

A RHYTHMIC ANALYSIS OF THE ALLEGRETTO MOVEMENT
FROM BEETHOVEN'S SEVENTH SYMPHONY

by

PAUL EUGENE KELLY

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A MASTER'S REPORT

submitted in partial fulfillment of the

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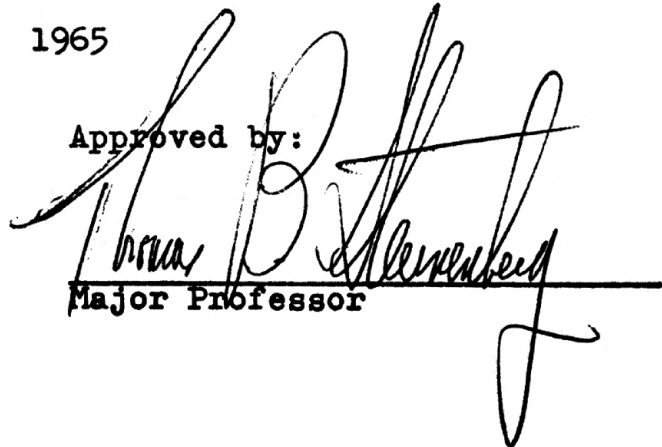
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Manhattan, Kansas

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Approved by:



Thomas B. Steinberg

Major Professor

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INTRODUCTION

Purpose of This Study

While listening to the recordings and studying the scores of their music, one is impressed by the feeling of growth generated by the music of the 18th century and early 19th century composers. The works, especially in the slow movements, possess a continuity which is difficult to explain. This continuity seems to be based on a growth of rhythmic activity from section to section, and ever-changing patterns of sonority values and dynamic levels.

The Allegretto movement of the Beethoven Seventh Symphony is a particularly good example of this kind of growth. Therefore, scores being readily available, and many recordings having been issued, this work was chosen as a specimen for the study of these factors.

The purpose of this study is to gain an insight into how continuity is attained by studying the rhythmic organization of the work. This is the most important aspect of the study. Secondary importance is given to the relation of different levels of sonority to the rhythmic organization and dynamic levels.


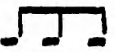

Methods of Study

The complete work was analysed in this way:

Cadences, especially perfect authentic cadences, were

located and form units were defined.

Key areas were located and form units were defined as cadential or episodic, depending upon their function within the form.

Each form unit (the term is explained later) was subjected to a rhythmic analysis. This was done by reducing each voice part to only its rhythmic notation, as in Plate IV. Under this structure was added a line on which the sum total of the individual rhythms is entered; this is the cumulative rhythm. For example, the cumulative rhythm yielded by two eighth notes, , and a triplet, , each executed simultaneously, will be this figure, , and is so notated on the line showing the cumulative rhythm.

The phrase structure was then determined in order that the behaviour of the rhythmic activity within different areas of the form unit could be determined.

Sonority was studied from these aspects:

The number of voices being used in any given phrase.

Whether block chords or contrapuntal structure predominated.

The treatment of doubling in unison passages.

Dynamic values were studied mostly in relation to rhythmic activity; i. e., the dynamic levels of passages containing much rhythmic activity versus those in passages of comparatively little activity.

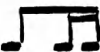
Terminology

Form Unit. The term form unit, which was previously discussed, refers to that portion of the composition which encompasses a theme in its entirety. For example, the First Form Unit is the first theme combined with three variations of that theme. The Second Form Unit begins in measure 102 with the introduction of the second theme.

There are two kinds of form units; those that end on Perfect Authentic Cadences, either real or implied, and those whose harmonic movement is directed toward a new form unit, as in form units two and four, each of which ends in a dominant area preparing for the following form unit. This conception is illustrated on Plate I. The term form unit, as used in the text of the study, will frequently be abbreviated to F. U.

Cumulative Rhythm. Cumulative rhythm or the cumulative line was previously discussed under the heading, Method of Study. As explained, this cumulative line is a composite of the rhythmic impulses of all the voices being utilized throughout the composition.

Note Impulse. A note impulse exists whenever one or more simultaneously sounding notes occur anywhere within the course of a beat. For instance, in Plate III, third stage, simultaneously sounding notes in the two upper lines on the first beat of m. 35 yield one note impulse and independently sounding sixteenth notes in the last half of the beat also yield note

impulses. The yield for the beat is three note impulses forming the pattern, , as the cumulative rhythm.

The term Perfect Authentic Cadence will frequently be abbreviated to P. A. C.

All other terms used in the discussion are well known and universally used in the study of the form and the analysis of music.

THE WHOLE FORM

This movement is a second Rondo form which is divided into six form units. These units are shown in Plate I, which is a structural outline of the complete movement.

The First Form Unit, mm. 3 to 100, is a cadential F. U. The theme, a bi-part song form, is repeated after the initial statement to form three variations.

The Second Form Unit, mm. 101 to 149, introduces the second theme. This is an episodic F. U. embracing several key areas, ending in a harmonic progression leading to the Third F. U.

