

THE CREATION OF HARMONIC TENSION IN THE
FIRST MOVEMENT OF HINDEMITH'S SECOND PIANO SONATA

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by

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A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

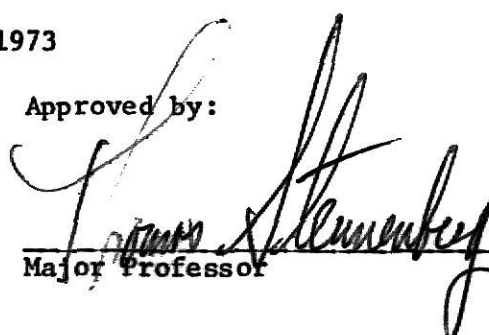
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INTRODUCTION

The purpose of this paper is to study the creation of harmonic tension through the use of two types of analyzation - Hindemith's own Harmonic Fluctuation method which he presents in his text, The Craft of Musical Composition and the "long line of thought" method of analyzation detailed in advanced theory courses at Kansas State University. The Sonata for Piano, no. II qualifies as a typical work; it was composed one year before Hindemith completed his Craft of Musical Composition. This paper is, out of necessity, similar to a Master's report by James Earl Dilley entitled The Creation of Harmonic and Rhythmic Tension in the Sonate for Clarinet and Piano, First Movement, of Paul Hindemith due to the fact that only four years separate the dates of the clarinet sonata and piano sonata under discussion, and Hindemith's style does not exhibit a marked change during this period.

In An Introduction to Twentieth Century Music, Peter Hansen labels Paul Hindemith "an idealistic radical, a wild expressionist, an unemotional neo-classicist, a well-respected educator, and a reactionary."¹ Each of these roles apply to Hindemith at different times in his rich musical life. Born in Hanau, Germany in 1895, his early education led him to study string instruments and composition, and at the age of

¹Peter S. Hansen, An Introduction to Twentieth Century Music (Boston: Allyn and Bacon, Inc., 1971, p. 249.

twenty he was already concertmaster of the Frankfurt Opera and violist in the Amar String Quartet. A complex musician who experienced every field of music from the most practical to the most theoretical, he entered the hectic musical life of post-war Germany after a year in the army in World War I.

From 1921 onwards, when his fame was first established, his name appeared annually at music festivals throughout Germany. He continued to play the viola in the Amar String Quartet until 1929 and performed solo recitals on that instrument with great mastery. (He appeared in London to give the first performance of William Walton's Viola Concerto in 1929.) He was appointed a professor at the Berlin High School for Music in 1927 and remained there until Nazi rule brought to an end his activities in Germany; his compositions, condemned as degenerate art, ceased to be performed there.²

Until this time Hindemith was known as the enfant terrible of the 1920's. His comparatively sharp, savage scores were regarded as the last word in acid dissonance and atonality even though he actually never composed atonal music. After the Nazi condemnation in 1933, he busied himself reorganizing musical education in Turkey. His interest in Turkey was due to his close friendship with the leader of his former quartet, a Turk named Licco Amar.³ Also during this time he toured widely as a conductor and violist, making several trips to the United States, and he completed work on his theoretical treatise, The Craft of Musical Composition (1937).

²Marion N. Scott, "Paul Hindemith," in Vol. IV of Grove's Dictionary of Music and Musicians, ed. by Eric Blom (10 Vols.; New York: St. Martin's Press, 1970), p. 287.

³Harold C. Schonberg, The Lives of the Great Composers (New York: W. W. Norton & Co., 1970), p. 530.

In 1940 Hindemith became a professor of theory and composition at the School of Music at Yale University and remained there for thirteen years. He also taught at the Berkshire (Mass.) Music Centre (Tanglewood). After his tenure at Yale, he moved to Switzerland and began again his busy life of composing, conducting, teaching, and writing about music.⁴ He accepted a post at the University of Zurich, where he remained until his death. The Bach Award of the City of Hamburg and the Balzan Award, the Italian counterpart to the Nobel Prize, were among the many honors bestowed on him. He devoted himself almost entirely to conducting during the last years of his life. His career ended as it started, as a performing artist, for he died on December 28, 1963 during a concert tour in Frankfurt, the location of many of his first great successes.⁵

Hindemith's compositions constitute a long and comprehensive list of works including large and small, serious and casual, difficult and easy compositions. Aside from sonatas for almost every orchestral instrument with piano, he wrote four sonatas for piano solo.⁶ He wrote music for amateur groups on down-to-earth, timely subjects known as Gebrauchsmusik. This was music Hindemith hoped would ingratiate himself with music lovers who had been alienated by the complexity and dissonance of the early works.

Composers during the early part of the century lacked a systematic

⁴Hansen, Twentieth Century Music, pp. 250-51.

⁵Otto Deri, Exploring Twentieth-Century Music (New York: Holt, Rinehart and Winston, Inc., 1968), p. 394.

