale of consonance and dissonance, which he refers to as Series Two.[10]

Fig. 2.



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[8]Copland, op.cit., p. 110.

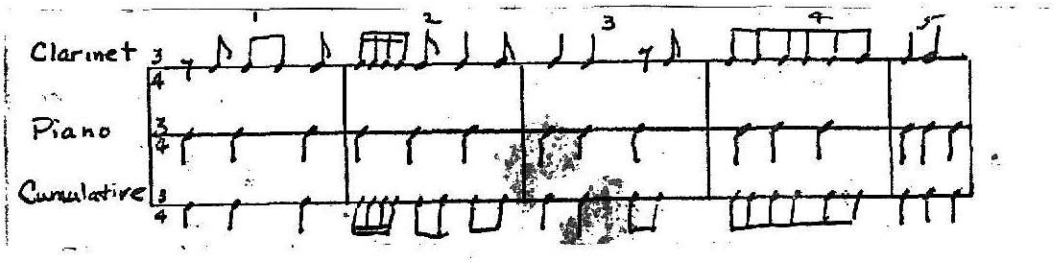
[9]Joseph Machlis, The Enjoyment of Music, p. 383.

[10]Hindemith, op.cit., p.96.

The degree of tension within any chord is a result of the dissonance established by the intervals in that chord. Hindemith classes each chord according to its degree of tension. A Class I chord contains no seconds, sevenths, or tritones; whereas a Class VI chord is an indeterminate chord with the tritone predominating. The Table of Chord Groups is listed in Appendix A. This analysis will show the use of harmonic tensions as they occur intervallically within the framework of the two-voice counterpoint.

The rhythmic organization of the Sonata for Clarinet and Piano will be presented by means of a cumulative rhythm chart. This chart is based on the premise that a musical measure is derived from a period of silence of specific duration. When a note or a group of notes sounding simultaneously appears within the measure, it creates a rhythmic pulse. When a second note or group of notes appears, it likewise produces a rhythmic pulse. The number of rhythmic pulses appearing within any one measure is an indication of that measure's rhythmic activity, complexity, and tension. These impulses are shown by measures in individual lines and cumulative lines.

Fig. 3.



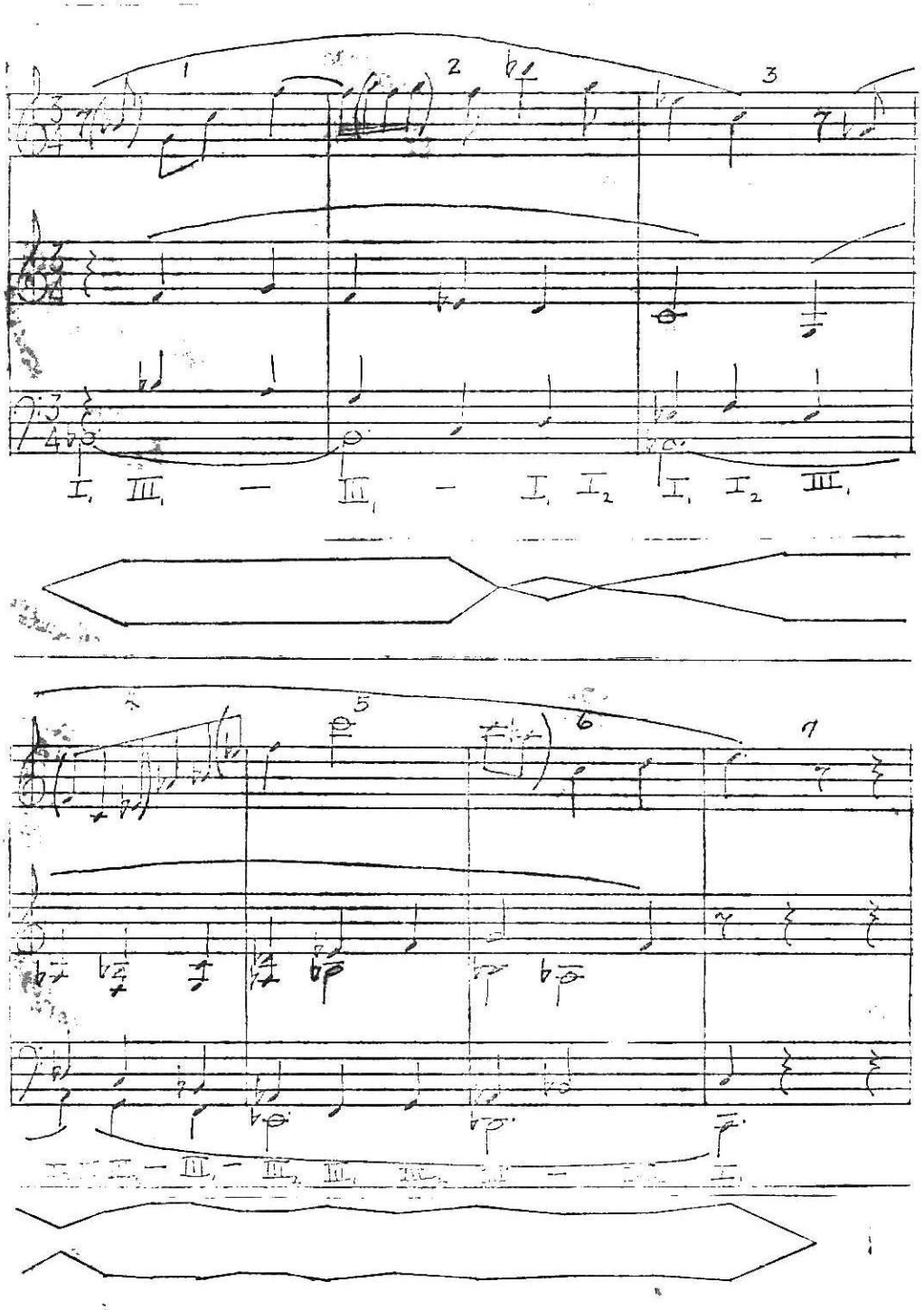
The first two lines show the rhythmic organization of the clarinet and piano lines respectively. A cumulative total of the separate lines is presented in the third line. The cumulative line displays the rhythmic organization of each phrase.

Rhythmic tension is used in conjunction with harmonic tension to create or relieve areas of excitement. Rhythmic tension plays a secondary role in that it introduces or augments the harmonic tension. The relationship of rhythmic to harmonic tension will be shown in this analysis.

EXPLANATION OF PLATE I

Phrase A. Measures 1-7

PLATE I



EXPOSITION -- SECTION 1

Phrase A is based on a descending bass line which extends conjunctly downward from B flat to C. Over pedal points, Hindemith regards the first moving line above as the lower line of the lineal framework.

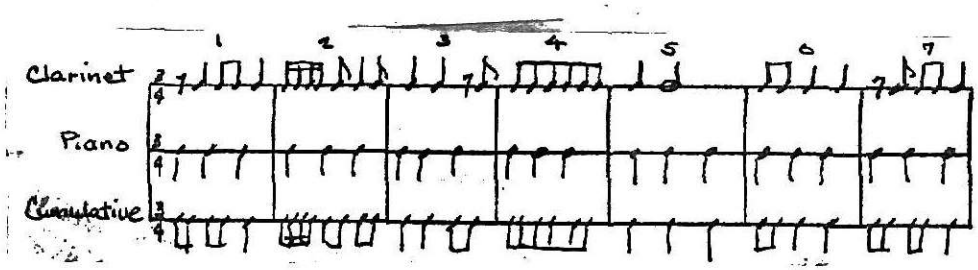
The complete melodic idea consists of two motives and is presented by the clarinet. Motive A basically ascends by fourths and descends the thirds, while Motive B contains a gradually ascending line that extends from A flat to E.

The melodic and bass lines are in contrary motion. The high point of Motive A is the B flat in measure 2 and the high point of Motive B is the C in measure 5. The two motives combine to form a gradually ascending melodic line as opposed to the descending bass.

Harmonic tensions within Phrase A parallel the melodic organization. Motives A and B both open consonantly with class I chords. Harmonic tensions build quickly to class III chords through the main body of each motive and then both close consonantly with class I chords.

The rhythmic organization of Phrase A is presented in Fig. 4.

Fig. 4.

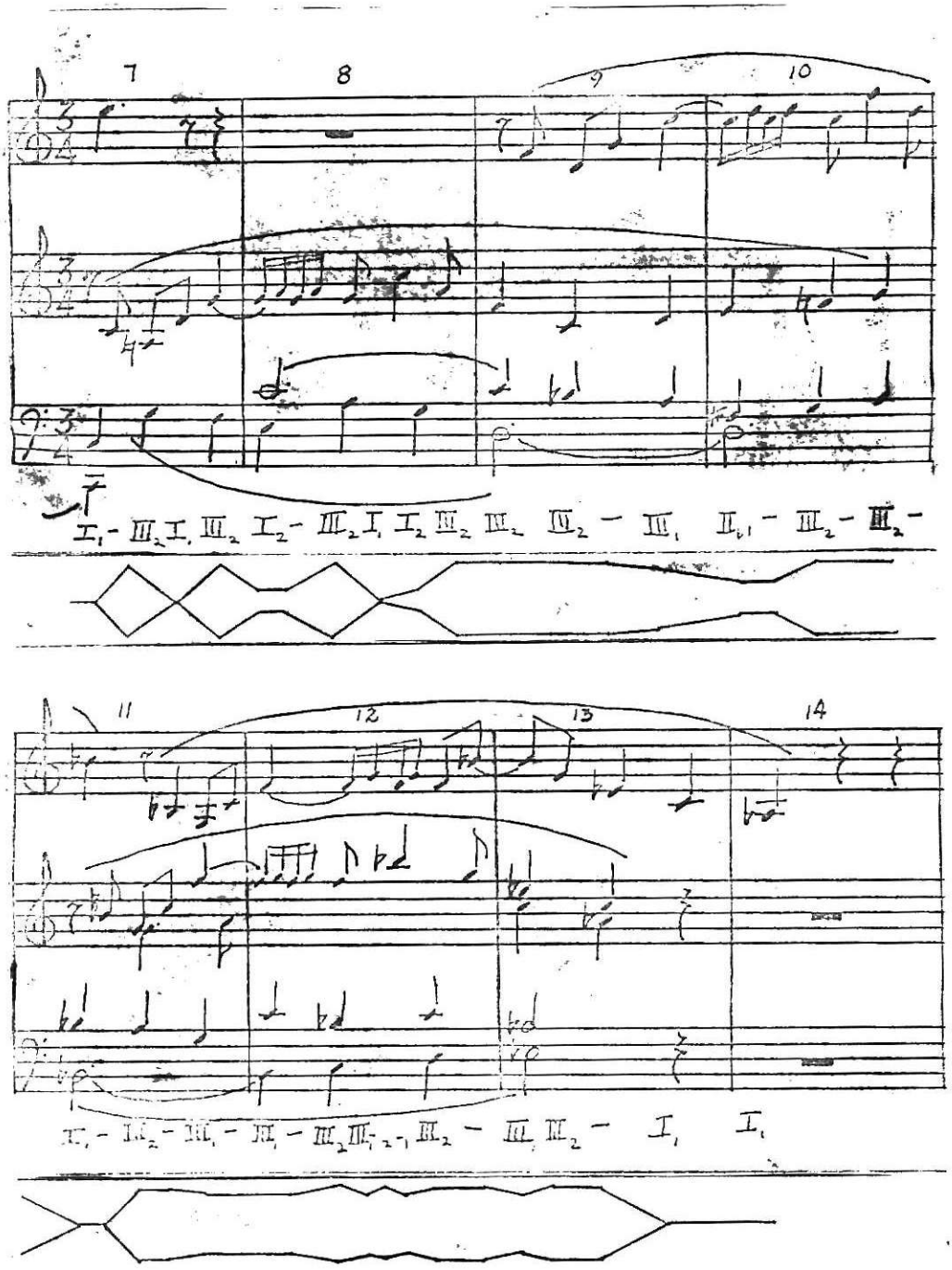


The rhythmic organization of Motive A parallels the melodic organization. The high point of both occurs in measure 2. The increased rhythmic activity of measures 2 and 4 serves to introduce the high points of Motives A and B.

EXPLANATION OF PLATE II

Phrase B. Measures 7-14

PLATE II



The bass line descends to a B flat in measure 11 and then returns conjunctly to an F in measure 14.

Motive A of the basic melodic material is developed by repetition, canonic treatment and transposition. The piano introduces Phrase B by presenting Motive A a seventh below the original pitch. The clarinet follows in repetition in measure 9 by playing Motive A a perfect fourth below the original. Canonic treatment is established in measure 11 when the piano begins Motive A on the original pitch and the clarinet follows suit one beat later.

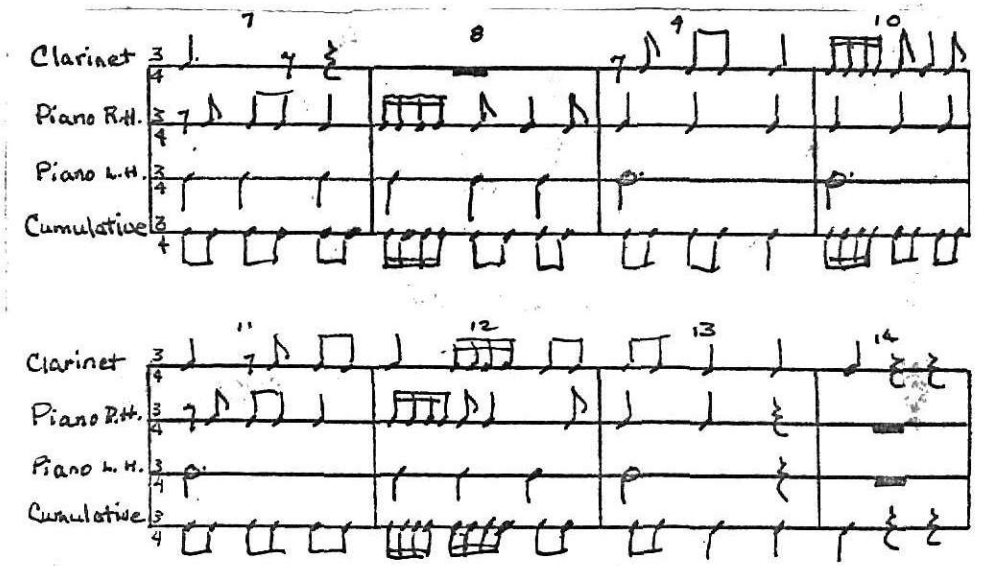
Harmonic tensions are developed within the framework of the bass and the uppermost melodic line. The uppermost line begins in the piano, switches to the clarinet in measure 9, and returns in the piano in measure 11. The melodic line ascends through measures 7-12 in contrary motion to the bass. Contrary motion continues in measures 12-14 as the two lines reverse their respective directions of movement.

Harmonic tensions fluctuate rapidly in measures 7-8 between class I and III chords. The tension remains fairly constant in measures 9-10 because of the added clarinet line. A class I chord in measure 11 closes the section of melodic repetition and introduces a section of canonic treatment. The harmonic tension established in measures 11-13 is relieved in measures 13-14 to parallel the close of Phrase B.

There is an increase of rhythmic activity in Phrase B. The rhythmic activity of measures 7-11 remains fairly constant because of the repetitious nature of the melodic material. The canonic treatment of melodic material in measures 12-13

results in greater rhythmic activity. There is a reduction of rhythmic as well as harmonic tensions at the close of Phrase B.

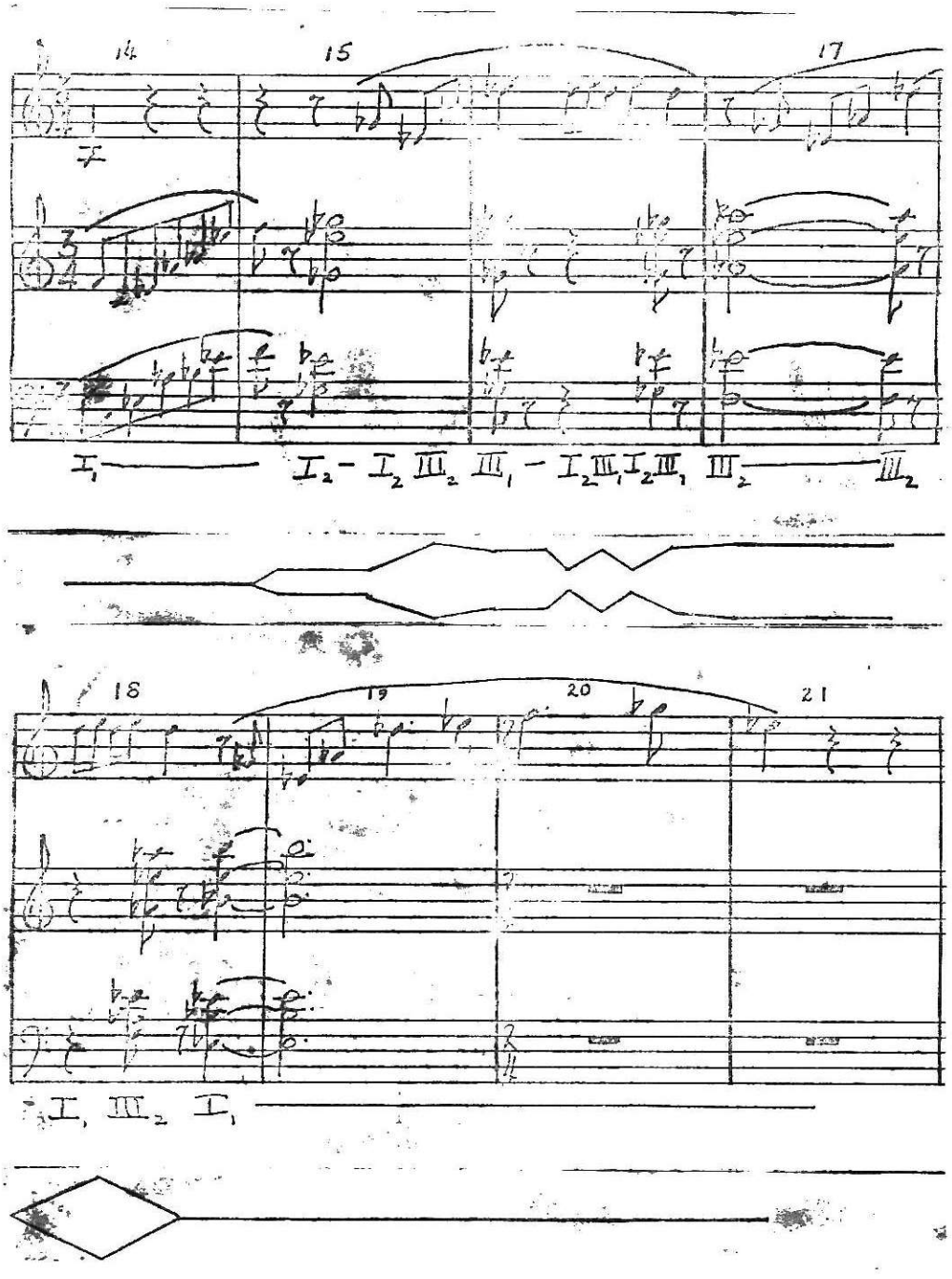
Fig. 5.



EXPLANATION OF PLATE III

Phrase C. Measures 14-21

PLATE III



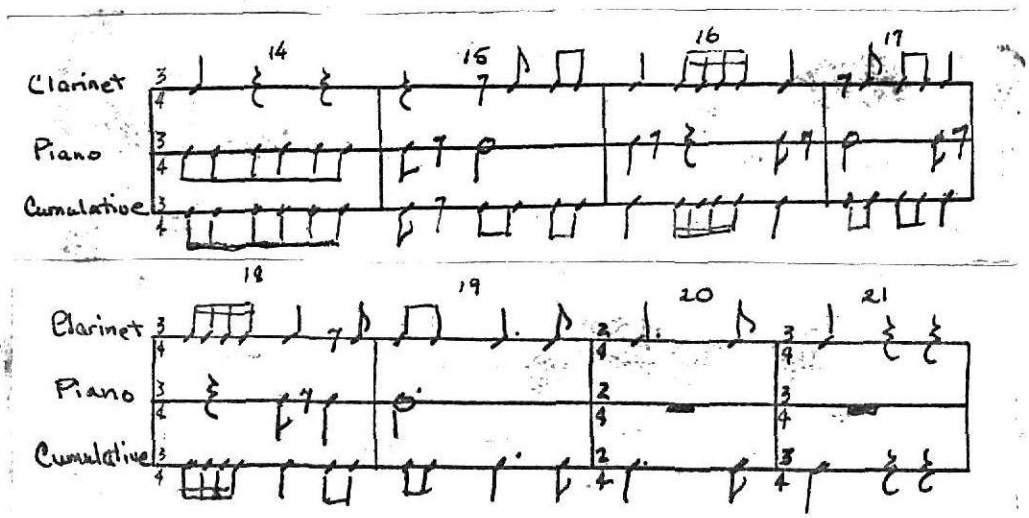
The third phrase is once again based upon a descending bass line.

Motive A of the original melodic idea is shortened to its first two measures and presented three times by the clarinet in quick succession. The third statement of the motive is a variation which leads into Section 11.

The outermost voices of measures 15-19 fall in the piano part and are set in contrary motion to create semi-climatic tension. Melodic tension is established by the rapid repetition of a short melodic figure from Motive A. Harmonic tension opens quietly in measures 14-15 with class I chords and builds to class III chords in measures 15-18. The reduction of melodic and harmonic tensions in measures 19-21 closes Section 1 and prepares Section II.

Rhythmic tensions parallel the harmonic and melodic tensions.

Fig. 6.