⁶Hansen, Twentieth Century Music, p. 254.

approach to their work. Hindemith ascertained this lack of organization in judging the compositions of his students and found it necessary to establish a standard by which twentieth-century chord progressions could be analyzed. The result of this search for a standard was his most important text on theory and composition, The Craft of Musical Composition.⁷ Otto Deri says of the two-volume work:

. . . he (Hindemith) set out to codify the rules of the new harmonic style that recognized a tonal center and the equivalence of the twelve steps of the chromatic scale, relinquishing the differentiation between major and minor keys.⁸

In the Introduction to The Craft of Musical Composition, the necessity for a new system is described by Hindemith:

In the last century . . . new combinations of tones came to be recognized, and new ways of bending a melodic line were discovered . . . Whoever wished to make any progress (was) neither helped nor hindered by theoretical instruction, which had simply become inadequate to the occasion.⁹

Nick Rossi describes Hindemith's style of composition in his book entitled, Music of Our Time:

Hindemith's personal idiom in composition is best characterized by its perfection of style . . . He is a traditionalist when it comes to structure, his models being the great contrapuntal forms of the Baroque . . . The symmetry and purity of the Classical sonata form are also cornerstones. His use of harmony is more traditional than most other composers of his generation. His free use of the twelve tones always seem to be based around a tonal center. What daring sounds that do occur are usually the result of the contrapuntal texture. He held firmly to the principle of tonality with little use for Schoenberg's

⁷James E. Dilley, "The Creation of Harmonic and Rhythmic Tension in the Sonate for Clarinet and Piano, First Movement, of Paul Hindemith" (unpublished Master's report, Kansas State University, 1969), p. 3.

⁸Deri, Exploring, p. 66.

⁹Paul Hindemith, Craft of Musical Composition, Book 1 (New York: Associated Music Publisher, Inc., 1937), p. 3.

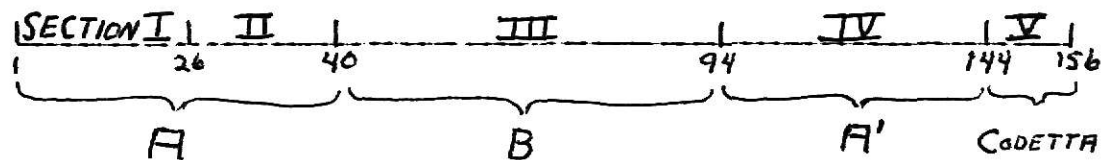
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"Method". In the matter of rhythm, Hindemith's music is more conventional than either Stravinsky or Bartok . . .¹⁰

This constitutes a perfect description of the Sonata for Piano, no. II. The first movement is composed sectionally in a ternary form with a codetta. There are two themes in the A section, and themes from both the A and B sections are recapitulated in the A' section. The B section does not develop any A section material.

Fig. 1.



In this report, the five sections are divided into a total of nineteen plates. In the explanations of the plates, the term, span, will be used in referring to the entire material of a plate. Span is used instead of phrase because in many instances a plate will contain two or more phrases or only part of a phrase. Several times the spans are further divided into stages.

Hindemith states that harmonic development occurs, and is molded within, a linear framework. The contrapuntal interaction of the bass line and the most important upper voice establish this framework.¹¹ The bass line may be either melodic in character or it may hardly rise above connecting the main points of the harmony. However, as the lowest voice it constitutes the foundation upon which the entire harmonic

¹⁰Nick Rossi and Robert A. Choate, Music of Our Time (Crescendo Publishing Company, 1969), p. 115.

¹¹Dilley, "The Creation of Harmonic and Rhythmic Tension," p. 4.

structure is based.¹²

The next most important line is the "theme" or "melody" and is usually the treble line. If the melodic aspect is so obscured by another compositional aspect (i.e., harmony and rhythm), the upper voice that results from chord-successions takes its place.

This Two-Voice Framework analysis method of Hindemith is quite similar to the long line of thought method this paper utilizes. In each method, the intervals formed by these important voices constitute much of the tension-release concept of music and, as Hindemith writes, both voices "must be carefully planned". The difference in the two methods is that Hindemith chooses his framework to include every note of the outer voices while the long line of thought method is based on reference tones. When used in this paper the term, reference tones, deals with the tones which form a skeleton of notes that is ornamented and made musically interesting by the harmonic and rhythmic treatment of these tones. Rhythmic values are nonexistent in the setting down of these reference tones. A silence in either voice is designated by the sign, } . The concentration on the outer voices is not intended to detract from the importance of other lines in Hindemith's linear writing. Rather, the value of the interior lines can be better understood when viewed in this context.

The nature and purpose of a composition determines the combination of consonance and dissonance which must be apparent. Or, again quoting Hindemith, "tensions and relaxations must alternate."¹³ This alternation

¹²Hindemith, Craft, p. 113.

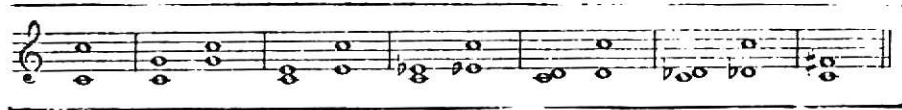
¹³Ibid., p. 114.

is what this paper intends to investigate.

Regarding the use of dissonance, Joseph Machlis says:

Consonance unites, dissonance separates. Composers began to use dissonance to separate the independent lines, to set them off against one another.¹⁴

The harmonic fluctuation or tension in Hindemith's music is built up through his use of dissonance. Of special importance to this study is the graduated scale of consonance and dissonance which is referred to as Series Two.¹⁵



The degree of tension within any chord is a result of the dissonance established by the intervals in that chord, and is the basis of Hindemith's classification. For example, a Class I chord contains no seconds, sevenths, or tritones, while a Class VI chord is an indeterminate chord with the tritone predominating.¹⁶ The Table of Chord Groups classified according to Hindemith is listed in Appendix A.

A further, more complete, example of the use of the Chord Groups is given by Hindemith in his negative discussion of homophonic music. In complaining that chordal music often slips into shallow insignificance, he concludes that when the "main harmonic components" must bear

¹⁴Joseph Machlis, The Enjoyment of Music (W. W. Norton & Co., 1970), p. 356.

¹⁵Hindemith, Craft, p. 96.

¹⁶Dilley, "The Creation of Harmonic and Rhythmic Tension," p. 6.

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the weight of "much incidental and often even much superfluous material, the play of line becomes so weakened that it can hardly be observed at all", and results in "utter futility".¹⁷ Under long line of thought and harmonic fluctuation analyzations, such a passage would result from too frequent chord changes and more especially from the continued use of what Hindemith calls the "sharpest combinations" or those belonging to class III and class IV. This analysis will show the use of harmonic tensions as they occur intervallically within the framework of the two-voice counterpoint.

¹⁷Hindemith, Craft, pp. 112-13.

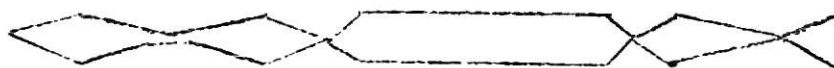
PLATE I
Measures 1-6

1 2 3 4 5 6

mf

I, - III, - I₂ - III, I, IV, - I, III, - I, IV, -

FLUCTUATION



Long line of thought

A SECTION - SECTION I

EXPLANATION OF PLATE I

The first span, mm. 1-6, is based on a pedal point on G. Hindemith regards the first moving line above the pedal point as the lower line of the lineal framework.

The melodic line steadily ascends, then descends to take the form of an arch. The lower line assumes a quasi-Alberti bass pattern.

The theme resembles a folk song melody in its lyricism and tunefulness.

The harmonic tension fluctuates rapidly between class I and class III chords. After attaining and holding a high point of tension in mm. 3 and 4, this opening span concludes quietly on the first beat of measure 6.

PLATE II
Measures 6-16

6 7 8 9 10 11 12

p

I, I-III, I, I-III, I-III, I, -I, -I-III, -VI, IV, III, II

FLUCTUATION



Long line of thought

f

13 14 15 16

f

I, -III, I, III, -VI, IV, III, II

FLUCTUATION



Long line of thought

p *f*

EXPLANATION OF PLATE II

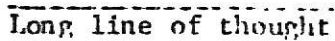
The bass line in mm. 6-16 is in three stages: in the first stage, mm. 6-10, the bass moves by fourths and fifths; in the second stage, mm. 11-13, it moves conjunctly through the interval of a fourth in a generally chromatic passage; in the third stage, mm. 13-16, it holds a pedal tone.

The pitch range of the melodic line is wide, from g^1 in measure 6 to c^3 in measure 14.

The harmonic tension in these measures is not slight as we see the first use of the classes IV and VI. Harmonic tension is built through mm. 11 and 12 then decreases as the melodic line descends and the dynamic becomes quieter.

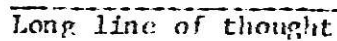
Measures 17-26

FLUCTUATIONS



Long, line of thought

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE III

This span is a variation and extension of the first theme, mm. 1-6, based upon first a pedal point on G and then a chromatically descending bass line.

The complete melodic idea is extended in mm. 23-26 by using the dotted quarter note-eighth note rhythmic figure of measure 1. Over the entire ten measures, the melodic line ascends an octave gradually from one G to another and back down again to the end.

Vertical sound variation is exhibited almost immediately as the bass accompaniment pattern begins to vary harmonically.

In this span, it is interesting to note that harmonic tension fluctuates within each measure, as each measure begins consonantly with a class I chord. The fluctuation within each measure varies, and it is this variation which gives the span its overall shape. The complex movement of chords is apparent in that the chord classifications generally change four times a measure. Tension is built up through measure 25 until the tension is released quickly in measure 26.

PLATE IV
Measures 26-35

26 27 28 29 30

f *mp* *f*

I, — I, I, I, I, I, I, I, — I,

FLUCTUATION

Long line of thought

mp *mf* *f*

I, — I, I, I, I, I, I, I, — I, I, I, I, I, I, I, — I,

FLUCTUATION

Long line of thought

mp *mf* *f*

I, — I, I, I, I, I, I, I, — I, I, I, I, I, I, I, — I,

FLUCTUATION

A SECTION - SECTION II

EXPLANATION OF PLATE IV

The bass line in this new span alternates between paralleling the melody and exhibiting a motion contrary to the melody.

The motive of mm. 26-29 is developed by repetition, transposition, and extension. In mm. 30-33, it is repeated, transposed up a major second. This literal transposition is made obvious by the similarities marked in the fluctuation graph. In measure 34, the last four eighth notes of the previous transposition are repeated to extend the passage to lead into the following measures.