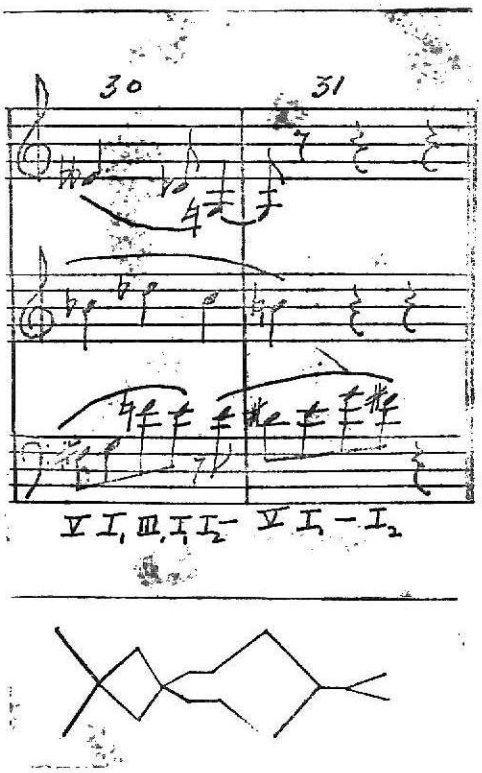


The rhythmic pattern of measure 14 aids the harmonic and melodic elements in introducing Phrase C. Rhythmic tension likewise increases in measures 15-18 and is relieved at the close of Phrase C.

EXPLANATION OF PLATE IV

Phrase A. Measures 21-31

PLATE IV


30
31
V I, III, I I₂ - V I, - I₂

EXPOSITION -- SECTION II

The two-measure pattern of measures 21 and 22 is repeated in measures 23 and 24 to emphasize the beginning of Section II. This brief section is based on a four note bass line which in itself points up the unity of measures 21-24. These four notes constitute Motive A of the bass line. Motive B is a sequentially ascending bass line in the piano which creates tension in contrast to the descending clarinet line.

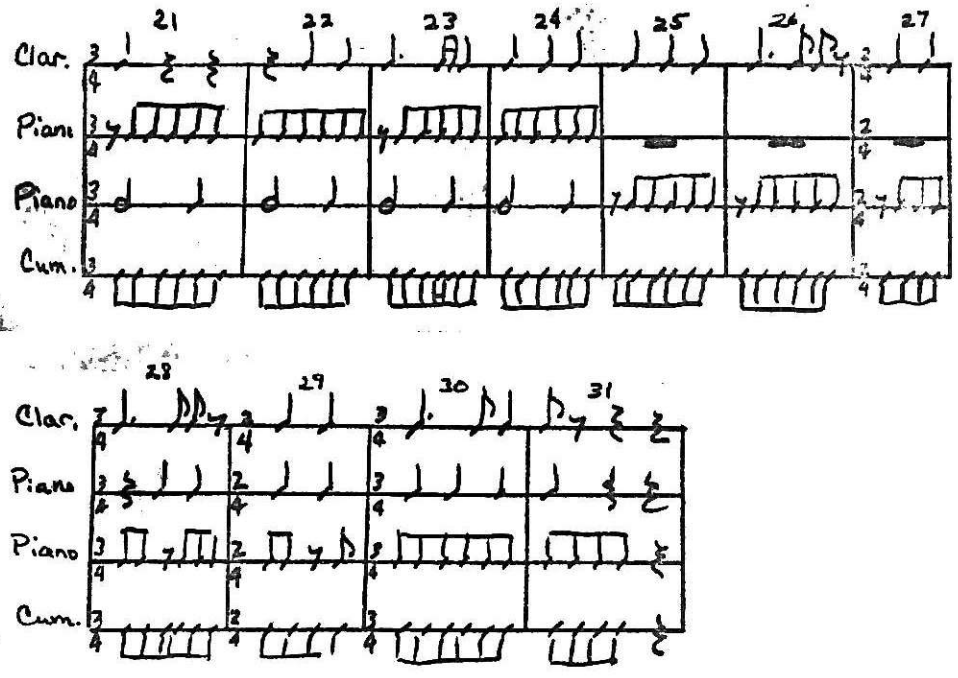
The second melodic idea likewise consists of two motives and is found in Phrase A. The clarinet presents Motive A in measures 22-25 and Motive B in measures 25 and 26. Motives A and B of the melodic idea relieve tension gradually by means of a sequentially descending line.

Hindemith uses contrary motion throughout Phrase A. The bass and melodic lines move away from each other in measures 21-23 and then return again to their original positions in measures 23 and 24. In Motive B the bass line is constantly ascending as the clarinet line is descending.

The harmonic tension fluctuates rapidly in Motive A between class I, III, and VI chords. Motive B begins quietly in measures 25-28 and builds to a high point of tension in measures 28-31.

The rhythmic organization of Phrase A remains constant through measure 31.

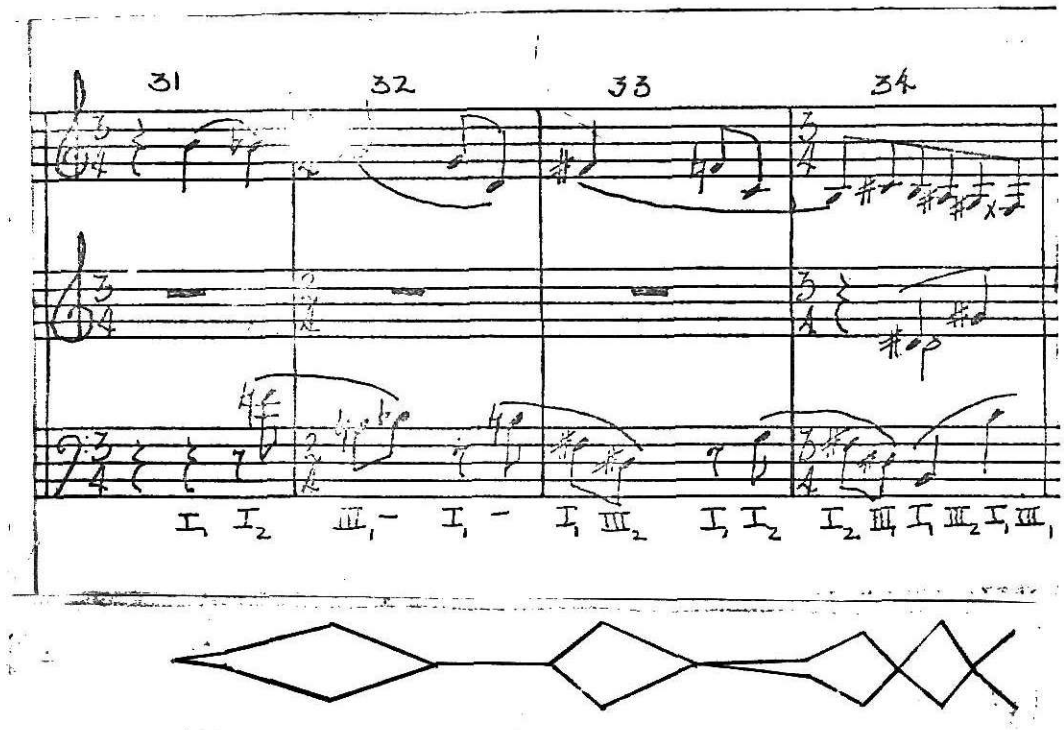
Fig. 7.

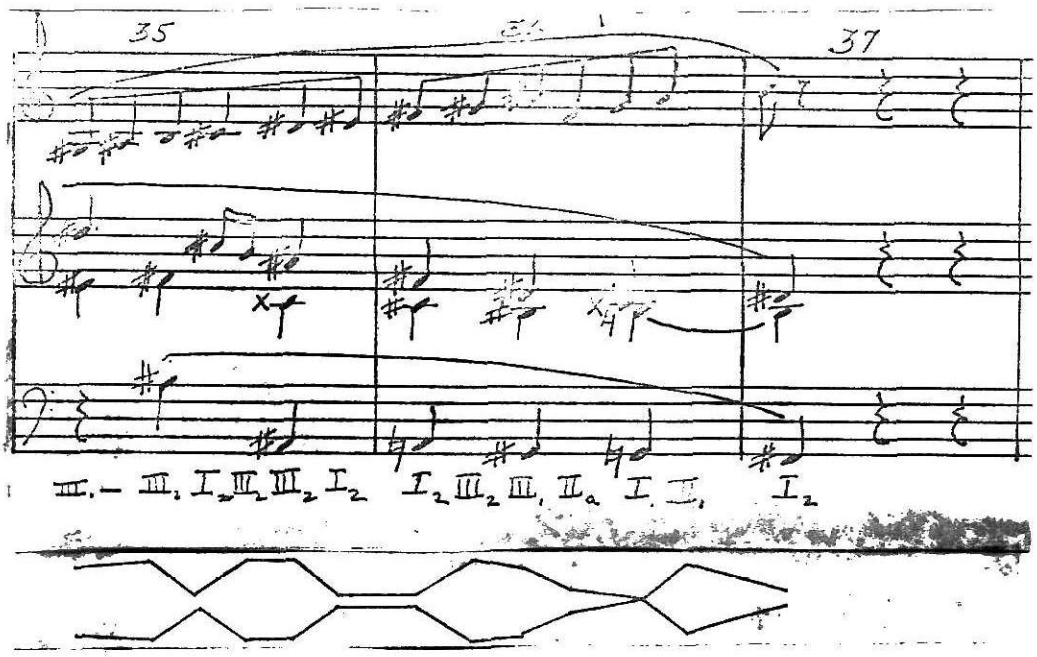

21
22
23
24
25
26
27
Clar.
Piano
Piano
Cum.
28
29
30
31
Clar.
Piano
Piano
Cum.

EXPLANATION OF PLATE V

Phrase B. Measures 31-37

PLATE V


31
32
33
34
I, I2 III,- I,- I, III2 I, I2 I2 III, I, III2 I, III,


35
37
III,- III, I2 III2 III2 I2 I2 III2 III, II2 I, I, I2

The bass line in Phrase B consists of two motives. Motive A is the sequentially descending line extending through measure 34. This motive relieves the tension established by the ascending bass line of Phrase A. Motive B consists of a chromatic bass line which descends from B to F sharp. This descending line is in direct contrast to the ascending clarinet line, and the two combine to introduce Phrase C.

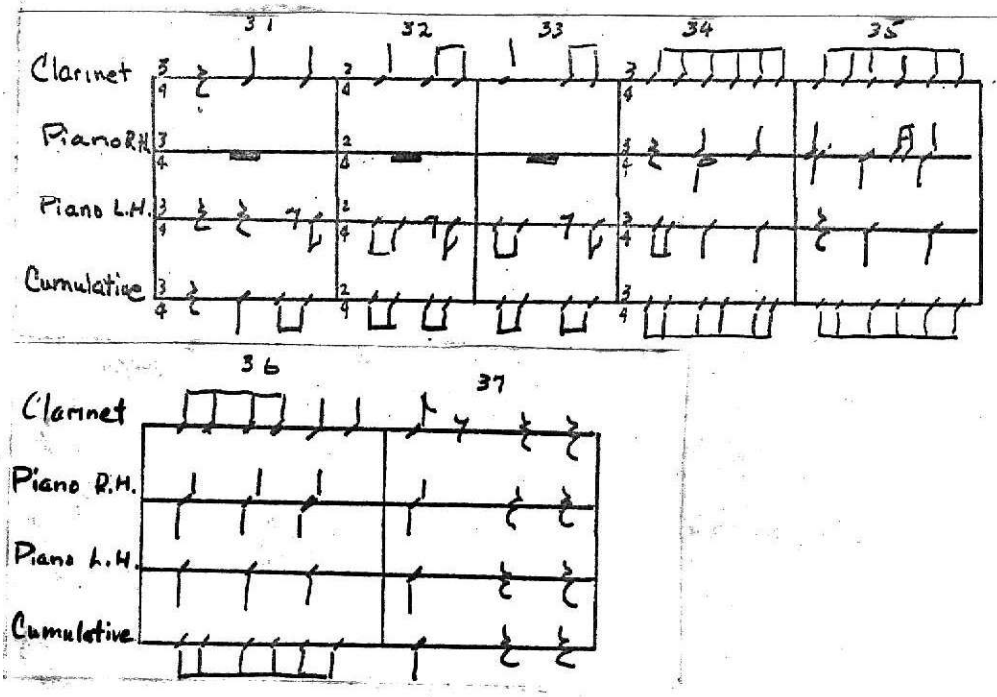
The melodic material consists of two motives. In Motive A, Measures 31-33, the clarinet descends sequentially to relieve melodic tension. Motive B begins in measure 34 when Motive A of the second melodic idea is once again established. This time it is presented enharmonically one octave higher by the piano.

The melodic and bass lines of measures 31-34 combine contrapuntally in parallel motion to relieve melodic tension. Melodic tension once again increases in measures 34-37 as a result of the interaction and contrast between the descending bass line, the fluctuating melodic line, and the ascending clarinet line.

The harmonic tension of Motive A is slight. This coincides with the reduction of melodic tension in the clarinet and bass lines. Harmonic tension increases once again in Motive B as does the melodic tension.

The rhythmic activity of Phrase B parallels that of Phrase A and remains constant throughout the phrase.

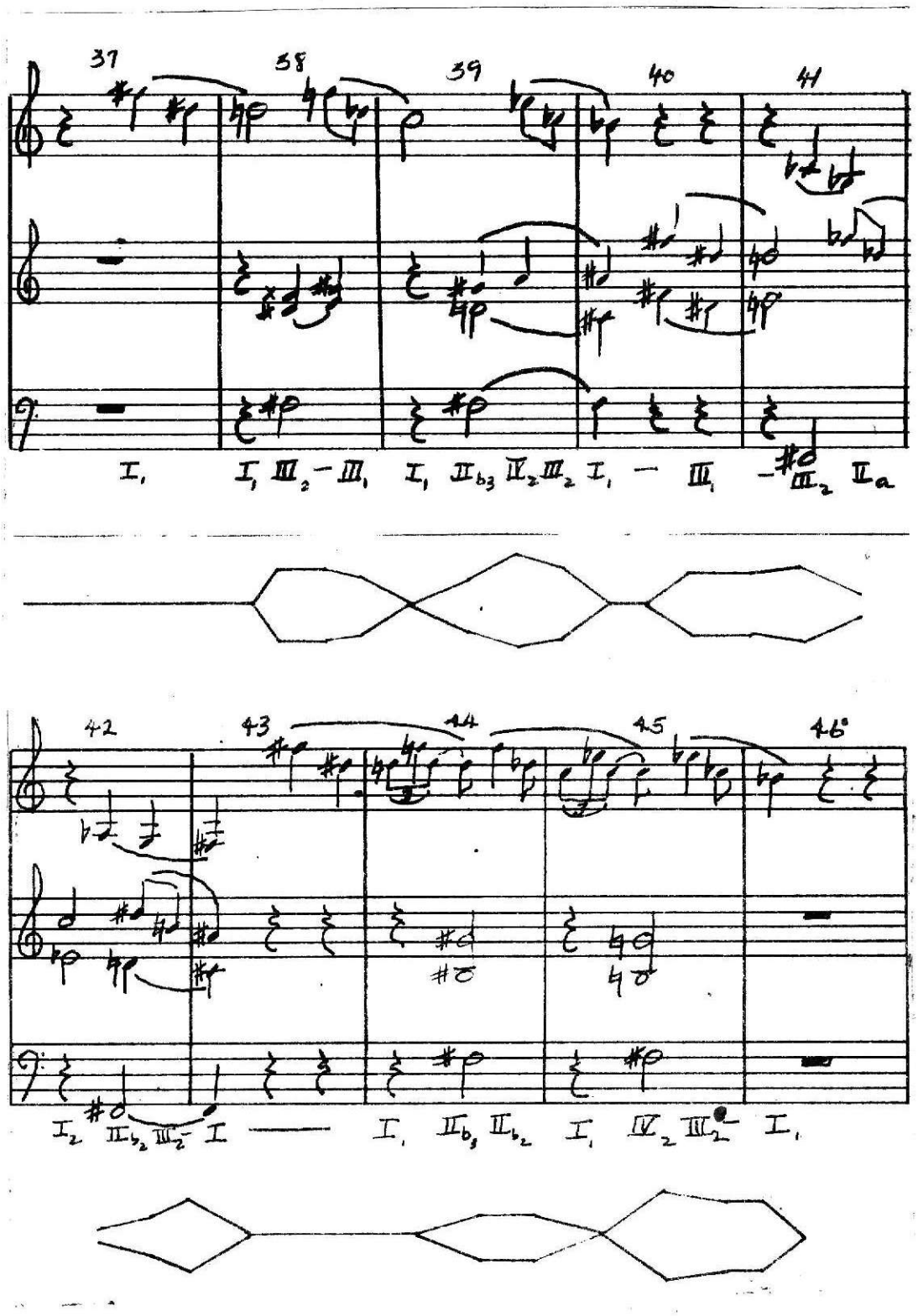
Fig. 8.


31
32
33
34
35
Clarinet
Piano R.H.
Piano L.H.
Cumulative
36
37
Clarinet
Piano R.H.
Piano L.H.
Cumulative

EXPLANATION OF PLATE VI

Phrase C. Measures 37-46.

PLATE VI



The bass line is composed of two motives. Motive A is based on an F sharp pedal point and extends from measure 37-40. Motive B is the chromatically descending bass line in measures 40-45.

Phrase C is melodically based on Motive B of the second melodic idea. As in Phrase C of Section 1, this phrase is built upon the idea of repetition by threes. Each of the three motives contain three statements of a melodic motif from measures 25-26.

Fig. 9.

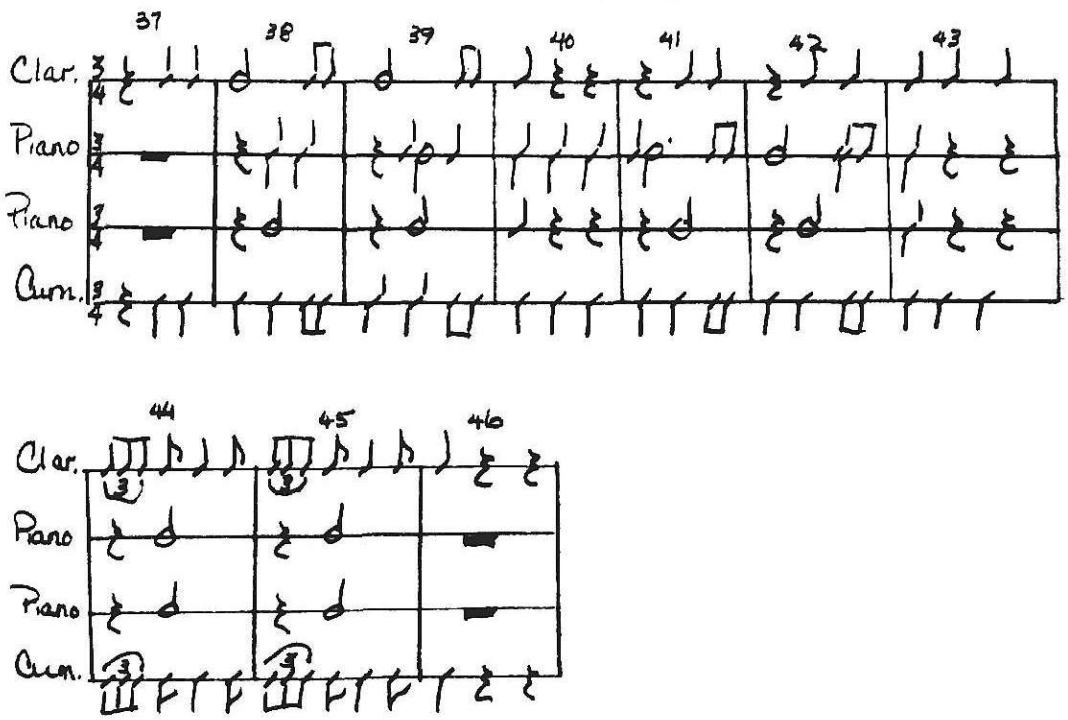
This rapid and extensive repetition builds melodic tension which serves to close Section II.

The contrapuntal structure of measures 37-40 is the result of a gradually descending clarinet line based upon an F sharp pedal point. In measure 40, the chromatically descending bass line in the piano gains importance over the stagnant F sharp pedal point, and as a result, becomes the most important bass voice. In measures 40-45, the bass line continually descends while the melodic line remains fairly constant.

The harmonic tension within each melodic motive fluctuates continually, but each motive begins and ends consonantly.

The rhythmic activity is reduced to the quarter note in measure 37, and it remains fairly constant through measure 43. In measure 44, a triplet figure is introduced in preparation for the new rhythmic style beginning in measure 47.

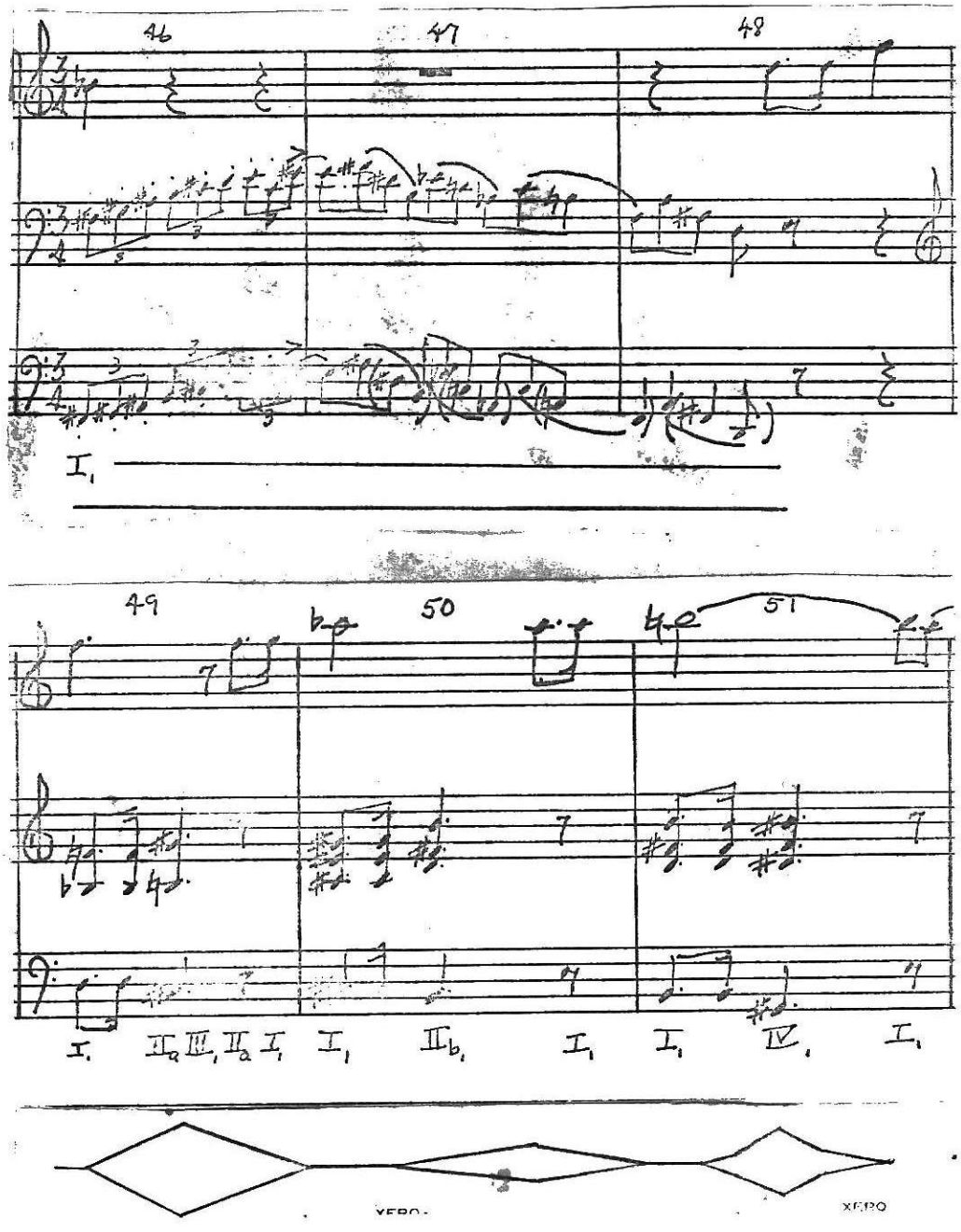
Fig. 10.

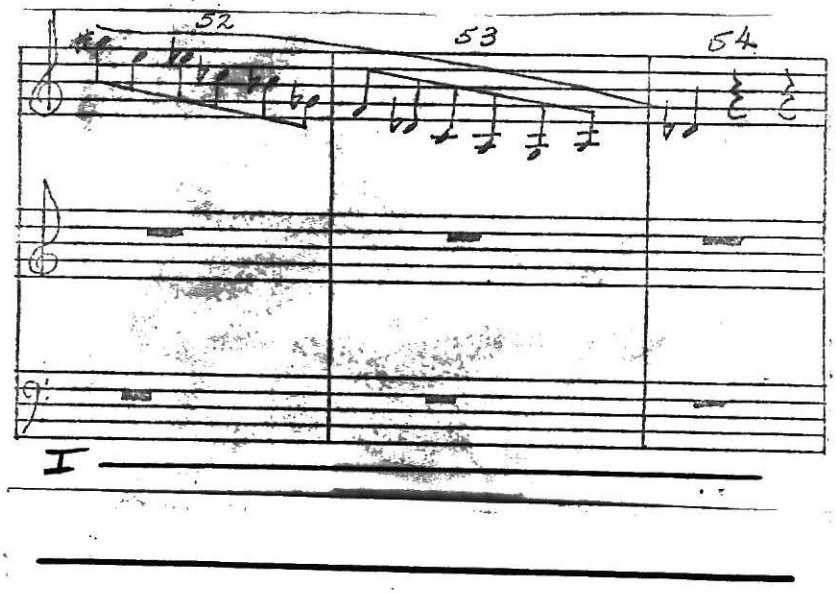


EXPLANATION OF PLATE VII

Transitional Passage. Measures 46-54.

PLATE VII




52
53
54
I

This short eight measure section is a transitional passage. The bass line consists of two motives. Motive A extends through measure 48, and constitutes the melodic element. In measure 49, the melodic material shifts to the clarinet and piano lines, and the base descends chromatically. The bass line as a whole opens on an f sharp in measure 46, and ascends to an f sharp in measure 47. It then descends gradually to a g sharp in measure 51.

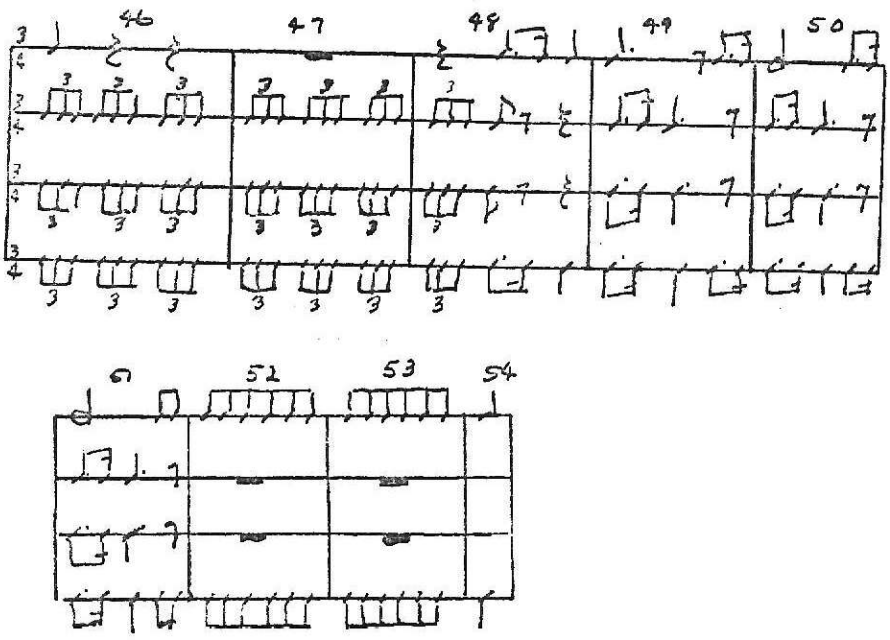
Significant melodic material is lacking because of the transitional nature of the passage. In measures 48-51 the clarinet and piano ascend canonically in a sequential pattern to develop tension. The clarinet relieves this tension in measures 52 and 53 in preparation of Section 111.

The counterpoint of measures 46-48 consists of strictly parallel motion. Contrary motion counterpoint occurs in measures 48-51 as the melodic lines are ascending and the bass line is descending. This contrary motion builds tension which is relieved by the clarinet in measures 52-53.

The increase of contrapuntal and rhythmic tensions in measures 49-51 is closely paralleled by a similar increase of harmonic tension.

The rhythmic plan is shown in Figure 11.

Fig. 11.



The basic rhythm changes to a triplet eighth note pattern in measure 46. This rhythmic pattern prepares the listener for the 9/8 rhythm of measure 54. Rhythmic tension is increased in measures 48-51 by altering the basic rhythmic pattern and introducing sixteenth notes. The rhythmic tension is relaxed in measures 52-53 to coincide with the reduced harmonic and melodic tensions.

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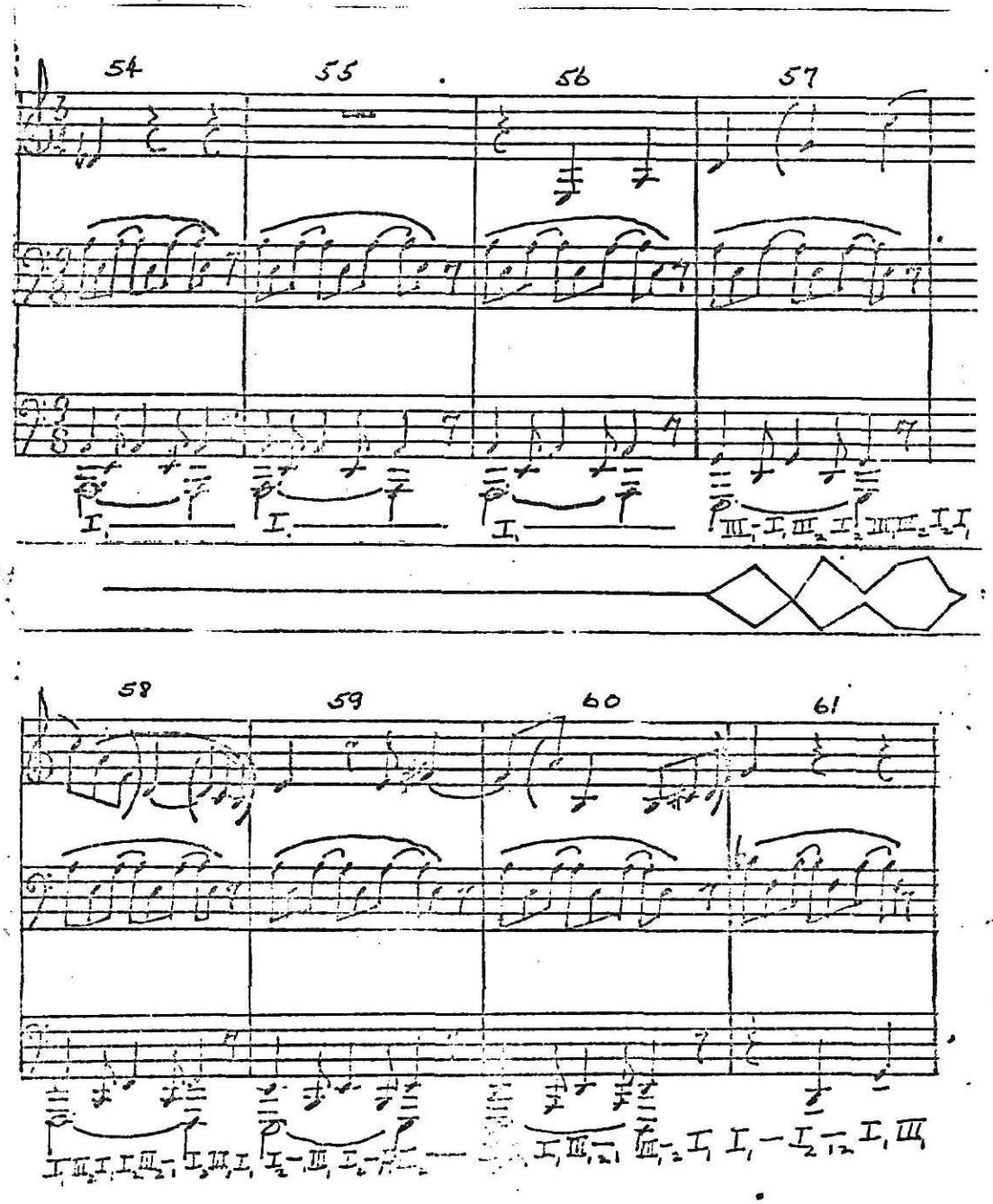
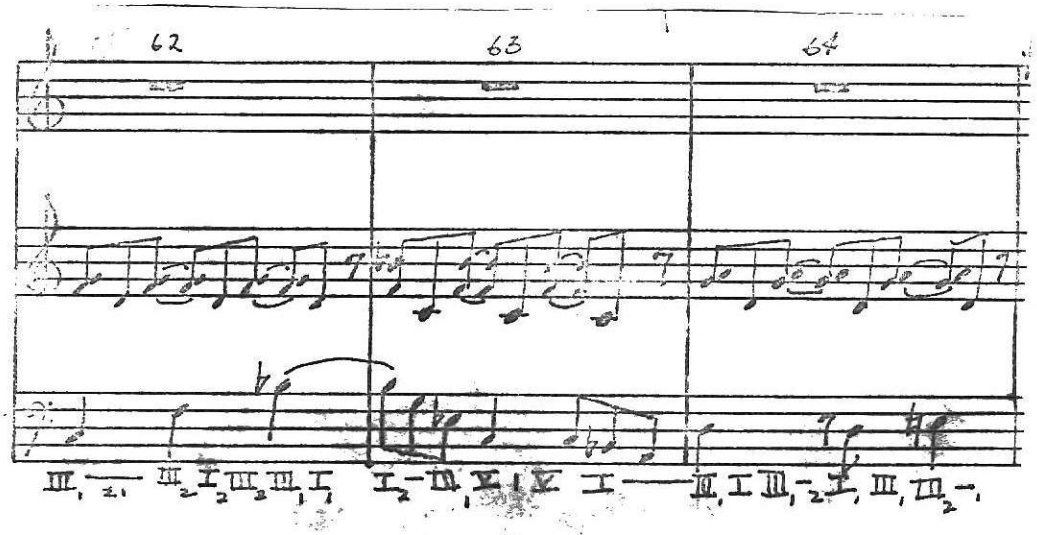
EXPLANATION OF PLATE VIII

Phrase A. Measures 54-66.

PLATE VIII

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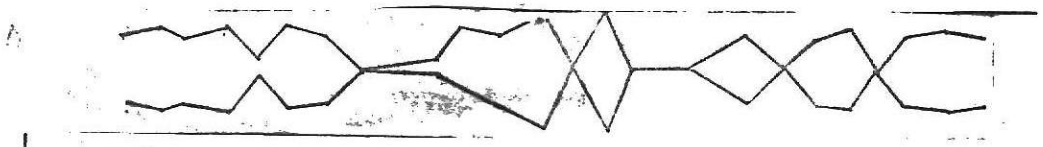

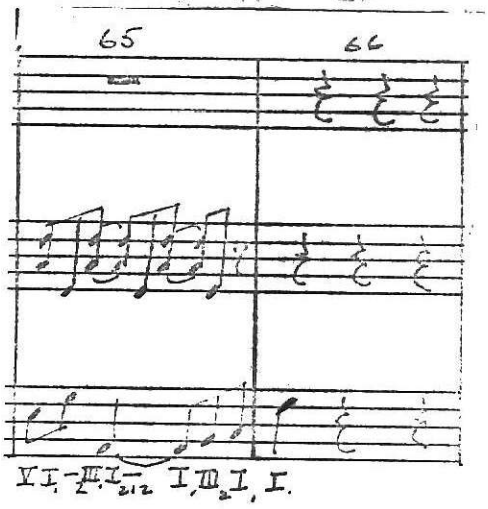
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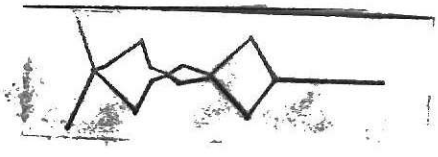


DEVELOPMENT

The pedal point A in measures 54-56 serves to accentuate the beginning of the development section. Measures 57-60 are based upon a descending bass line similar to the exposition. The bass line of measures 61-65 is taken from the melodic material in the left hand of the piano. This gradually ascending bass line serves to create melodic tension.

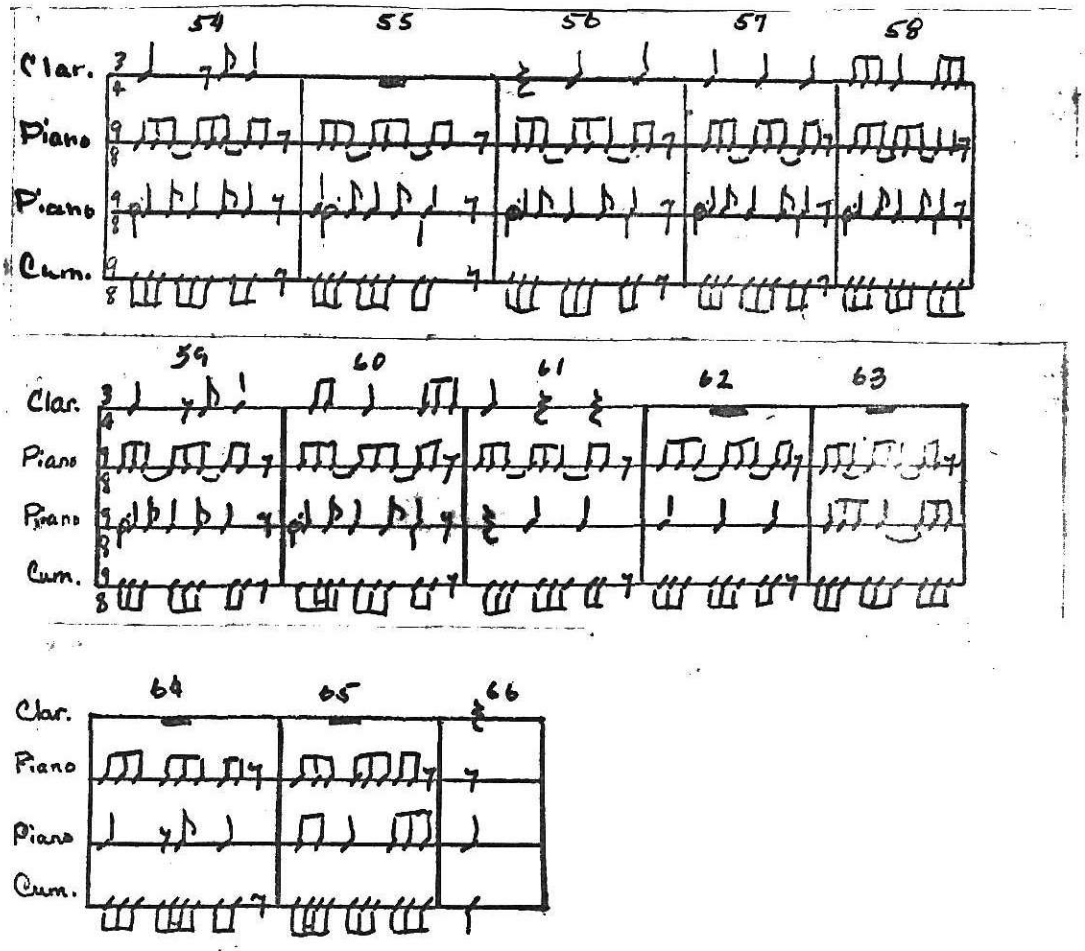
The first melodic idea of the development section is taken from the melodic material in measures 1-7 of the exposition. Both melodic ideas contain two similar motives. Motive A ascends by fourths and descends by thirds while Motive B contains a gradually ascending line. The melodic idea is first presented by the clarinet in measures 56-61. It is then repeated by the piano in measures 61-66.

Counterpoint by contrary motion is established in measures 56-61 as the melodic line is gradually ascending and the bass is constantly descending. Contrary motion builds tension gradually through these measures. Tension is increased in measures 61-65 as the bass-melodic line and the accompaniment gradually rise by similar motion.

Harmonic tension is negligible in measures 54-56, but it begins to build in measure 57 as the two voice counterpoint begins its contrary motion. The harmonic tensions of measures 57-65 fluctuate between Class I and III chords.

Figure 12 illustrates the rhythmic organization.

Fig. 12.