This second theme of the A section is a running sixteenth-note figure interspersed with octaves marked forte. After the first octave statement, the bass line material in measure 28 suggests the dotted quarter note-eighth note pattern of measure 1. In mm. 27-29, the melodic sequential pattern is based on the intervallic pattern of the first four notes of the piece.

For the most part, increase in dynamic and rhythmic tension in this span is closely paralleled by a similar increase of harmonic tension. Dissonance is most prevalent during crescendos. When the forte is reached, the tension is released. The tension which is created is easily seen in the long line of thought outline.

PLATE V
Measures 35-40

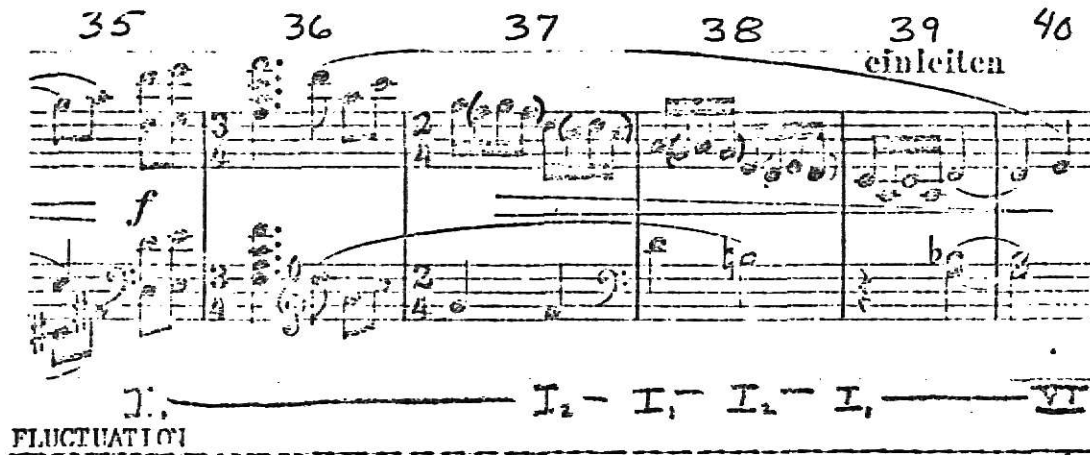
35 36 37 38 39 40

einleiten

f

I, ————— I₂ — I₁ — I₂ — I₁ — — — — — VI

FLUCTUATION



Long line of thought



EXPLANATION OF PLATE V

This span is once again based on a descending bass line. This time, the overall melodic line is descending also, resulting in parallel motion.

This section-concluding span begins with the third statement of the profound octaves in mm. 35 and 36. This shortened melodic idea is followed by an ornamented descent in fourths. The descent ends by a slight variation in measure 39 (ornaments of a third rather than a second) which leads into Section III.

The original motive of the ornamentation, that is, two notes repeated, will be utilized later in the composition.

The above-mentioned parallel motion predominates and very little tension is created. Harmonic tension is negligible until measure 40 when a diminished chord sets up the entrance of new material.

PLATE VI
Measures 41-48

41 42 43 44 45 46

I, - III, I, ——— III, I, ——— I, I, ———

FLUCTUATION

Long line of thought

47 48

I, VI III, I, I,

FLUCTUATION

Long line of thought

B SECTION - SECTION III

EXPLANATION OF PLATE VI

This new span is based on a bass line centered around F.

In mm. 41-44, the bass alternates between F and other notes while in mm. 44-48, it leaves F shortly only to return at the end (measure 48).

The melodic idea of the first stage ascends an octave mostly by thirds. Then in the second stage, it descends the octave by intervals of a fourth.

These measures begin the B section with an opening theme not unlike the opening theme of the piece. Its physical appearance is one of homophony or harmonization with vertical chords.

The harmonic tension continues an average amount of fluctuation through these measures. The chords are all classified as class I, II, or III chords with the exception of a class VI chord near the end.

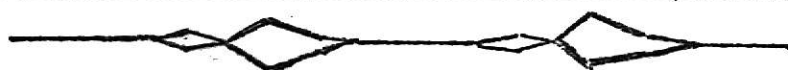
PLATE VII
Measures 48-55

48 49 50 51 52

p *mf*

I, — I, I, III, I, I, — I, I, III, I, I, —

FLUCTUATION



Long line of thought

53 54 55

p

I, — VI II VI — III, — II, —

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE VII

The bass line from mm. 49 and 50 is now sequenced up a third in mm. 51 and 52. Then follows a chromatic ascension to lead to the next span.

The melodic motive of mm. 48-50 is developed by repetition, transposition, sequencing, and a modified form of canonic treatment. This motive is sequenced once up a third and once again up another third when it is extended to descend by thirds to set up the following material. Canonic treatment is suggested when the motive begins in measure 48 and the bass line follows a beat and a half afterward.

In mm. 53-55, the melodic and bass lines are set in contrary motion.

The increased activity of mm. 53-55 is reflected by an increase of harmonic tension. As the passage ends, classes II, III, V, and VI chords predominate these measures. These tensions are obvious in the long line of thought outline, as the augmented fourth is introduced in measure 54. Before this, in mm. 48-53, the harmonic tension is relaxed somewhat and fluctuates rapidly between class I and class III chords.

PLATE VIII
Measures 56-63

56 57 58 59

mf

I, - III, V I, - III, I, - III, - I, I,

FLUCTUATION

Long line of thought

60 61 62 63

f p

III, - I, III, - III, III, III, - I, I, -

FLUCTUATION

Long line of thought

EXPLANATION OF PLATE VIII

The bass line in these measures, mm. 56-63, is in two stages: in the first stage, mm. 56-60, the bass moves conjunctly up a fourth, then sequences down a whole step to repeat the ascension; in the second stage, mm. 60-63, it begins a descending scale passage in a modified aeolian mode on B-flat.

The melodic idea in these measures is almost an exact repetition in octaves of mm. 41-48 (Plate VI). The exception is in measure 56, a modal change from A-flat to A-natural. This span does not resemble mm. 41-48 in its dynamic markings, amount of fluctuation, or texture.

The average harmonic tension of these measures is slightly lower than that of the previous spans within the B section. It opens quietly, goes immediately to its highest fluctuation in measure 56, then alternates between class I and class III chords to the end of the span. The decrease in fluctuation in mm. 61 and 62 is opposite to the crescendo in dynamics in those measures.

PLATE IX
Measures 63-73

63 64 65 66 67

f p

I, I, I, -I, I, I, I, III, -I, VI, II, III, II, II, IV, I, II, III, III, IV

FLUCTUATION



Long line of thought

68 69 70 71 72 73

mf p

II, I, II, VI, I, III, I, III, -I, I, I, I, III, -I, I, I, II, III, II, III, VI, I, II, III, III, IV

FLUCTUATION



Long line of thought

p f

EXPLANATION OF PLATE IX

This span is in two stages, mm. 63-68 and mm. 69-73. The division is based on a sequence of material over a repeating three note pattern, with a gradual increase in dynamics. A transposition up a fourth is easily observed in the long line of thought in mm. 63-68 and mm. 69-73.

The interesting feature of the pattern in the bass deals with its performance. By continuing octave reinforcement of the first of the three note pattern, Hindemith accentuates the cross-rhythm element in these measures. A result of properly performing these cross-rhythms is a pedal effect in the bass.

The complete melodic idea consists of the running sixteenths for three beats followed by ascending suspensions. The sequence is set up to allow an overall chromatic feeling on the staccato eighth notes of mm. 65, 66, 68, 71, and 72.

In measure 63, a melodic contrast begins on the second beat. The bass pattern is taken from the first three notes of the melodic line. Also at measure 63, the vertical harmonies become more random and dissonant to anticipate the forthcoming highest level of tension in the movement.

This high degree of harmonic tension is established in these measures and at the close, measure 73, is seen to prepare for more dissonance. Due to the transposition, the harmonic tension drops sharply at measure 70, to a class I chord. This precedes a rise in both tension and dynamics.

PLATE X
Measures 74-81

74 75 76 77

p *mp*

I, I, I, VI, — III, I, I, — I, — III, I, VII, III, I, I, III, I, — I, — III, I, III, I

FLUCTUATION

Long line of thought

Handwritten musical score for "Fluctuation" by John Cage. The score is written on two systems of staves. The first system has measures 78, 79, 80, and 81. The second system continues the piece. The notation includes various musical symbols such as notes, rests, and dynamic markings like "mf" and "f". Below the staves, there is a section labeled "FLUCTUATION" with a series of Roman numerals and a wavy line representing a fluctuation.

78 79 80 81

mf *f* *mf*

III, I, III, I, III, — I, I, II, I, I, I, — III, IV, III, IV, I, II, I, I

FLUCTUATION

Long line of thought

A handwritten musical score for the song "The Rose Tree". The score is written on two staves, a treble staff and a bass staff, both with a key signature of one flat (B-flat). The melody is written in the treble staff, and the bass line is in the bass staff. The music is in common time (C). The piece consists of four measures. The first measure has a treble staff with a whole note G4 and a bass staff with a whole note G2. The second measure has a treble staff with a whole note A4 and a bass staff with a whole note A2. The third measure has a treble staff with a whole note B4 and a bass staff with a whole note B2. The fourth measure has a treble staff with a whole note C5 and a bass staff with a whole note C3. The piece ends with a double bar line.

EXPLANATION OF PLATE X

The bass line of this span is in three stages, all the result of the three note pattern set up in the previous measures: in the first stage, mm. 74-76, the bass begins on F-sharp; in the second stage, mm. 76-79, the pattern is sequenced up a sixth; in the third stage, mm. 79-81, the pattern is sequenced again a third lower.

In mm. 74-80, the material in the treble line previously found in mm. 63 and 64 (Plate IX) is transposed upward by seconds.

These measures have an overall continuity due to the dynamic markings which move from the piano of measure 74 to the forte of measure 81.

This span opens consonantly, but quickly builds to an average harmonic tension of class III chords. It resembles the previous span (Plate IX) in that it is still anticipating the movement's highest point of tension. The harmonic tension drops considerably in 74, 77, and 79 each time the melodic motive is sequenced.