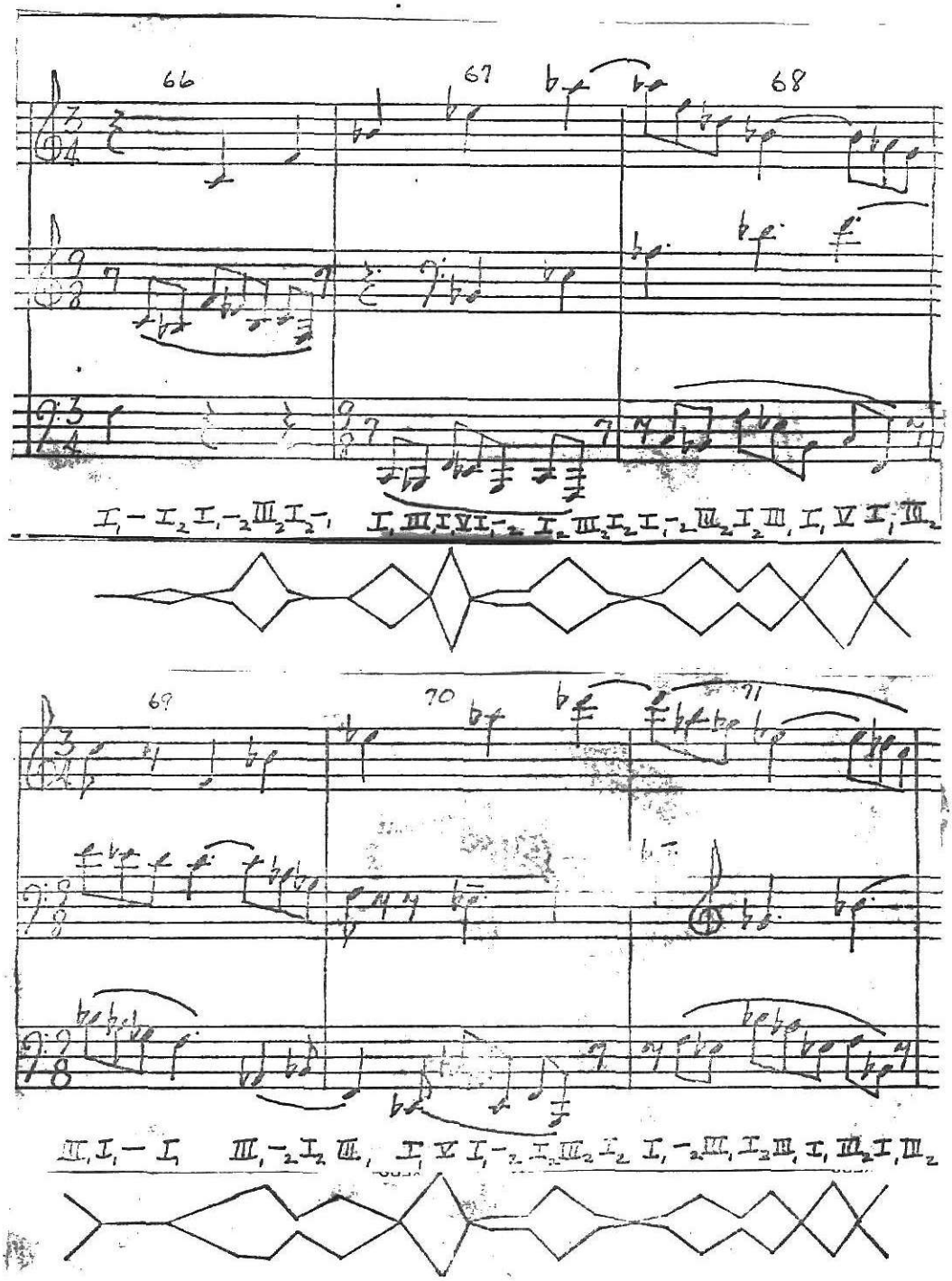


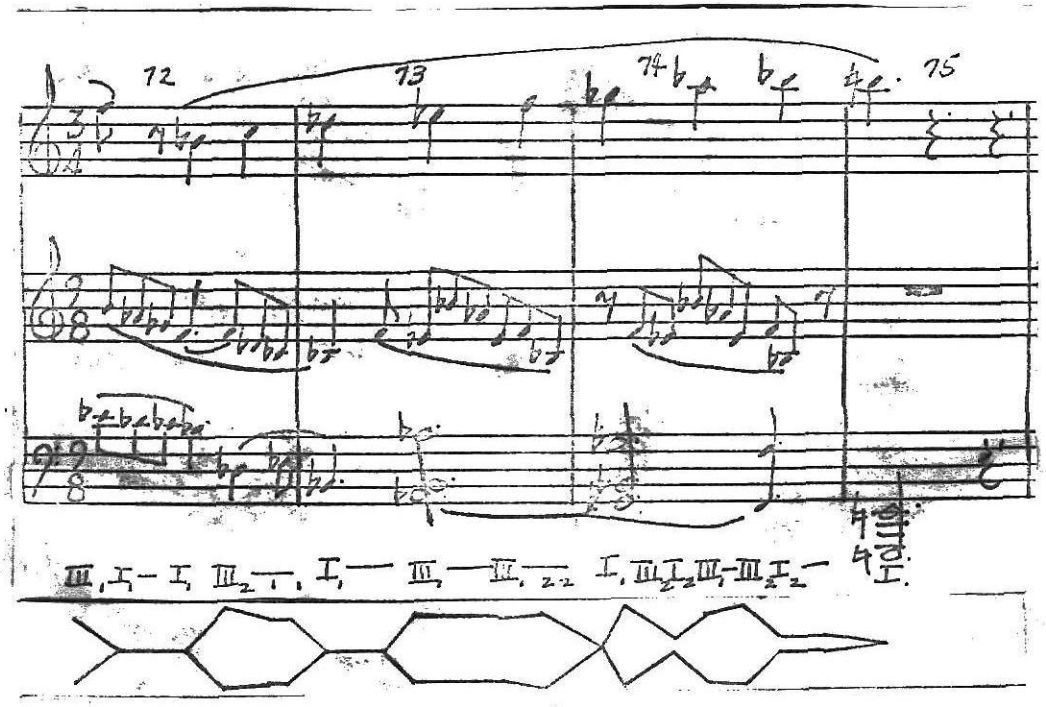
The rhythmic organization remains fairly constant through measure 66.

EXPLANATION OF PLATE IX

Phrase B. Measures 66-75.

PLATE IX




72
73
74
75

This phrase is based on the motif found in measure 66. The three measure pattern established in measures 67-69 is sequentially repeated in measures 70-72. Measures 73-75 contain a descending bass line in contrast to the ascending clarinet line. These two lines create the tension which introduces Phrase C.

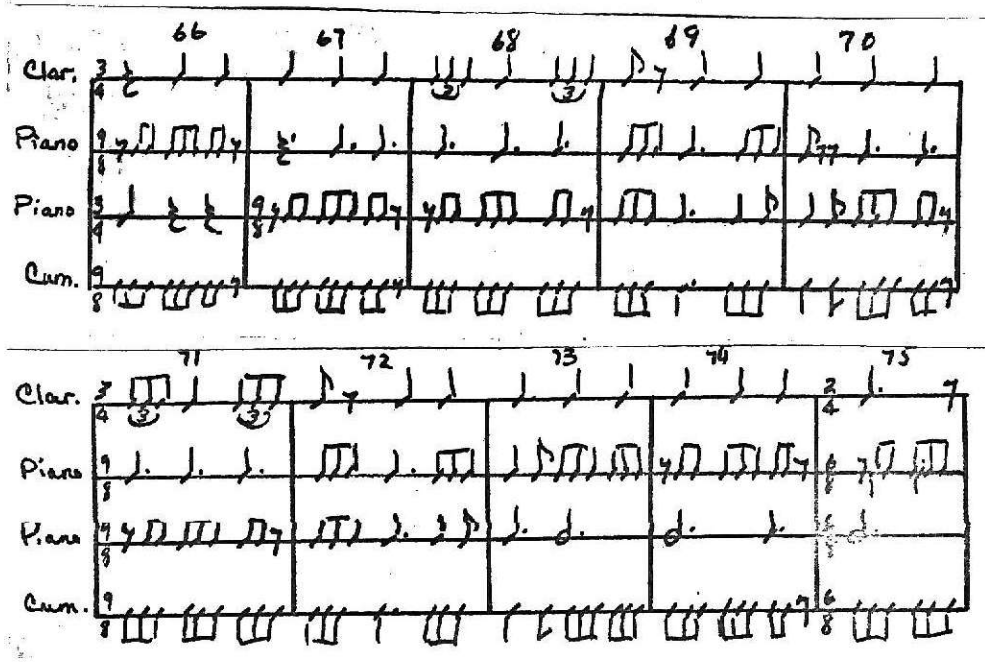
Canonic treatment between the clarinet and piano begins in measures 66 and 67 when the clarinet presents Motive A at the fourth above the original and the piano presents it at the sixth below. This canonic treatment is continued in measures 69 and 70 with the clarinet at the seventh below and the piano at the third below. Tension is created by pitching each successive repetition of Motive A higher in both the clarinet and piano. The ascending clarinet line in measures 72-75 is in contrary motion to the bass line. The two lines combine to introduce Phrase C.

The two voice counterpoint of Phrase B work on the principle of contrary motion. The bass line descends in measures 66-67 as the clarinet line is ascending. Their respective roles are reversed in measure 68. These two lines spread apart again in measures 69-70 and then return in measure 71. The bass line descends steadily in measures 72-75 as the melodic line ascends to the b natural in measure 75. The contrary motion of measures 72-75 builds tension which aids in the introduction of Phrase C.

The harmonic tension continues to fluctuate throughout Phrase B. The chords are all classified as Class I, III, or V chords.

The rhythmic activity remains constant throughout Phrase B.

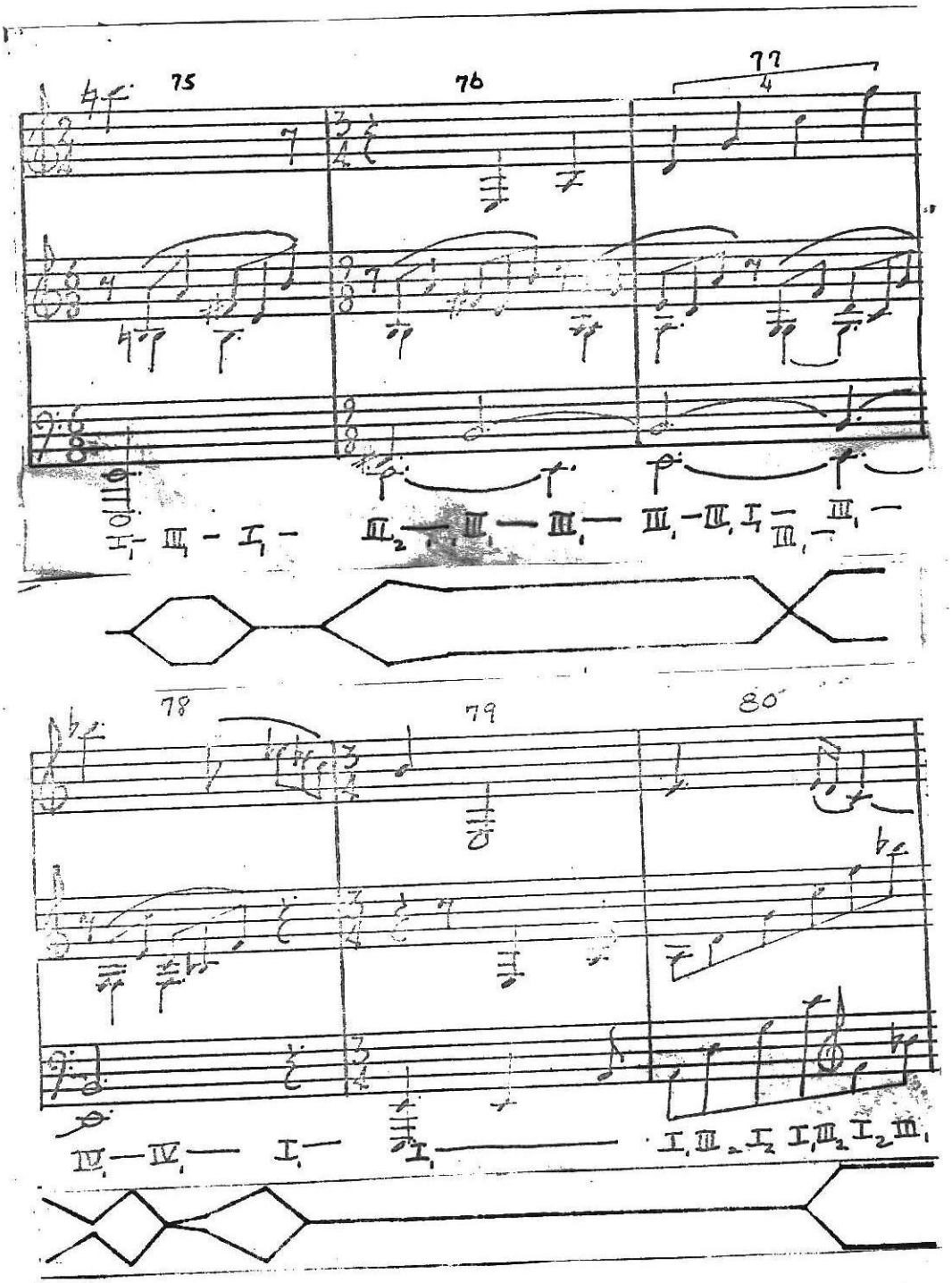
Fig. 13.

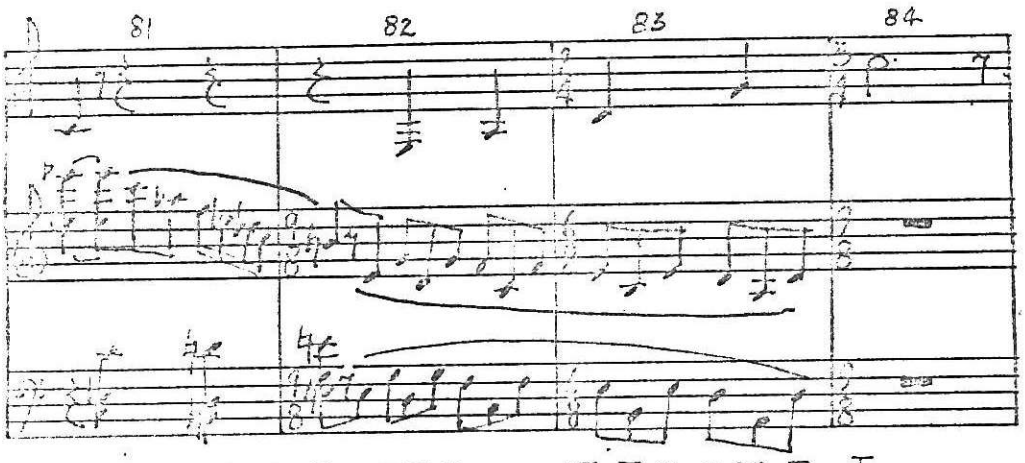

66
67
68
69
70
Clar.
Piano
Piano
Cym.
71
72
73
74
75
Clar.
Piano
Piano
Cym.

EXPLANATION OF PLATE X

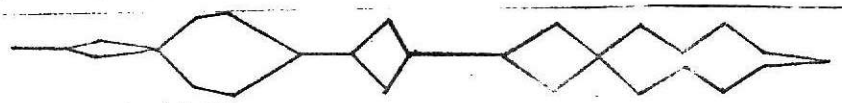
Phrase C. Measures 75-84.

PLATE X





I₁ — I₂ I₁ III₁-III₂ I₁ — I₁ II₁ I₁ — — III₁ I₁ II₁ I₂ III₁ I₂ I₁



In Motive A, measures 75-79, the descending piano line is set in contrast to the generally ascending clarinet line. Hindemith considers the pedal point E too stagnant to be considered the bass line. Motive B of the bass outlines a distinctly ascending and descending pattern.

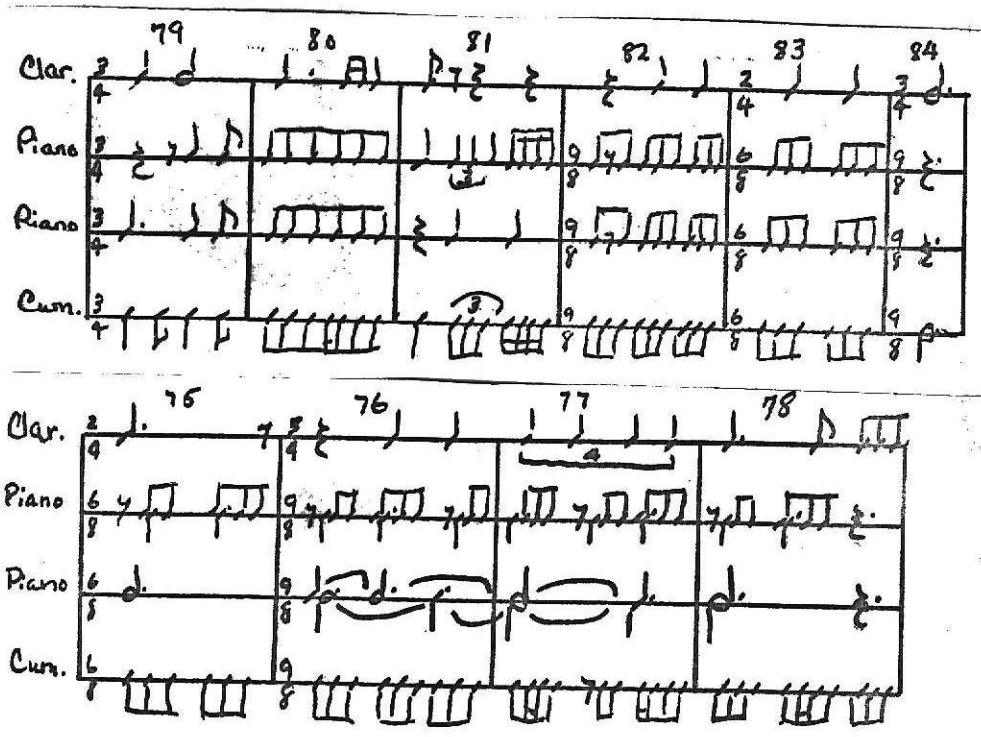
This short phrase canonically throws Motive A of the melodic idea from the clarinet to the piano and then back to the clarinet. Note the rhythmic differences in the melodic material.

For the most part, the bass and melodic lines are set in contrary motion throughout Phrase C. Measure 75 remains contrapuntally motionless as a new pattern is introduced in the piano. The clarinet ascends in measures 76-78 as the piano descends. They descend briefly in parallel motion in measures 78-79, after which the clarinet continues to descend in measures 80-81 as the piano ascends with Motive A of the melodic material. Contrary motion appears in measures 81-82 between the two piano lines. The clarinet once again assumes the melodic lead in measures 82-84, and ascends as the bass line descends.

The increased activity of measures 75-78 is reflected by an increase of harmonic tensions. Class III and Class IV chords predominate throughout these measures. In measures 79-84, the harmonic tension relaxes somewhat and fluctuates rapidly between Class I and Class III chords.

The rhythmic activity likewise increases in Phrase C.

Fig. 13.

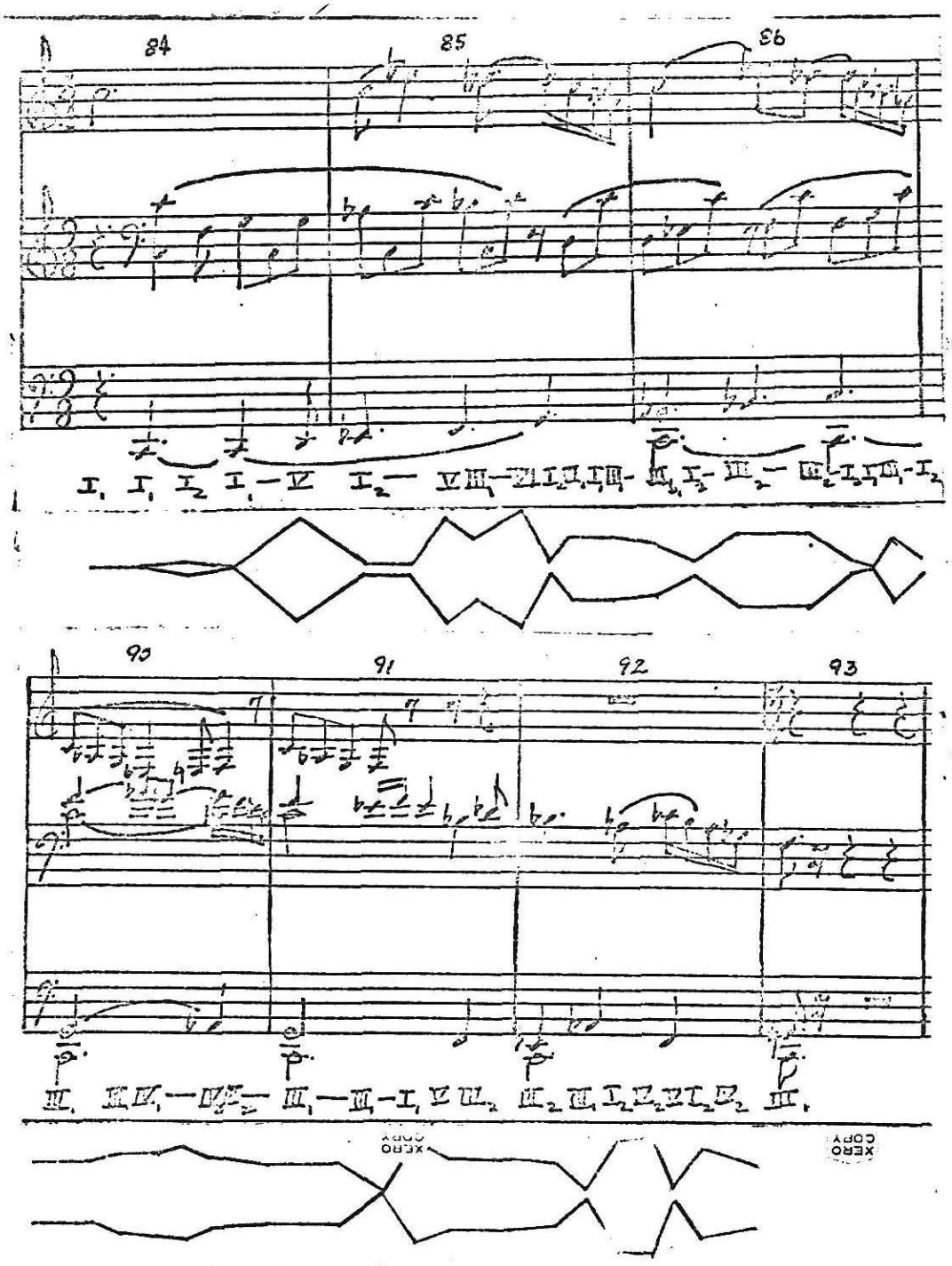


The rhythmic activity opens fairly evenly, increases in measures 77-81, and then slowly diminishes to measure 84. The high point of harmonic tension and rhythmic activity occurs in measures 77-78.

EXPLANATION OF PLATE XI

Phrase D. Measures 84-93.

PLATE XI



Phrase D is composed of two motives. Motive A ascends to measure 87, and then descends through measure 88. Motive B establishes a fairly constant pattern around the G in measures 89-93. This pattern accentuates the close of Phrase A, and prepares the introduction of Phrase E.

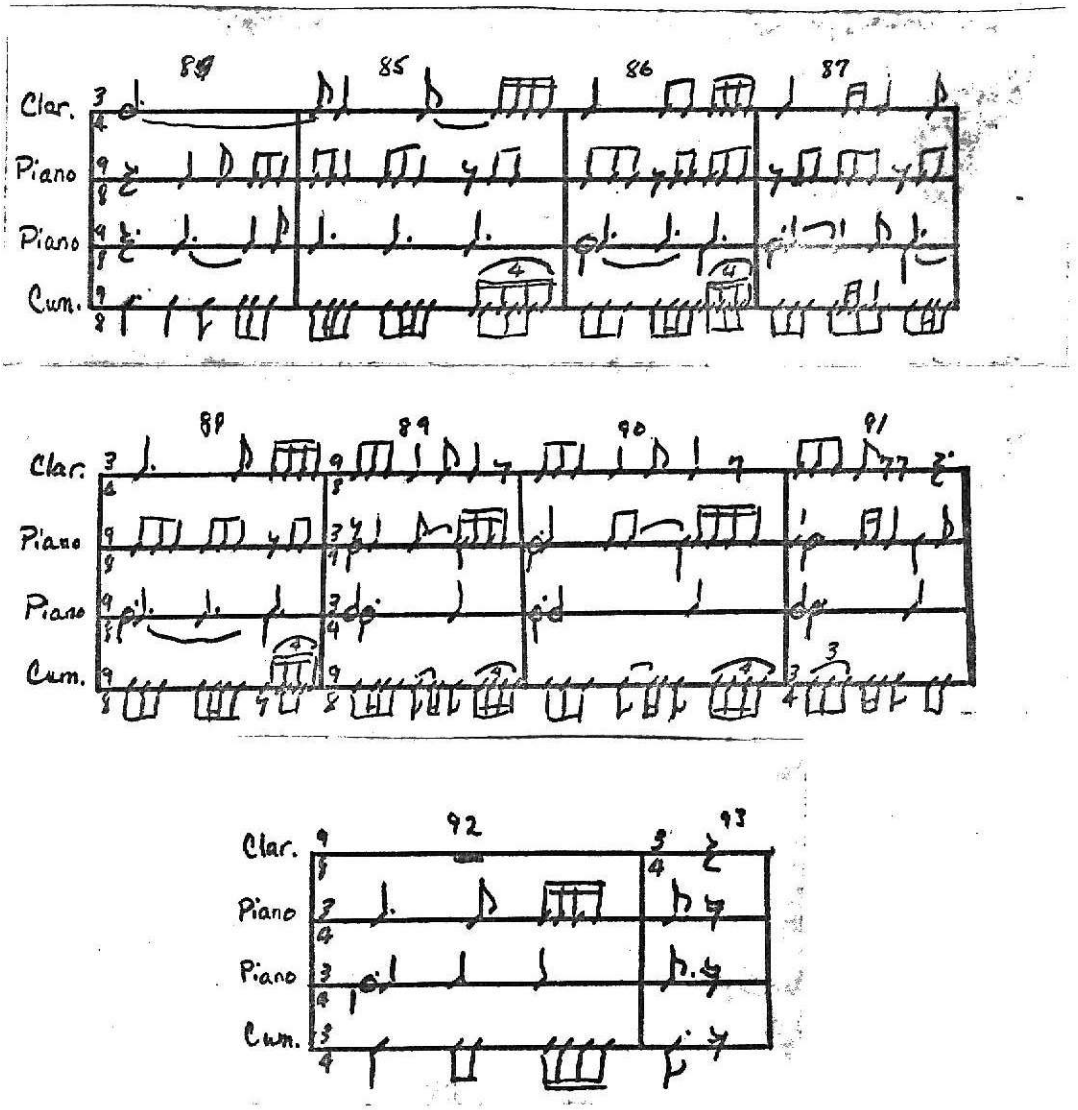
New melodic material is introduced in Phrase E to provide a period of rest before the climatic Phrase F. The clarinet carries this melodic material through measure 88, and then gives it to the piano. The melodic line of the piano rises above the clarinet, and maintains that position to the close of Phrase D.

The bass line rises steadily in measures 84-87, but the ever changing clarinet line produces a two voice counterpoint that is a blend between contrary and oblique motion. The two descend in parallel motion in measures 87-88 as the clarinet prepares to hand the melodic line to the piano. The two voice counterpoint of measures 89-93 is established by the piano. Oblique motion is maintained in measures 89-90, and parallel motion appears in measures 91-92, as the two lines descend in anticipation of Phrase E.

The average harmonic tension of Phrase D is greatly increased over that of previous phrases within the development section. The phrase opens quietly, but builds quickly to a high point of tension in measure 85. An average tension of Class III to Class VI chords is maintained from that point to the end of Phrase D.

Figure 14 illustrates the rhythmic activity of Phrase D.

Fig. 14.



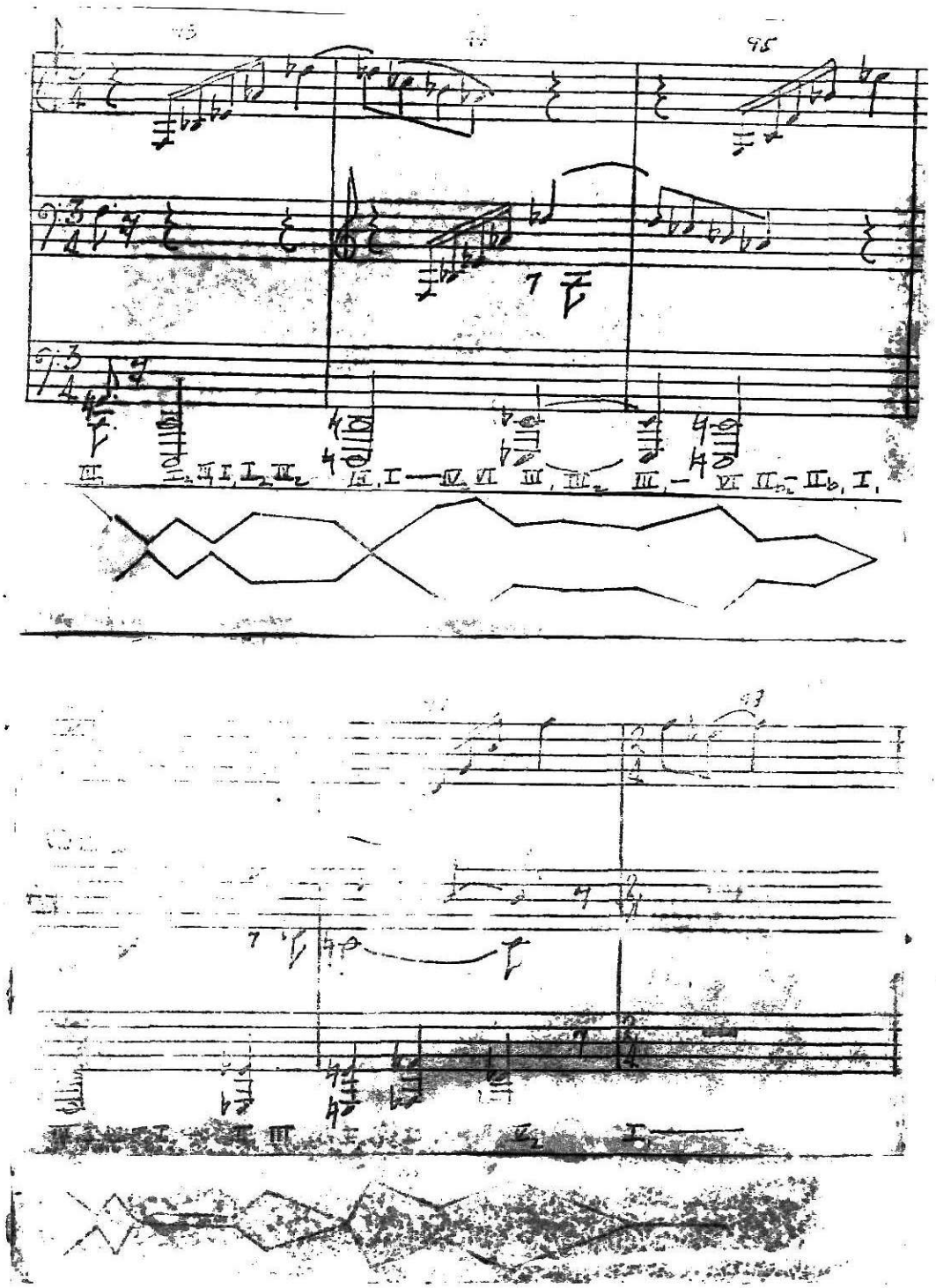
Although new melodic material is introduced as a brief interlude of rest, the harmonic and rhythmic tensions continue to build. Phrase D opens quietly, but builds to a high point of rhythmic tension in measure 85. This tension continues

through measure 90, and then begins to taper off in measures 91-93. The average rhythmic tension is higher in phrase D than in the previous phrases of the development section.

EXPLANATION OF PLATE XII

Phrase E. Measures 93-98.

PLATE XII



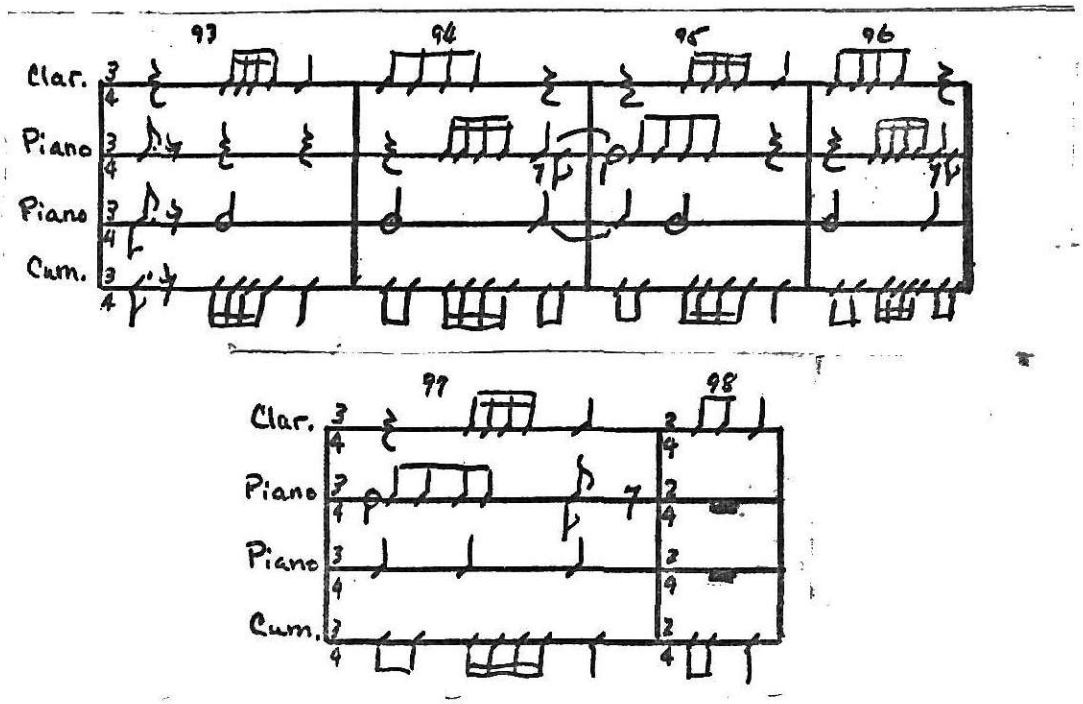
The development section ends with Phrase E. Climatic pitch tension is created by the constantly ascending bass line.

Climatic tension is created melodically by the rapid canonic repetition of a two measure motif from Motive A. Pitch tension is also created by starting each successive set of repetitions one step higher than the previous set.

The rapidly fluctuating nature of the melodic line presents contrary, oblique, and parallel counterpoint at various points in the phrase, but the phrase should generally be considered as being bassed on parallel motion.

The high degree of harmonic tension established in Phrase D is carried through Phrase E to measure 97. The harmonic tension drops sharply in measure 98 to a Class I chord which prepares the opening of the recapitulation.

Fig. 15.

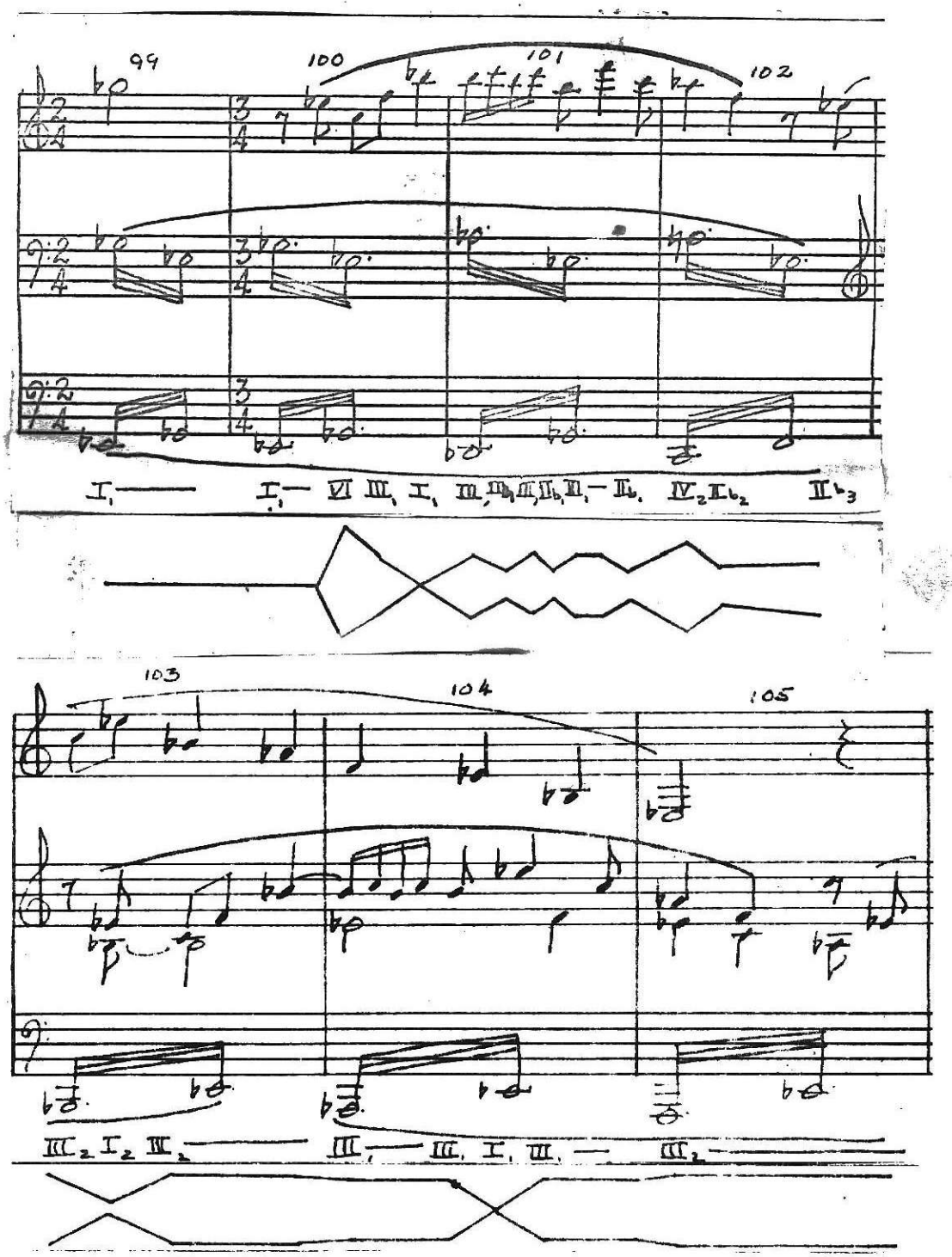


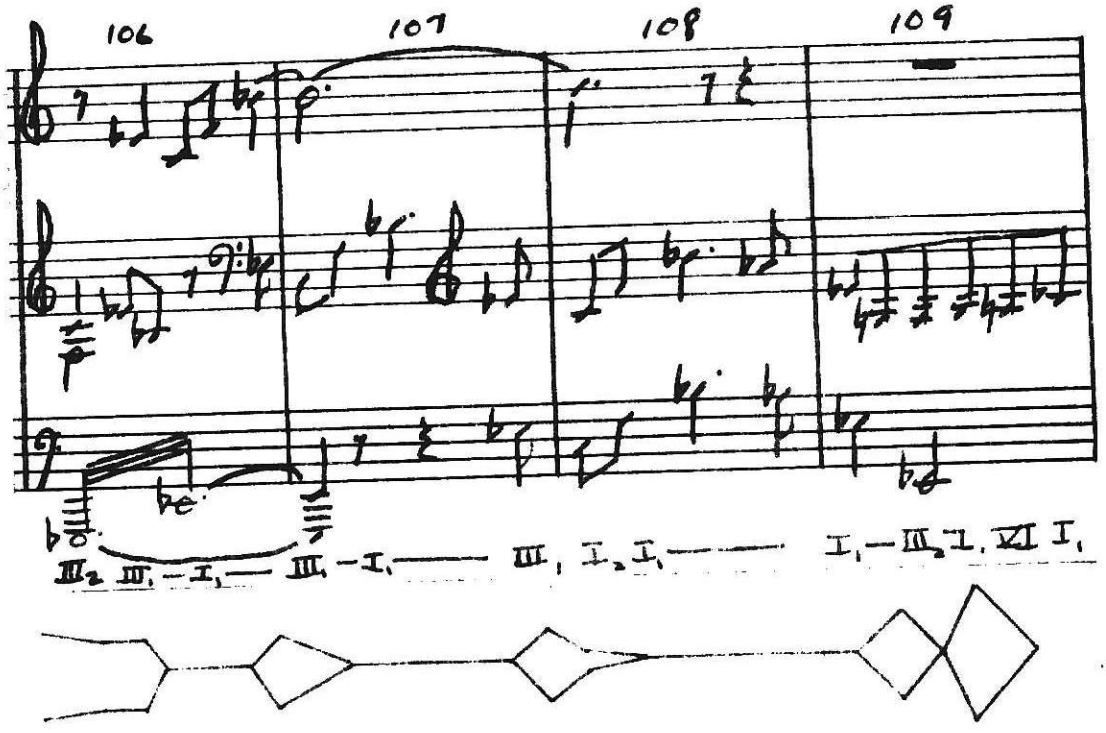
The high degree of rhythmic tension established in Phrases C and D is relaxed somewhat in Phrase E. A two measure rhythmic pattern appears with each entrance of the clarinet and parallels the two measure melodic motif.

EXPLANATION OF PLATE XIII

Phrase A. Measures 99-109.

PLATE XIII




106
107
108
109

RECAPITULATION

Measures 99-107 are based on a descending bass line extending from E flat to E flat. This matches the descending bass line in measures 1-7 of the exposition. Motive A of the melodic material is used in measures 108-109 to close phrase A. The motif centers around E flat -- the note which terminates the descending bass line of phrase A, and introduces the bass line of phrase B.

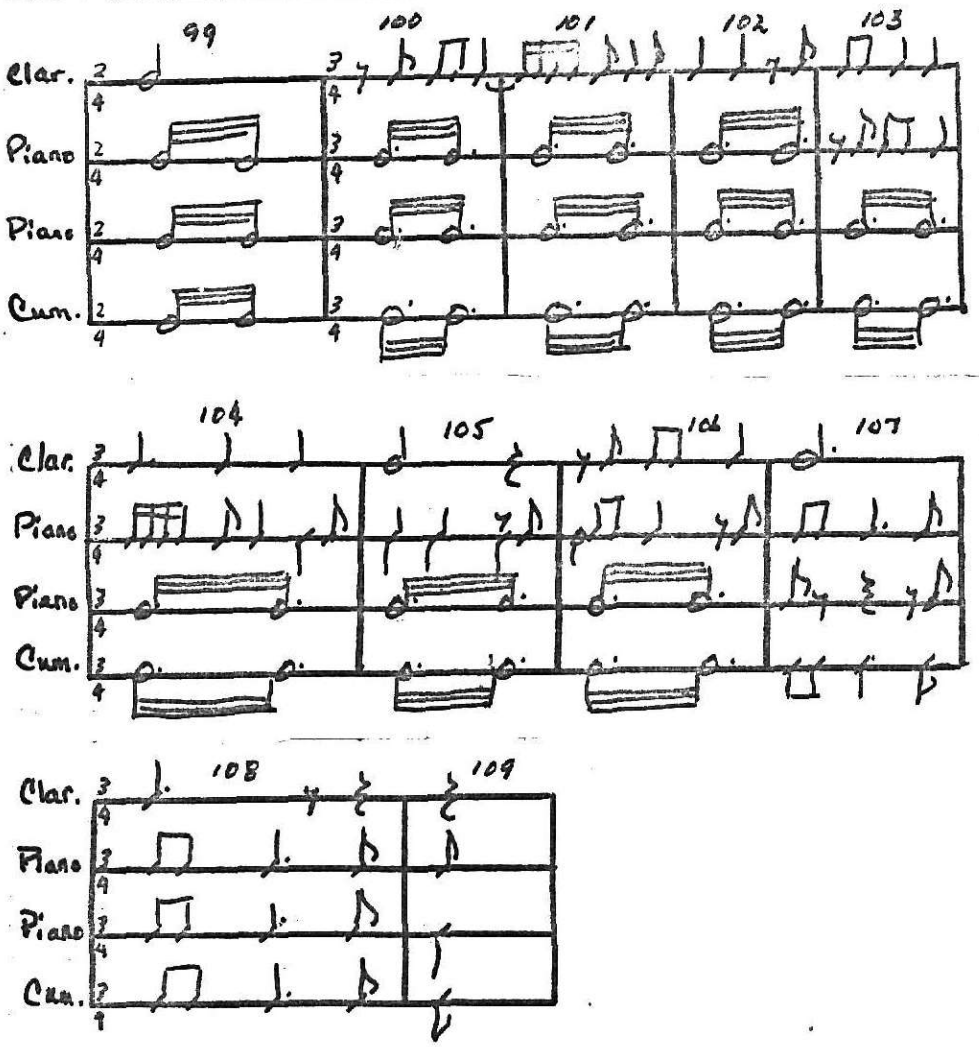
The melodic material is taken from measures 1-7 of the exposition, and is presented at the fourth above the original. Motive A remains the same, but Motive B is altered to accommodate the canonic treatment of the material. The melody is first presented by the clarinet in measures 100-105. The piano enters canonically at the fifth below the original in measure 103. A motif of Motive A is given by the clarinet again in measure 106, and by the piano in measures 107-108 to close phrase A.