PLATE XI
Measures 81-94

81 82 83 84

f *mf* *f* *mf*

III₂ - IV. VI I, II, - I, - III, VI I, I, VI III, IV, II, VI

FLUCTUATION

Long line of thought

Long line of thought

Handwritten musical notation for the first system of 'The Rose Tree'. It consists of a treble and a bass staff. The treble staff has a key signature of one sharp (F#) and a common time signature (C). The melody is written in a simple, folk-like style with eighth and quarter notes. The bass staff provides a simple accompaniment with quarter and eighth notes. The system is divided into two measures by a vertical bar line.

89

90

91

cresc.

IV, III,

FLUCTUATION



Long line of thought

92

93

94

ff

I,

FLUCTUATION

Long line of thought

EXPLANATION OF PLATE XI

In this long span, the bass line continues a three note pattern in octaves from mm. 81-84. In measure 84, the octaves change to sixths and this pattern continues until measure 89 when the lower line becomes a reinforcement for a melodic pattern of sixteenth notes through measure 94. The resulting octaves lead eventually to Section XII.

The melodic motive of sixteenth notes in mm. 82 and 83 is developed by repetition and extension. The initial statement is repeated in mm. 85 and 86, and mm. 86 and 87, and finally in mm. 88 and 89 where it is extended in measure 90. An ascension to measure 92 and descension in the next two measures is paralleled by the dynamic markings which include a crescendo to fortissimo in measure 92. In mm. 93 and 94, the melodic tonal descent is matched by a tapering off in dynamics.

The sixteenth note figure being developed through these measures comes from the initial statement of the figure in mm. 63 and 64.

The harmonic tension fluctuates somewhat in mm. 81-89, but it is in these measures that the highest degree of tension in the movement is created. The tension remains in the area of class IV and class V instead of the more average class III area. Measure 89 closes consonantly and class I predominates in mm. 89-94 as Section III ends.

PLATE XII
Measures 95-100

95 96 97 98 99 100

I, II, III, - IV, - I, II, III, IV, - V, - VI, - VII, - I, II

FLUCTUATION



Long line of thought

A' SECTION - SECTION IV

EXPLANATION OF PLATE XII

The bass line in these measures is a continuation of the three note ostinato based on the bass of measure 63 and found in mm. 63-89.

The complete melodic idea is a restatement of the first theme of the A section, mm. 1-6. (See Plate I.)

Vertically, the theme is harmonized almost completely in fourths and fifths.

There is an average amount of harmonic tension for the first half of the span, mm. 96-97. However, in mm. 97-99, as the dynamic grows, so does the harmonic tension until the end of measure 99, when the span comes to a quiet and consonant end in measure 100.

PLATE XIII
Measures 100-106

100 101 102 103

$V, I_2, I, -III, I, I, I, III, III, I, -III, III,$

FLUCTUATION



Long line of thought

104 105 106

$I, -I, -I, III, -III, IV, III, II,$

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE XIII

Measures 100-106 are an exact restatement of mm. 6-12.

(See Plate II.)

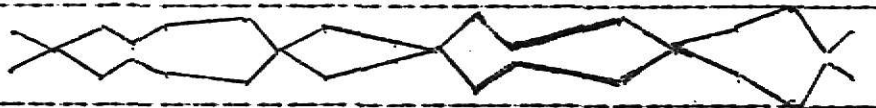
PLATE XIV
Measures 107-116

107 108 109 110 111

f

I, III, I, III, -III, I, III, I, I, V, I, III, III, -I, III, VI, I, III,

FLUCTUATION

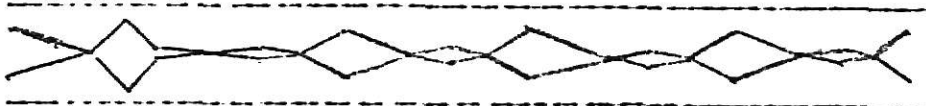


Long line of thought

f

I, I, V, I, I, I, I, III, I, I, I, III, I, I, I, III, I, I, I, III,

FLUCTUATION



Long line of thought

f

I, I, V, I, I, I, I, III, I, I, I, III, I, I, I, III, I, I, I, III,

EXPLANATION OF PLATE XIV

This span is in two stages: in the first stage, mm. 107-112, the open sound of mm. 95-100 returns in a restatement of the initial theme. This restatement is in an inner voice and is almost obscured by the three note ostinato in the bass and pedal points on B in the other voices. In the second stage, mm. 112-116, canonic treatment occurs as the upper line begins a four note pattern and the lower line imitates one beat later.

These measures of canonic treatment (mm. 112-116) form a motive which leads into a restatement of the first theme of the B section.

In the first stage, harmonic tension is increased. The absence of relatively high tension parallels the appearance of contrapuntal motion in the second part.

PLATE XV
Measures 117-124

117 118 119 120 121

mp

I, -III, II, I, - III, I, - I, I,

FLUCTUATION



Long line of thought

122 123 124

p

I, - I, VI, III, I, I, -

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE XV

Measures 117-124 are a transposition of mm. 41-48. (See Plate VI.)

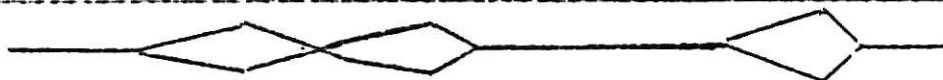
PLATE XVI
Measures 124-129

124 125 126 127 128 129

p *cresc.*

I, — I, — III, I, I, — III, I, — — — — I, VI, —

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE XVI

The bass line in this short span constitutes the melody. The material is transposed from mm. 53-55 (Plate VII). Over this melody occurs a chromatic harmonization of ascending minor thirds.

The span opens consonantly but builds quickly to a class III chord. Class I chords are maintained through measure 128. A class V chord is immediately resolved as a class I chord closes this span and prepares the opening of another span.

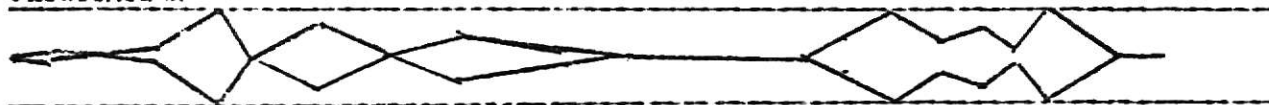
PLATE XVII
Measures 130-136

130 131 132 133 134 135 136

mf *f* *mf*

I, - I, I, II, - IV, I, - III, - I, I - II, VII II, IX, I, VII I, -

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE XVII

This span, mm. 130-136, is in two stages: in the first stage, mm. 130-133, another transposition of the melody in mm. 41-43 occurs over a pedal tone and a middle line ascending chromatically. The second stage, mm. 130-136, is characterized by slower motion in the melody over a bass line which descends generally in intervals of a fourth. The entire passage is given unity by the dynamics. Beginning mezzo-forte, it crescendos to forte in measure 133, then decrescendos back to the mezzo-forte in measure 136.

The motive of sixteenths in measure 133 begins as if to continue the transposition of measure 43. However, the motive is expanded in a variation which leads to the next span.

The division of these measures is seen in the long line of thought outline. After the chromatic bass outline ends in measure 133 and tension is built up in mm. 130-132, the consonant sound in measure 133 begins a new rise in degree of tension. After much fluctuation all the way from class I to class VI in mm. 134 and 135, the class I chord of measure 136 predominates.

PLATE XVIII
Measures 136-144

136 137 138 139 140

mf *p*

I — I, II, IV, II, VI, I, — I,

FLUCTUATION



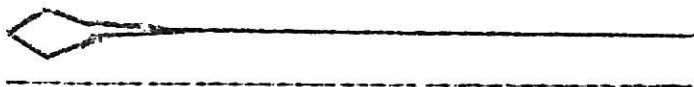
Long line of thought

141 142 143 144

mf

III, I, — I,

FLUCTUATION



Long line of thought

EXPLANATION OF PLATE XVIII

This span is based on the extension of mm. 133-135, measures which in turn come from the second half of the B theme, mm. 44-48. Measures 136-139 are repeated once down an octave in mm. 139-141. Measures 141-144 extend the span further to lead into Section V.

The complete melodic idea of these measures is over a bass line which is a transposition of the bass in mm. 134 and 135. In mm. 137 and 138, the transposition is down a second; in mm. 140 and 141, it is down another fifth. In mm. 142-144, the bass line runs out as a single melodic line concludes the span.

The harmonic tension continues to fluctuate basically between periods of predominately class I chords and smaller periods of great fluctuation. The tension created by chords containing the tritone in mm. 137 and 138 drops sharply in measure 139 which, except for a slight fluctuation in measure 141, ends Section IV consonantly.

PLATE XIX
Measures 145-156

145 146 147 148 149 150

mp *mf*

I, III, - I, II, III, - I, III, - V II, - I, II,

FLUCTUATION

Long line of thought

151 152 153 154 155 156

p

III, - III, IV, II, III, - I, -

FLUCTUATION

Long line of thought

CODETTA - SECTION V

EXPLANATION OF PLATE XIX

The bass line in mm. 145-156 is in four stages: in the first three stages, mm. 145-147, mm. 148-150, and mm. 151-153, the bass becomes a three-measure ostinato figure repeated twice; in the fourth stage, mm. 154-156, it maintains the tone G for a consonant ending.

The melodic line of mm. 145-154 is a restatement of mm. 17-26. (See Plate III.) Any remaining melodic tension is released by the repetition of G, mm. 154-156. A G in the bass is the final comment.

The long line of thought outline delineates the abovementioned ostinato over the pedal tone G.

Harmonic tension continues to fluctuate around the average class III chords. The juxtaposition of the old theme over the ostinato results in a gradually diminishing amount of tension from the class VI chord of measure 146 to class I tension in measure 154 which ends the section and movement consonantly.

CONCLUSION

Within the framework of the two voice counterpoint, Hindemith molds harmonic tensions and releases. Fluctuation, or tension, is ascertained to be built in a threefold manner: within each individual phrase, within each section of the movement, and within the movement as a whole. The individual phrases generally open without harmonic tension and then build to a high degree of tension. This tension relaxes in the last few measures of the phrase and the phrase closes in a consonance. Each section of the movement also takes on this consonant-dissonant-consonant shape. Section I and Section II of the A section quickly build to an average tension of Class III chords, and then gradually the tension is released to a consonant section ending. An exception is found at the close of Section II in that the final vertical sound is one of extremely high tension. The B section or Section III immediately releases this high level of harmonic tension and initiates its own consonant opening. This section exhibits the most concentrated dissonance in the movement before closing consonantly. The A' section builds tension in the harmonic variations of the themes before quietly closing to the codetta. This Section V opens consonantly and builds in tension through the use of pedal point and ostinato before it closes consonantly. In regards to the overall movement, Hindemith opens consonantly, builds to a high point of harmonic tension in the middle of the B section, and then gradually decreases to the consonant ending.