Counterpoint by contrary motion opens phrase A, and extends into measure 101. The bass and melodic lines then descend in parallel motion to measure 103, where the piano picks up the melodic line. This contrapuntal pattern is then repeated in measures 103-106. Counterpoint by oblique motion is established in measures 106-107 between the stationary bass and the melodic motifs appearing in the clarinet and the piano. Parallel motion counterpoint appears in measures 107-109 as the piano presents the melodic motif in both clefs.

Phrase A opens consonantly, but quickly builds to an average harmonic tension of Class III chords. This tension extends

through measure 106 because of the tremolo pattern in the piano, and the canonic treatment of the melodic material in measures 103-107. The harmonic tension drops considerably in measures 107-109 as the melodic motif is presented canonically in measures 106-107, and in unison in measures 107-109.

Fig. 16.

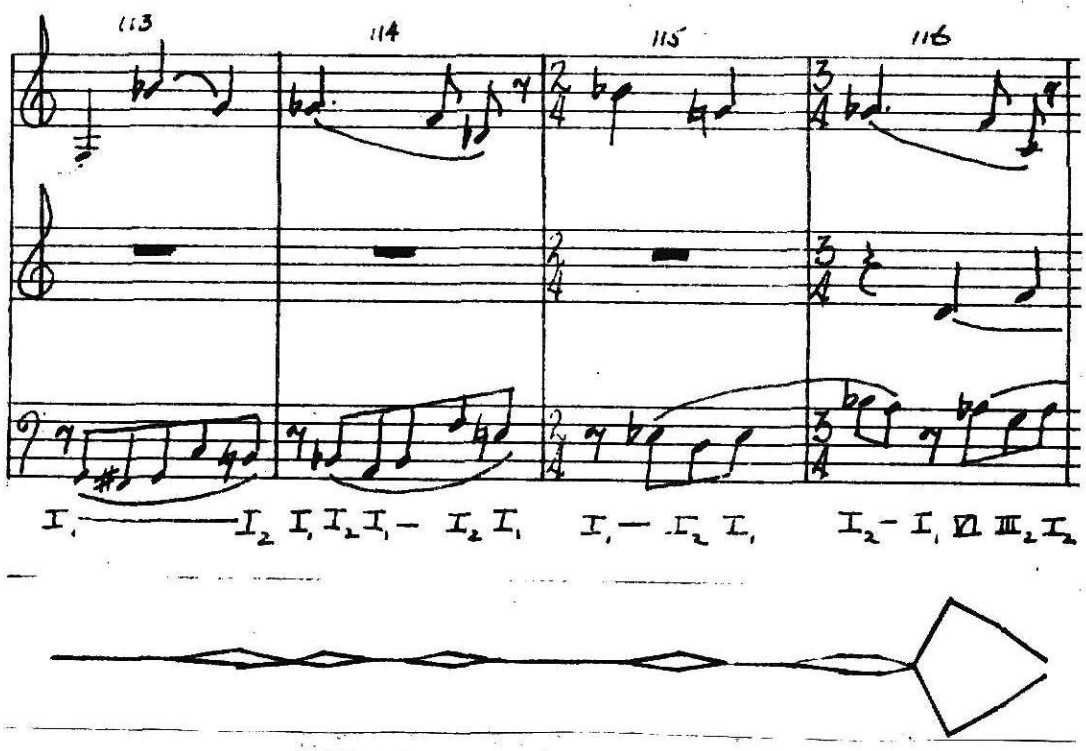


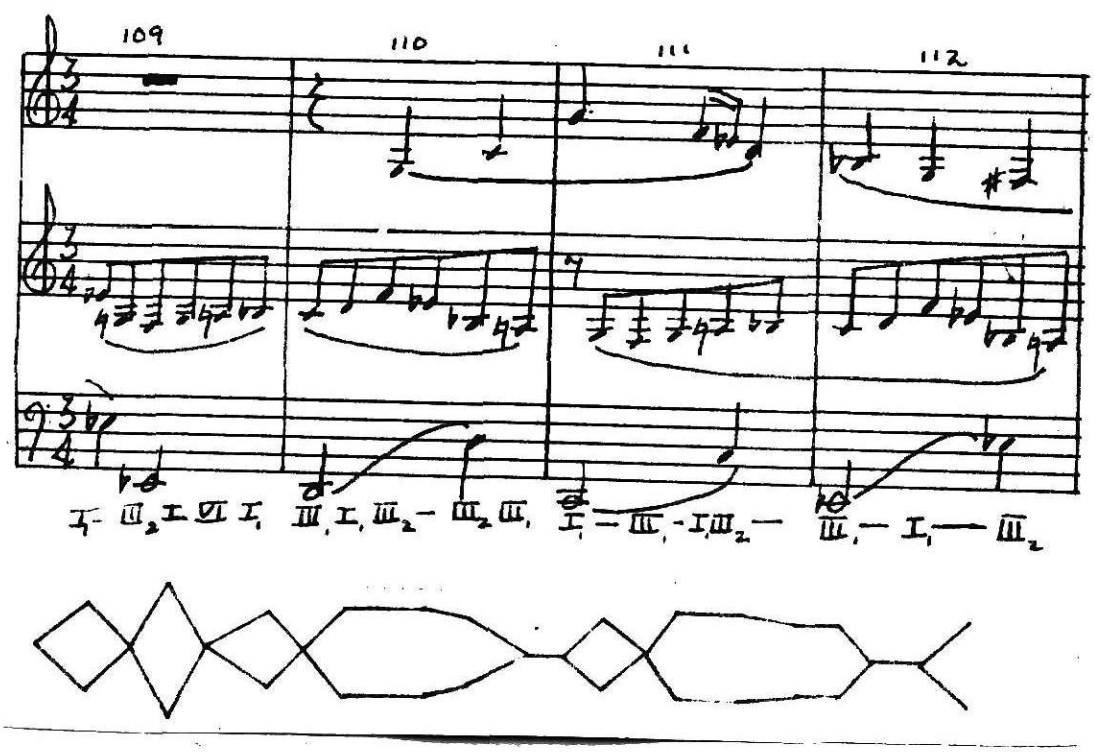
The most striking difference between the statement of the first melodic idea in the exposition and in the recapitulation is the rhythm. Measures 99-106 are based on a tremolo rhythm. A reduction of rhythmic tension occurs in measures 107-109 in anticipation of phrase B.

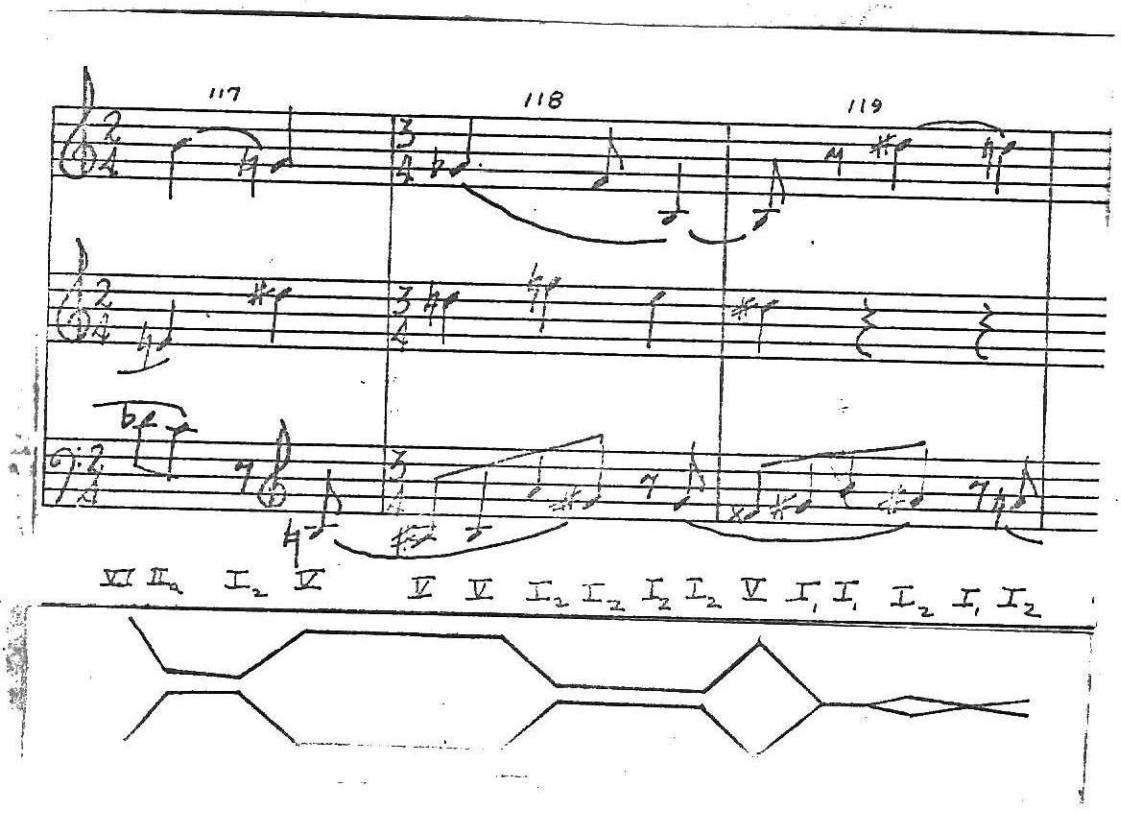
EXPLANATION OF PLATE XIV

Phrase B. Measures 109-119.

PLATE XIV






117
118
119

As in measures 21-24 of the exposition, a repetitious two measure pattern is used to establish the second melodic idea. This pattern is based upon a four note bass line, and constitutes Motive A. Motive B is the repetitious figure ascending sequentially in measures 113-119. Motive B parallels measures 25-31 of the exposition.

The second melodic idea is taken "verbatim" from measures 22-31 of the exposition, but it is presented at the third above the original. The clarinet carries the melody throughout the phrase.

Hindemith uses contrary motion throughout phrase B. The bass and melodic lines move away from each other in measures 109-111, and then return again to their original positions in measures 112-113. In Motive B the bass line is constantly ascending as the clarinet line is descending.

The harmonic tension fluctuates somewhat in Motive A, but it remains basically in the area of Class III chords. Motive B opens consonantly because of the singular intervals created by the bass and melodic lines. Harmonic tension increases rapidly in measure 116 with the introduction of a third line, and remains high through measure 118. Class I chords predominate in measures 118-119 as the phrase ends.

Fig. 17.

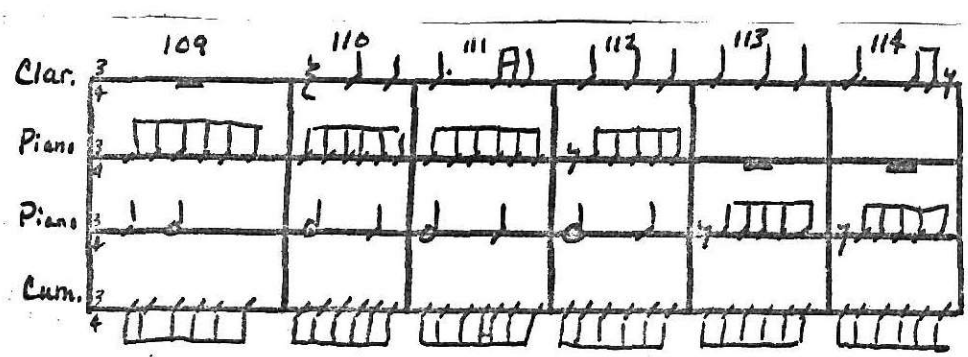
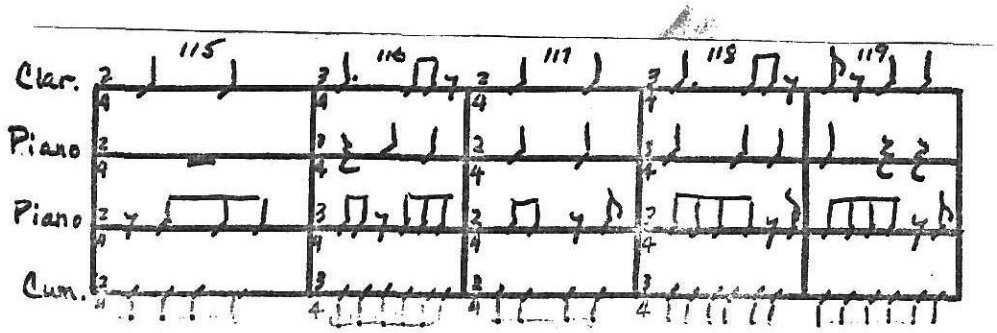


Fig. 17 (Cont'd)

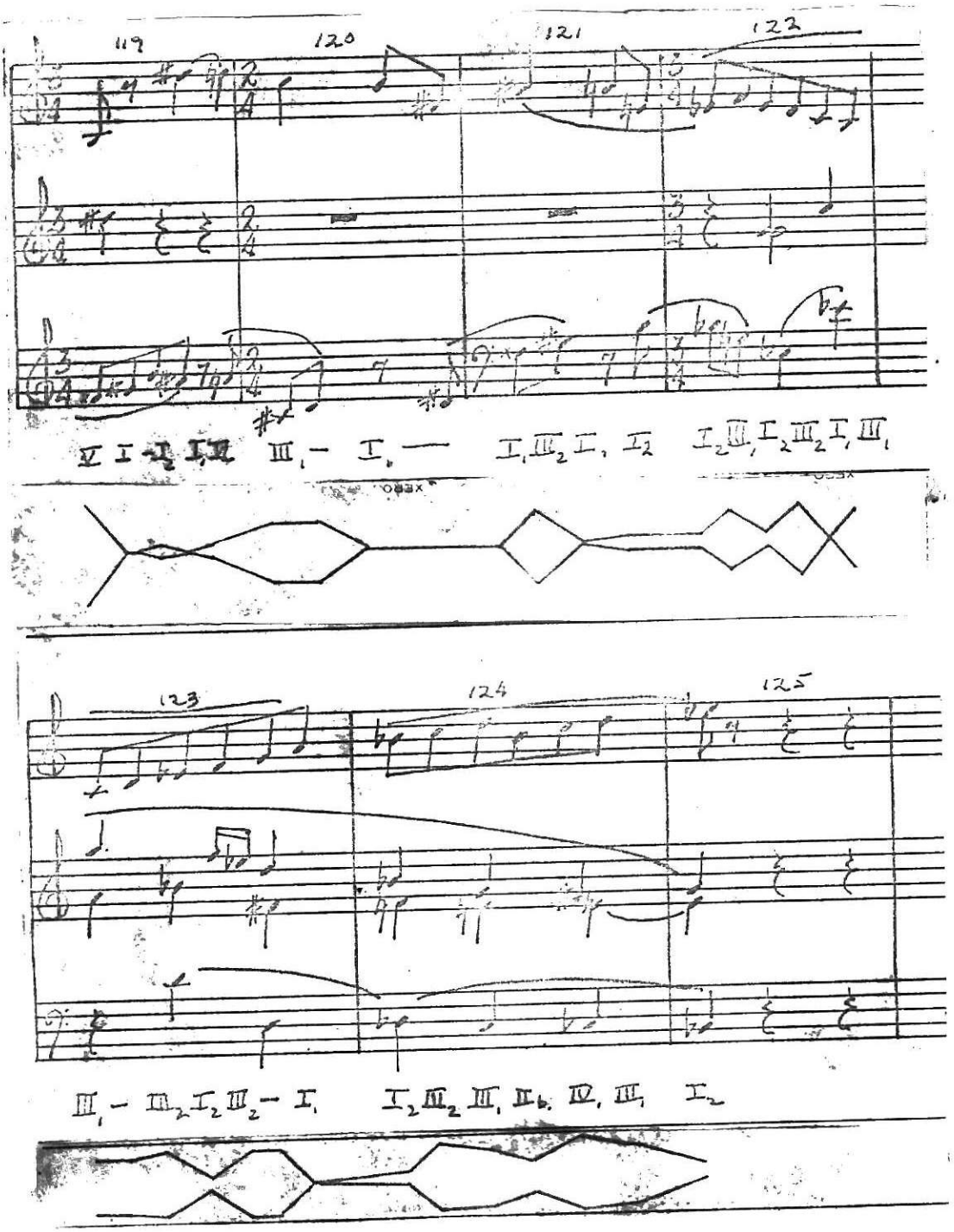


This phrase is rhythmically the same as Phrase A, measures 21-31 of the exposition.

EXPLANATION OF PLATE XV

Phrase C. Measures 119-125.

PLATE XV



Phrase C parallels Phrase B, measures 31-37, of the exposition. It is presented at the third above the original.

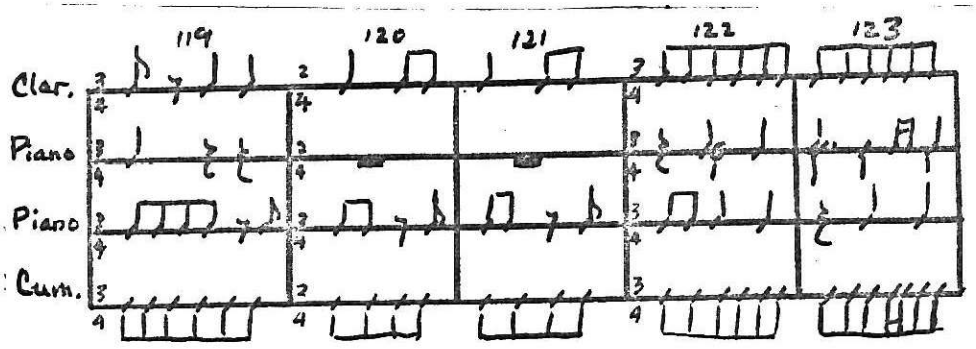
Motive A of the bass line descends sequentially to measure 122, and Motive B continues this downward motion by descending chromatically from E flat to B flat.

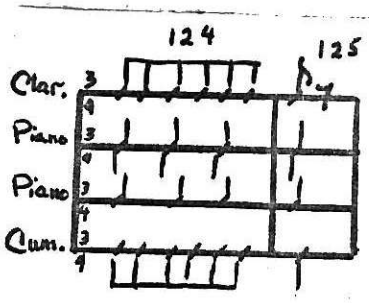
The clarinet descends to measure 122 in Motive A of the melodic line. This descent relieves the melodic tension previously established by the clarinet and prepares the introduction of the piano line in measure 122. The piano presents Motive A of the second melodic idea in Motive B.

Parallel motion counterpoint exists in Motive A. Contrary motion appears in Motive B between the outer two piano lines, but it returns to parallel motion at the close of measure 123. The clarinet assumes contrapuntal importance in measure 124, and the contrary motion of measure 124 builds tension in anticipation of Phrase D.

The phrase opens consonantly, and alternates between Class I and Class III chords to measure 122. The introduction of the additional piano lines increases the average harmonic tension to Class III chords throughout the remainder of the phrase.

Fig. 18.



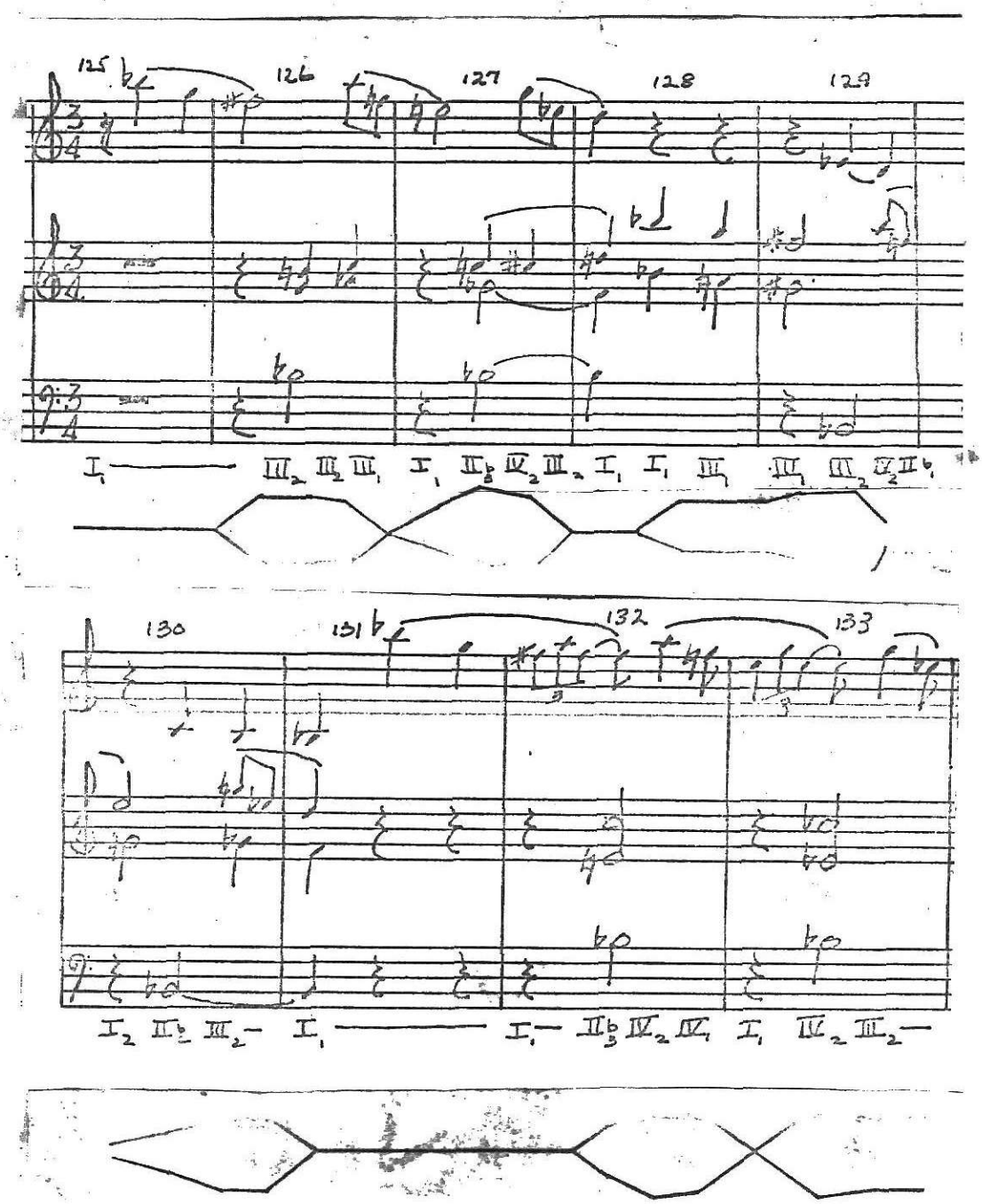


As in measures 31-37 of the exposition, the rhythmic activity remains constant.

EXPLANATION OF PLATE XVI

Phrase D. Measures 125-133.

PLATE XVI



Phrase D parallels measures 37-45 of the exposition and is presented at the third above the original.

Motive A of the bass line is the pedal point B flat in measures 126-128. The bass line shifts from the pedal point to the right hand of the piano in measure 128, because the pedal point is too stagnant to be considered the bass. Motive B descends chromatically from the B flat in measure 128 to the E flat at the end of the phrase.

The phrase is based melodically on Motive B of the second melodic idea. It develops repetitiously by stating the motif three times in three successive phrases.

The counterpoint is basically oblique. The clarinet descends against the pedal point B flat in Motive A. In Motives B and C, the bass line descends as the melodic line remains fairly constant.

Each motive opens consonantly with Class I chords, but builds quickly to Class III and Class IV chords through the last two measures of the motive.

Fig. 19.

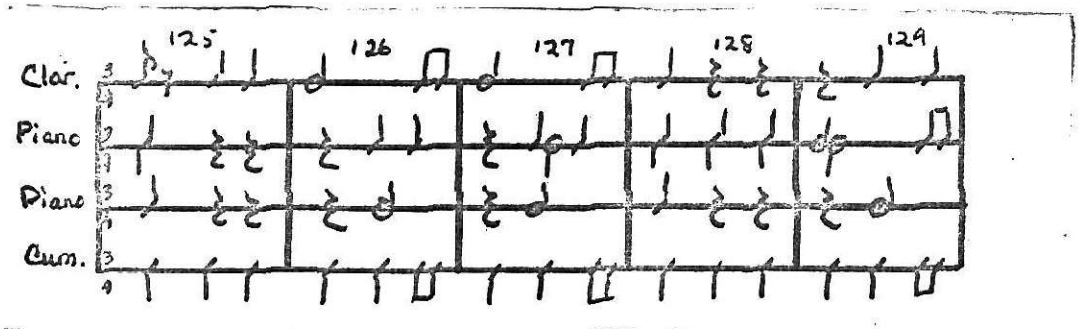
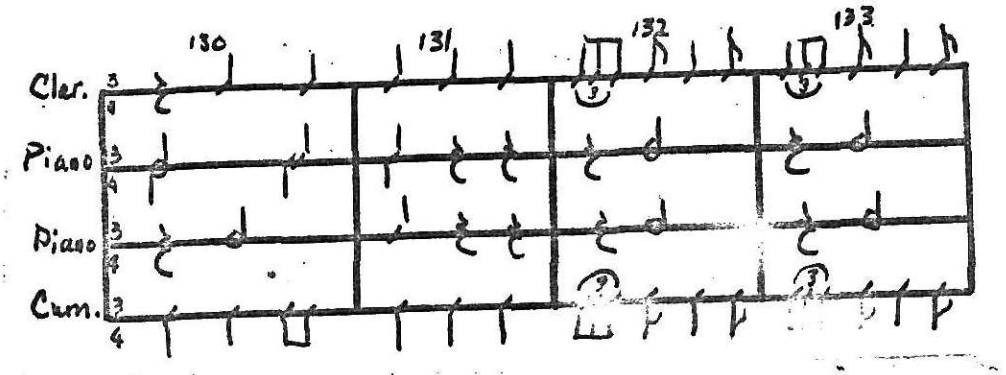


Fig. 19. (cont'd)

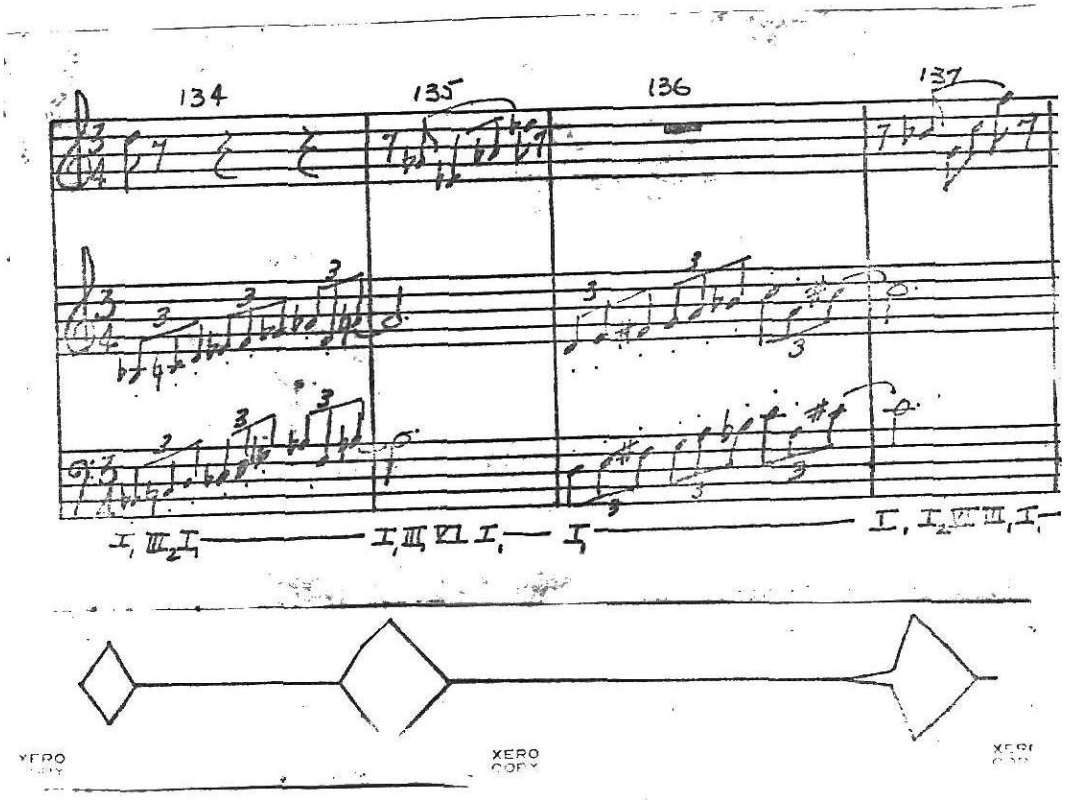


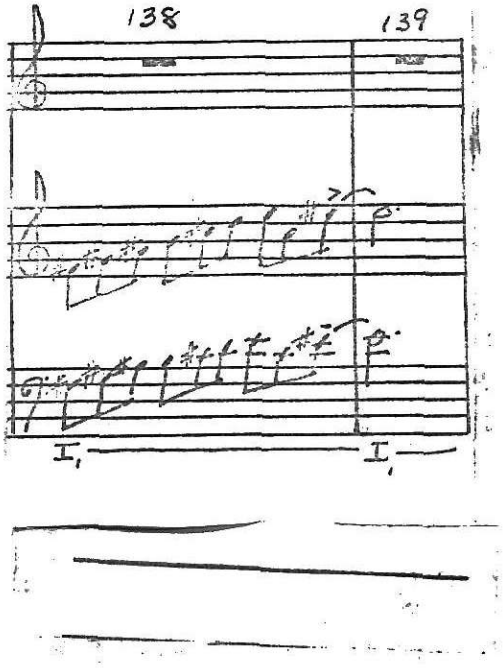
Motives A and B are reduced to a quarter note pattern in contrast to Phrase C. This serves as a break between the rhythmic patterns of Phrases C and E. A triplet pattern is introduced in Motive C in preparation of the rhythmic change.

EXPLANATION OF PLATE XVII

Phrase E. Measures 134-139.

PLATE XVII





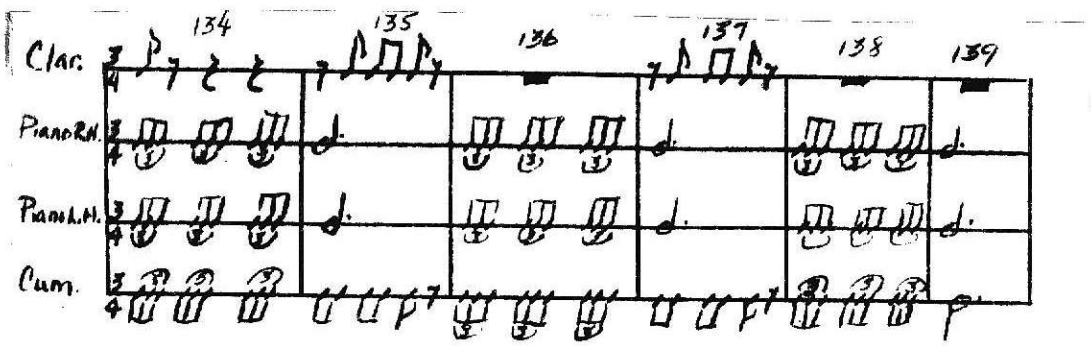
This phrase closes the recapitulation section and introduces the coda. The bass line consists of three sequential figures. Each figure is pitched successively higher and is marked dynamically louder to build the tension which prepares the coda.

The melodic material consists of two brief statements of a motif from Motive A of the first melodic idea. Tension is established by the second statement which is pitched higher than the first in order to parallel the ascending bass line.

Parallel counterpoint rules Phrase E. Brief interludes appear in measures 135 and 137 with the introduction of some oblique motion counterpoint.

The absence of significant contrapuntal motion is matched by a similar lack of harmonic tension. Harmonic tension does appear in measures 135 and 137 between the intervals created by the oblique counterpoint.

Fig. 20.

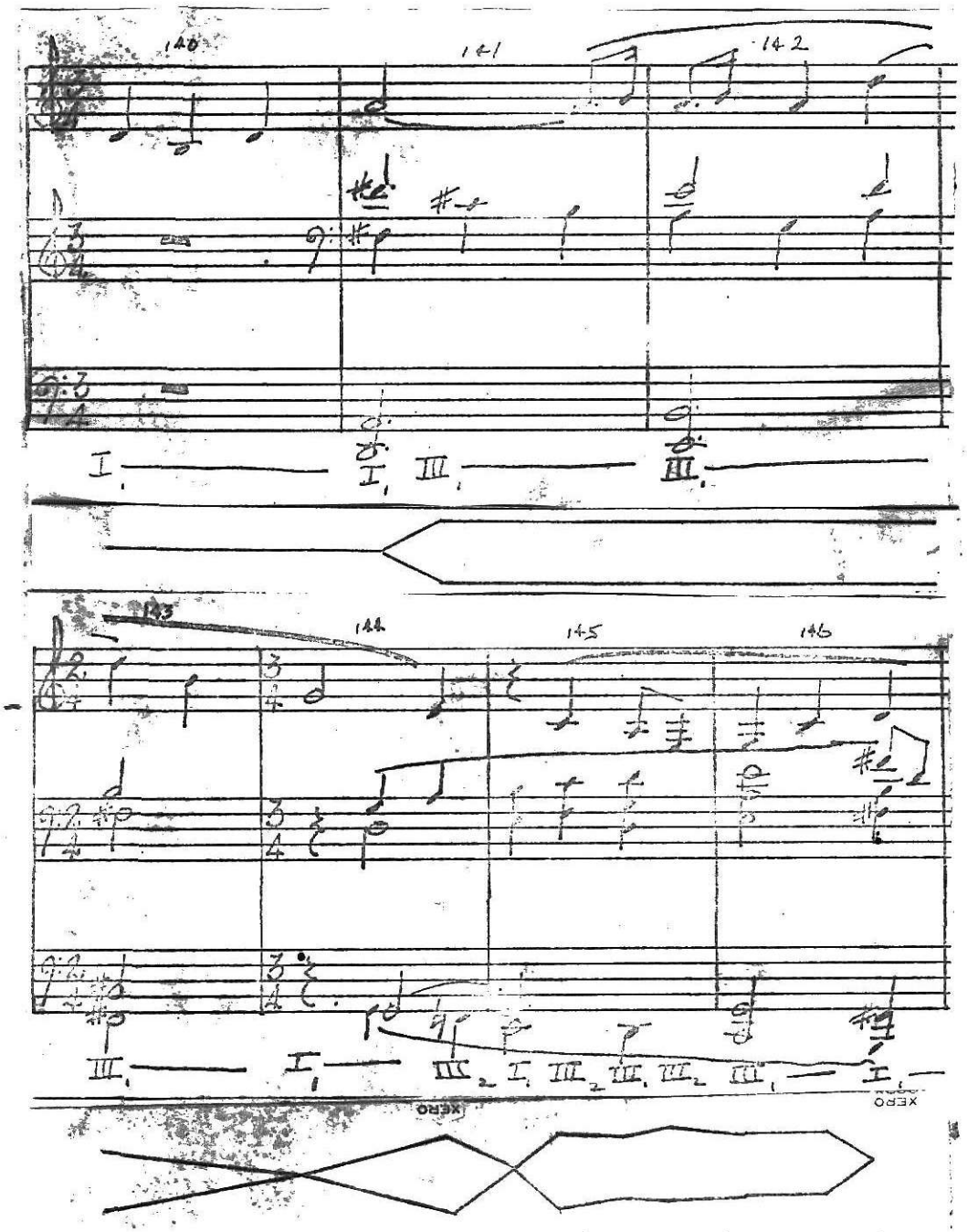


The increased rhythmic activity combines with the elements of sequentially rising pitch levels increasing dynamically to produce tension. This tension marks the close of the recapitulation and the opening of the coda.

EXPLANATION OF PLATE XVIII

Phrase A. Measures 140-150.

PLATE XVIII



148
149
150
III.
I.

CODA

Motive A is based upon an ascending bass. The two motives of the bass line overlap in measure 144. Motive B descends through measure 146, and then reverses to settle on the C in measure 148.

The coda opens with a statement of the first melodic idea at the sixth below the original. The rhythmic value of the notes has been completely altered.

The bass and melodic lines ascend in parallel motion through measure 143. The melodic line then descends in contrary motion to close Motive A. Both lines descend in parallel motion to open Motive B, after which the bass remains fairly constant on C as the clarinet moves in oblique motion. The singular melodic line closes the phrase.

Phrase A opens and closes consonantly with only Class III chords appearing throughout the main part of the phrase.

Fig. 21.

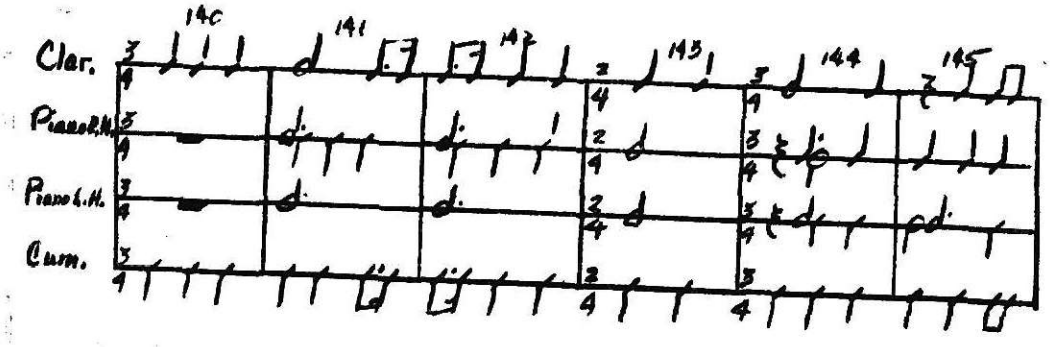
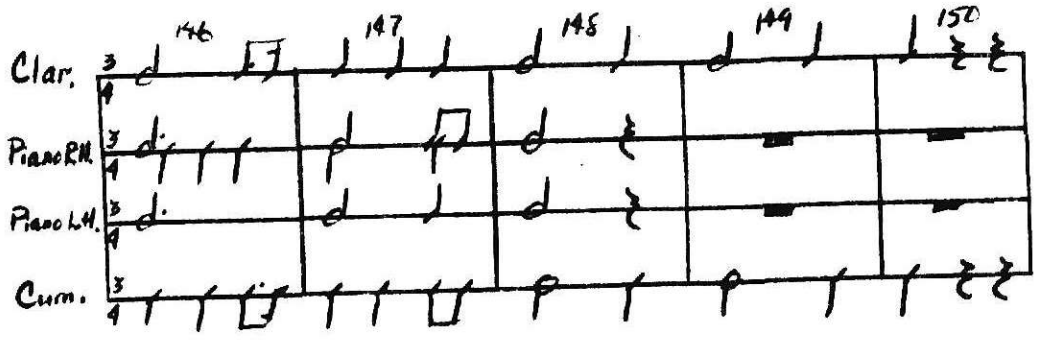


Fig. 21. (Cont'd)

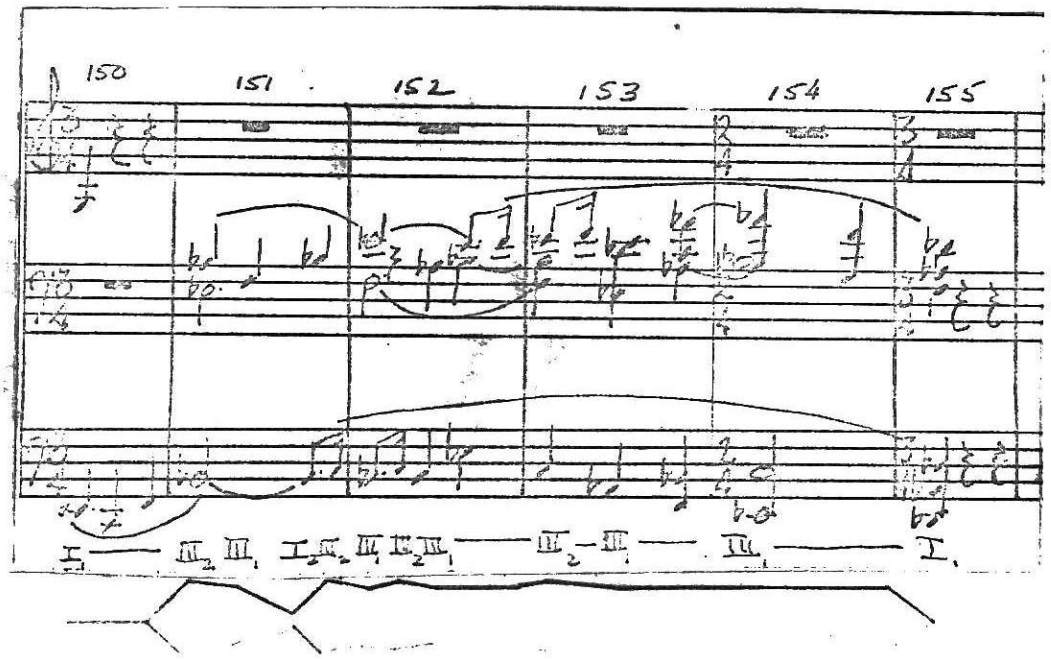


The rhythmic activity of Phrase A is reduced from that of previous phrases. The basic rhythmic pattern revolves around the quarter note.

EXPLANATION OF PLATE XIX

Phrase B. Measures 150-155.

PLATE XIX



The bass line is a tonal derivitive of the first melodic idea.

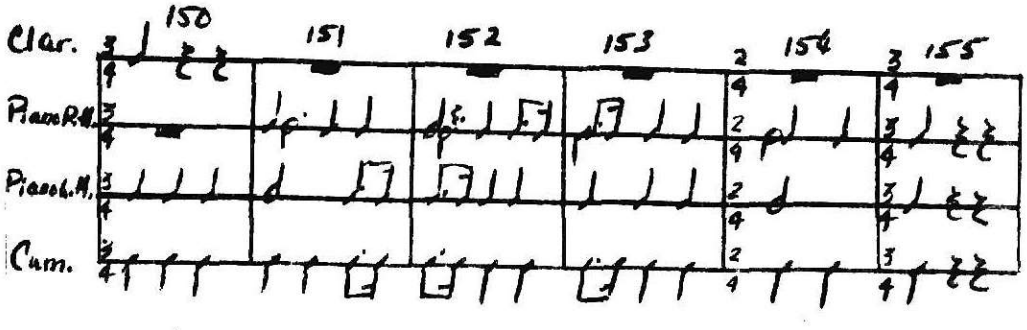
There is canonic treatment of the melodic material in Phrase B. The piano introduces the melodic material at the fifth below the original in measure 150 and the piano again introduces it at the second below the original in measure 151.