Harmonic fluctuation and long line of thought analyses show how Hindemith combines harmonic tension and release with other musical aspects to build music. Tension and release work in conjunction with polyphonic texture, dynamics and melodic inventiveness and development.

Table of Chord-Groups

A Chords without TritoneWithout minor seconds or major sevenths

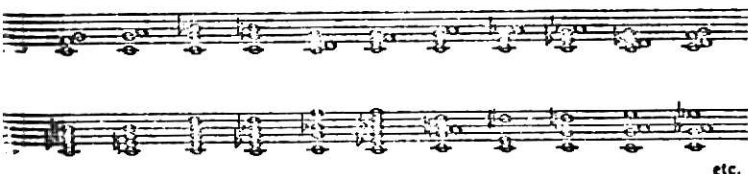
Root and bass tone are identical



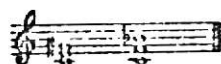
Root lies above the bass tone

Containing minor seconds or major sevenths or both

Root and bass tone are identical



Root lies above the bass tone

Indeterminate**B** Chords containing Tritone**II** Without minor seconds or major seventhsThe 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



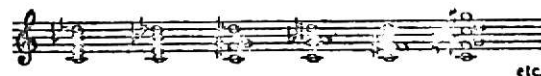
2. Root lies above the bass tone



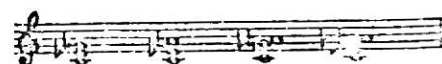
3. Containing more than one tritone

**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

SELECTED BIBLIOGRAPHY

Deri, Otto. Exploring Twentieth-Century Music. New York: Holt, Pinehart and Winston, Inc., 1968.

Dilley, James E. "The Creation of Harmonic and Rhythmic Tension in the Sonata for Clarinet and Piano, First Movement, of Paul Hindemith." Unpublished Master's report, Kansas State University, 1969.

Hansen, Peter. An Introduction to Twentieth Century Music. Boston: Allyn and Bacon, Inc., 1971.

Hindemith, Paul. Craft of Musical Composition. Book 1. New York: Associated Music Publisher, Inc., 1937.

Machlis, Joseph. The Enjoyment of Music. New York: W. W. Norton & Co., 1970.

Rossi, Nick and Choate, Robert A. Music of Our Time. Boston: Crescendo Publishing Company, 1969.

Schonberg, Harold C. The Lives of the Great Composers. New York: W. W. Norton & Co., 1970.

Scott, Marion N. "Paul Hindemith." Vol. IV of Grove's Dictionary of Music and Musicians. Edited by Eric Blom. 10 vols. New York: St. Martin's Press, 1970.

THE CREATION OF HARMONIC TENSION IN THE
SONATA FOR PIANO, NO. II, FIRST MOVEMENT, OF PAUL HINDEMITH

by

JAMES B. GREENWOOD, JR.

B. A., University of Nevada at Las Vegas, 1971

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF MUSIC

Department of Music

KANSAS STATE UNIVERSITY
Manhattan, Kansas

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ABSTRACT

The purpose of this paper is to study the means by which Hindemith creates harmonic tension in a typical work. The Sonata for Piano, no. II has been chosen as suitable material for analyzation. Two types of analyzation are used.

First is the analyzation method of Hindemith's known as the Harmonic Fluctuation method. This fluctuation is built up through his use of dissonance. The degree of tension within any chord is a result of the dissonance established by the intervals in that chord. This is the basis of Hindemith's chord classification known as the Table of Chord Groups. This table is set up on the basis of whether or whether not a chord contains seconds, sevenths, or tritones.

Second is the analyzation method detailed in advanced theory courses at Kansas State University known as the long line of thought method. Hindemith states that harmonic development occurs, and is molded within, a linear framework. The contrapuntal interaction of the bass line and the most important upper line establishes this framework. As the lower voice, the bass line constitutes the foundation upon which the entire harmonic structure is based. The next most important line is the "theme" or "melody" and is usually the treble line. Similar to Hindemith's own analysis method known as the Two-Voice Framework method, the long line of thought differs in its use of reference tones. These tones form a skeleton of notes that is ornamented and made musically interesting by their harmonic

and rhythmic treatment.

Each of the nineteen sections is analyzed by these two methods to study the bass line, the most important upper voice, the contrapuntal interaction between them, and the harmonic fluctuation created. To use these two methods conjunctly shows the use of harmonic tension as they occur intervallically within the framework of the two-voice counterpoint.

This report shows how Hindemith uses the same basic pattern for each individual phrase, section of the movement, and within the movement as a whole. Each of these has an arch form of consonant-dissonant-consonant shape.

Harmonic fluctuation and long line of thought analyses also show how Hindemith combines harmonic tension and release with other musical aspects to build music. Tension and release work in conjunction with polyphonic texture, dynamics, and melodic inventiveness and development.