The contrapuntal texture of measures 150-152 is basically oblique. Contrary motion appears in measure 153, and the phrase closes in measures 154-155 with parallel motion.

Phrase B opens consonantly but builds quickly to Class III chords with the introduction of the canonic material. The Class III chords are maintained through measure 154. A Class I chord closes the phrase and prepares the introduction of Phrase C.

The rhythmic activity parallels Phrase A in that it is basically a quarter note pattern with a few dotted eighths and sixteenths added.

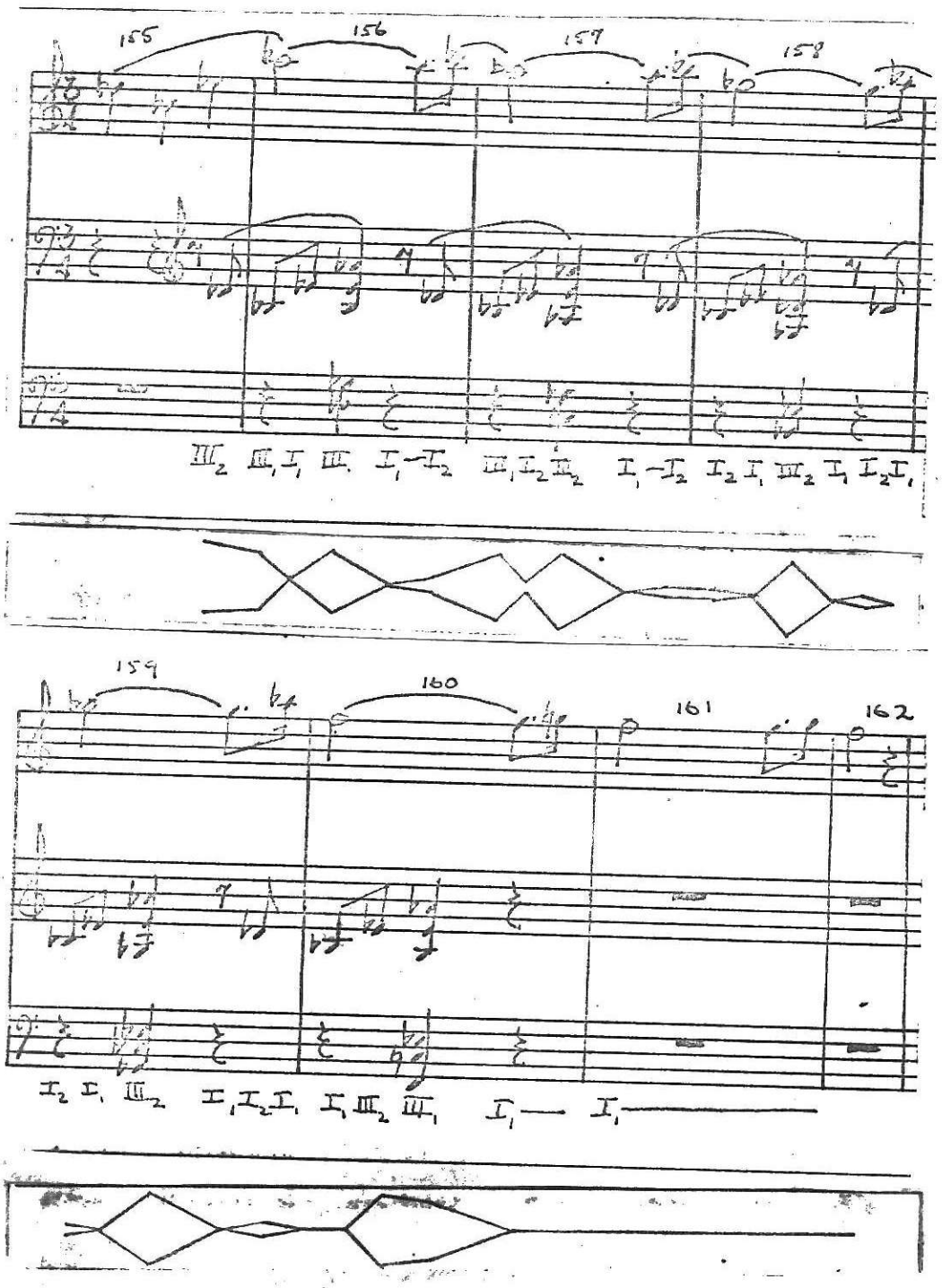
Fig. 22.



EXPLANATION OF PLATE XX

Phrase C. Measures 155-162.

PLATE XX



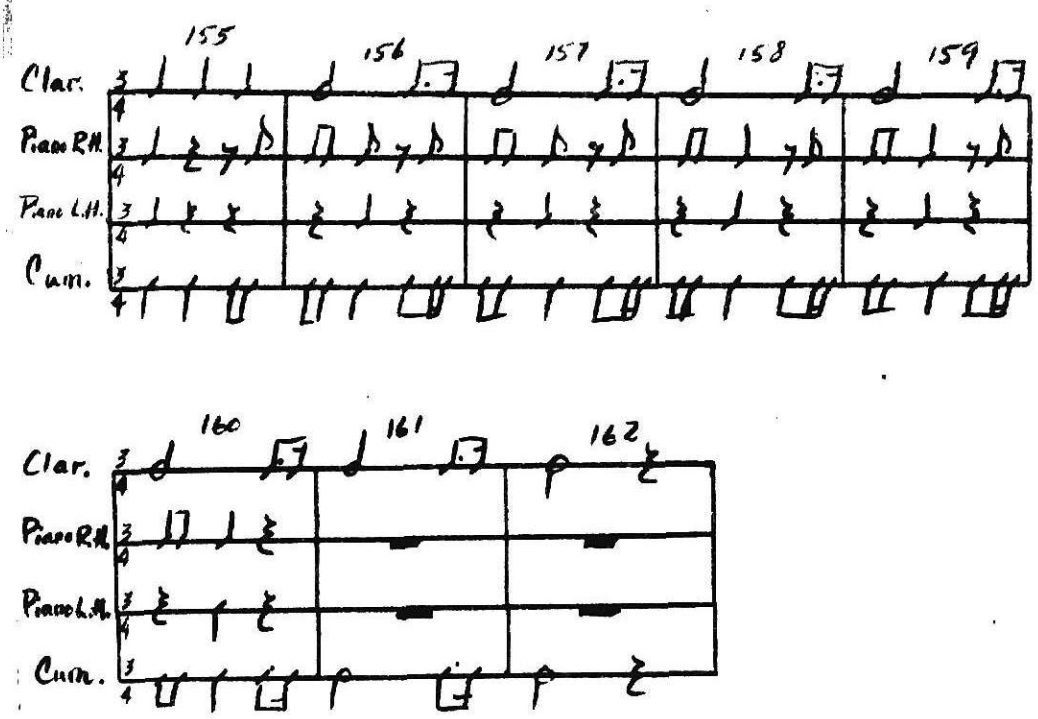
Phrase C is based on a descending bass line which relieves tension in conjunction with the melodic and rhythmic elements.

A motif is developed from the melodic material of the coda. This motif descends from A flat to F in parallel motion with the bass line to relieve melodic tension.

Parallel motion predominates as the melodic and bass lines both descend to relieve tension.

The harmonic tension continually fluctuates between Class I and Class III chords, but the majority are Class I chords.

Fig. 23.

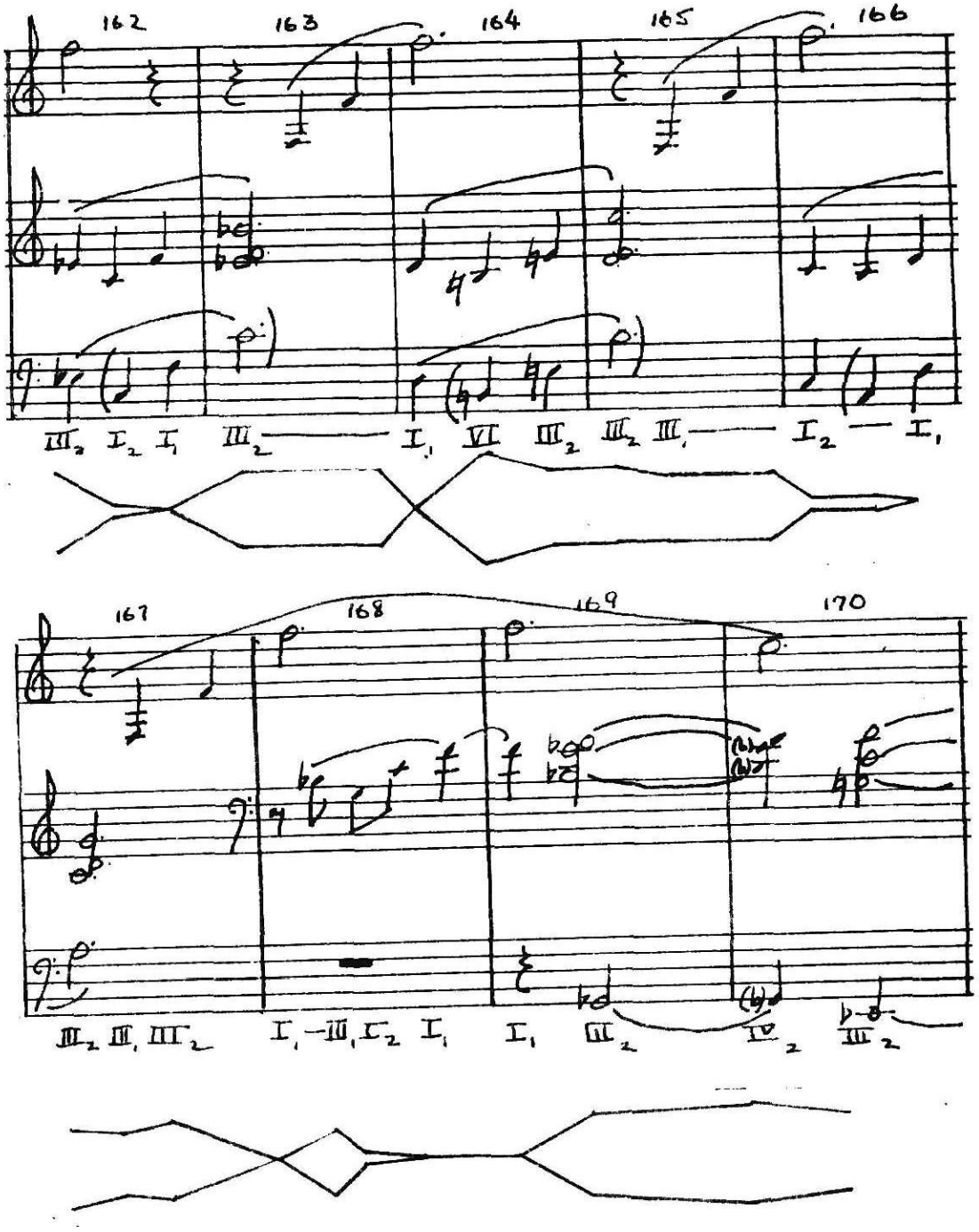


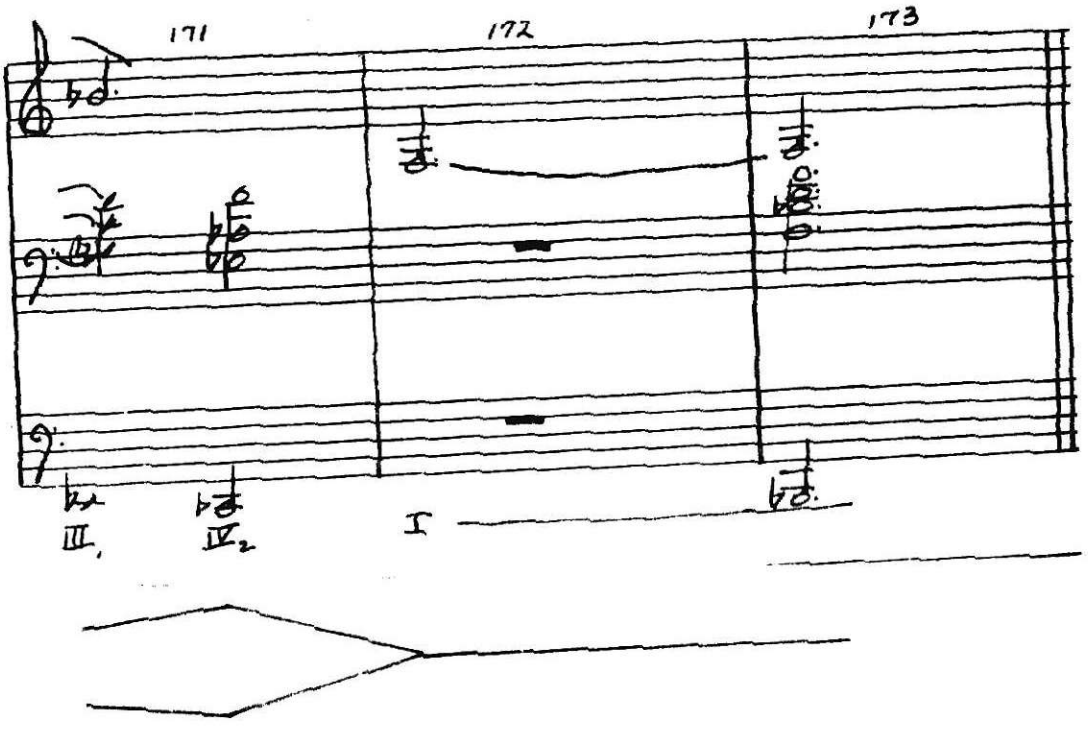
Unlike the harmonic and melodic tensions, the basic rhythmic tension does not decrease. It actually increases over that of Phrase B. The rhythmic pattern established in measure 156 is carried through measure 159. There is a rhythmic reduction in measures 160-161 which closes the phrase.

EXPLANATION OF PLATE XXI

Phrase D. Measures 162-173.

PLATE XXI




171
172
173

The bass line continues the descent started in Phrase C.

A second motif taken from the melodic material of the coda is introduced by the piano in the bass line. The unifying element around which the phrase revolves is the F in the clarinet. At measure 167, the clarinet resumes control of the melodic element with a gradually descending passage which serves to relieve the remaining melodic tension.

Oblique motion counterpoint is maintained through measure 169 as the clarinet remains constant against the descending bass. Both lines descend in parallel motion in measures 170-173.

The harmonic tension continues to fluctuate between basically Class I and Class III chords. The Class IV tension of measure 171 drops sharply in measure 172 to Class I tension which ends the phrase consonantly.

Phrase D exhibits a reduction in rhythmic activity.

Fig. 24.

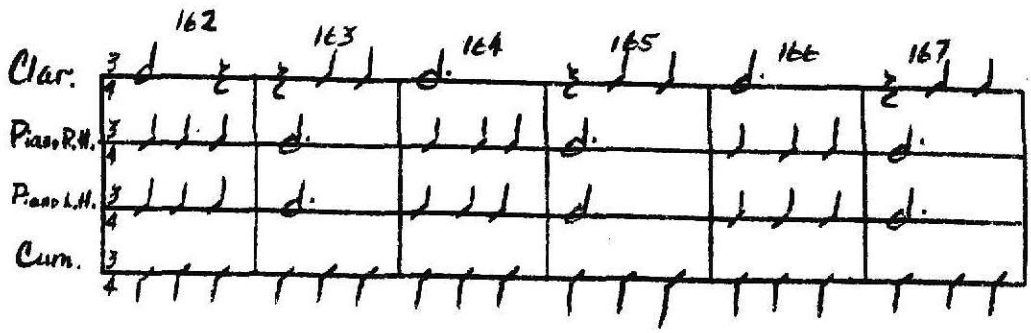
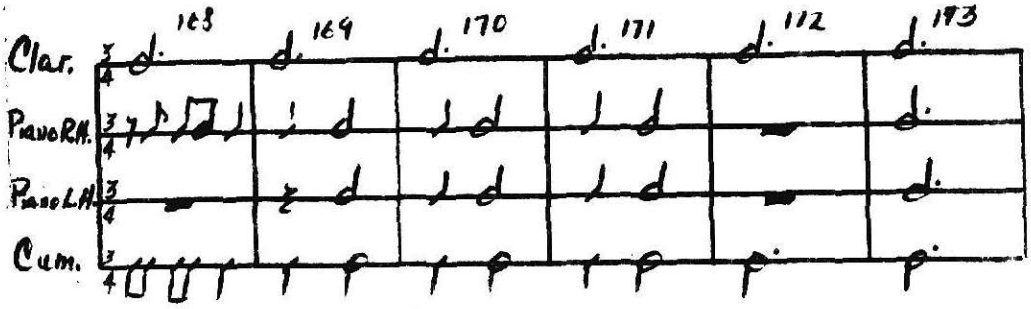


Fig. 24. (Cont'd)



Phrase D begins with a quarter note pattern. The half note becomes dominant in measures 169-171 and the dotted half note appears in measures 172-173.

CONCLUSION

Hindemith builds harmonic tension effectively within the framework of the two part counterpoint. This tension is molded in three respects -- within each individual phrase, within each section of the movement, and within the movement as a whole. The phrases generally open consonantly and build quickly to an average degree of tension characteristic of the phrase. This harmonic tension relaxes in the last few measures of the phrase and the phrase closes consonantly. Hindemith likewise molds the harmonic tension within each section of the movement. The exposition opens consonantly, builds to a high point of harmonic tension in Phrase A of Section II, and then gradually decreases towards the consonant Transition section. The Transition remains consonant as an interlude between the Exposition and Development. The Development section builds harmonic tension to a high point in the last two phrases of the section. The Recapitulation accepts this high level of harmonic tension and gradually decreases it throughout the phrase. The Coda opens consonantly and builds to an average tension of Class III chords throughout the phrase. The final phrase exhibits a slightly higher level of harmonic tension before it closes consonantly. The movement opens consonantly, builds to a high point of harmonic tension at the close of the Development section, and the gradually decreases to the consonant ending.

Rhythmic tension is directly affected by the degree of

rhythmic activity. This tension builds gradually through the first sections of the movement to the Development section. The contrasting clarinet and piano rhythms of the Development section create the most complex rhythmic activity of the movement. A slow decline of rhythmic activity is then evident from the Development section to the ending.

The harmonic and rhythmic elements work in conjunction throughout the movement to mold the music. They combine with the aspects of contrapuntal texture, dynamics, and melodic development to create music.

Table of Chord-Groups

A Chords without Tritone

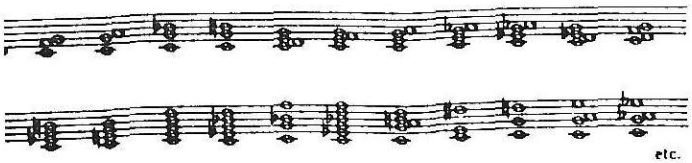
ıut seconds or sevenths

ɔot and bass tone are identical

ɔot lies above the bass tone

taining seconds or sevenths or both

ɔt and bass tone are identical



oot lies above the bass tone

terminate

B Chords containing Tritone

II Without minor seconds or major sevenths
The tritone subordinate

a With minor seventh only (no major second)
Root and bass tone are identical

b Containing major seconds or minor sevenths or both

1. Root and bass tone are identical

2. Root lies above the bass tone

3. Containing more than one tritone

IV Containing minor seconds or major sevenths or both
One or more tritones subordinate

1. Root and bass tone are identical

2. Root lies above the bass tone

VI Indeterminate. Tritone predominating

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THE CREATION OF HARMONIC AND RHYTHMIC TENSION IN THE SONATE FOR CLARINET AND PIANO, FIRST MOVEMENT, OF PAUL HINDEMITH

by

JAMES EARL DILLEY

B. S., Kansas State University, 1964

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Music

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1969

ABSTRACT

The purpose of this paper is to study the means by which Hindemith creates harmonic and rhythmic tensions in a typical work. The Sonata for Clarinet and Piano has been chosen as suitable material for this report.

To analyze the interaction between harmonic and rhythmic tensions, it is necessary to first study each one individually. Hindemith states that harmonic development occurs, and is molded within, a linear framework. This framework is established by the contrapuntal interaction of the bass line and the most important upper voice. The bass line serves as the foundation upon which the entire harmonic structure is built while the most important upper voice usually constitutes the melodic material. The melodic material is imaginatively handled by canonic, repetitious, and sequential treatment. The harmonic intervals created within this framework possess varying degrees of consonance or dissonance. Hindemith uses this dissonance to build harmonic tension in his music. Each section is analyzed harmonically by studying the bass line, the most important upper voice, the contrapuntal interaction between them, and the harmonic dissonances created.

The rhythmic organization of the Sonata for Clarinet and Piano will be presented by means of a cumulative rhythm chart. This chart is based on the premise that a musical measure is derived from a period of silence of specific duration. When a note or a group of notes sounding simultaneously appears within a measure, it creates a rhythmic pulse. When a second note or

group of notes appears, it likewise produces a rhythmic pulse. The number of rhythmic pulses appearing within any one measure is an indication of that measure's rhythmic activity, complexity, and tension.

The report shows how Hindemith builds harmonic tension within the framework of the two part counterpoint. He uses the same basic pattern for each individual phrase, section of the movement, and within the movement as a whole. This pattern consists of a consonant opening, the building of tension to a high point, and gradual decline to a consonant ending.

Rhythmic tension is directly affected by the degree of rhythmic activity. This tension builds gradually through the first sections of the movement to the Development section. The contrasting clarinet and piano rhythms of the Development section create the most complex rhythmic activity of the movement. A slow decline of rhythmic activity is then evident from the Development section to the ending.

The harmonic and rhythmic elements work in conjunction throughout the movement to mold the music. They combine with the aspects of contrapuntal texture, dynamics, and melodic development.