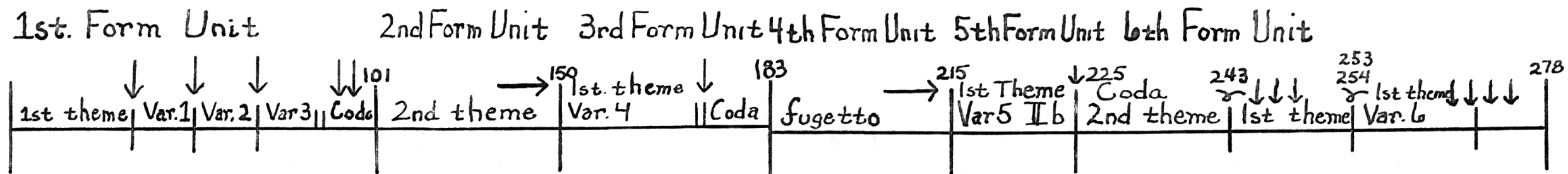
The Third Form Unit, mm. 150 to 182, is a restatement of the first theme in its fourth variation. This unit includes a short coda ending in an elision leading to the Fourth F. U.

The Fourth Form Unit, mm. 183 to 214, is an episodic F. U. in which the first theme appears as a fugetta.

The Fifth Form Unit, mm. 215 to 224, is a very short F. U. in which the first theme, Part II b, appears as the fifth

PLATE I

Formal Plan, Allegretto Movement, Beethoven's Seventh Symphony



- ↓ indicates a perfect authentic cadence in home key.
- indicates harmonic progression leading into the next form unit.
- ⌋ indicates an elision suppressing the perfect authentic cadence.

variation.

The Sixth Form Unit, mm. 225 to 278, is a coda divided into three sections. The first section, mm. 225 to 243, is a restatement of second theme material, ending on an elision leading to a restatement of the first theme, mm. 244 to 253. Following a cadential area this section moves on an elision into the third section, mm. 254 to 278, which is the sixth variation of the first theme. The movement ends in a P. A. C. area with a repeated statement of the first two bar phrase of the first theme.

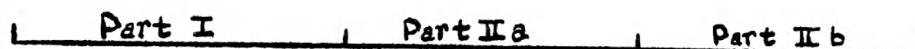
THE FIRST FORM UNIT

The Principal Theme

The First Form Unit is made up of two introductory measures, the theme proper, mm. 3 to 98; three variations, mm. 27, 51, 75; and a short coda, mm. 99 to 101.

The theme proper is a bi-part form with Part II repeated. Its form may be represented in this design:

Fig. 1



Part II and its repetitions will be referred to as Part II a and Part II b respectively.

The theme is found on Plate II. Due to the reference of the second phrase of Part II to the first phrase of Part I, it is what Goethschius would call an incipient three part form.

The cumulative rhythm is this:

Fig. 2



The cumulative rhythm in Part II is an exact counterpart. It is marked by the constant repetition of a two measure pattern, varied only at the cadences by a half note.

The simplicity of the design and its consistency make it subject to many kinds of variations.

Variation I, mm. 27 to 34, as seen in Plate III, shows how rhythmic activity is increased.

In all of the variations, the theme proper retains the same rhythmic form, without variation. Rhythmic variation is caused by the addition of the counter theme which adds rhythmic complexity to the form. How rhythmic activity becomes greater as the music progresses can be realized by scanning the patterns marked (1), (2), (3), (4), and (5) in the successive stages shown in Plate III and summarized at the bottom of the plate.

PLATE II

The Principal Theme

Part I

Musical score for Part I, measures 3-10. The score is written on two staves (treble and bass clefs). Measure numbers 3 and 7 are indicated above the treble staff. A slur covers measures 3-6, and another slur covers measures 7-10. Chord symbols are written below the bass staff: I, V, I, VI, I⁶, V, I.

Part II a

Musical score for Part II a, measures 11-15. The score is written on two staves (treble and bass clefs). Measure numbers 11 and 15 are indicated above the treble staff. A slur covers measures 11-14, and another slur covers measures 15-18. Chord symbols are written below the bass staff: I, V, I, VI, I⁶, V, I.

PLATE III

Stages of Rhythmic Activity

1st Stage

Musical notation for the 1st stage, measures 27-30. The notation is arranged in three staves. Measure 27 shows a single note on the top staff. Measure 28 shows a note on the top staff and a note on the middle staff. Measure 29 shows notes on the top and middle staves. Measure 30 shows notes on the top and middle staves. Brackets below the staves group measures 27-28 as '1' and measures 29-30 as '2'.

2nd Stage

Musical notation for the 2nd stage, measures 31-34. The notation is arranged in three staves. Measure 31 shows notes on the top and middle staves. Measure 32 shows notes on the top and middle staves. Measure 33 shows notes on the top and middle staves. Measure 34 shows notes on the top and middle staves. Brackets below the staves group measures 31-33 as '3' and measures 34 as '2'.

3rd Stage

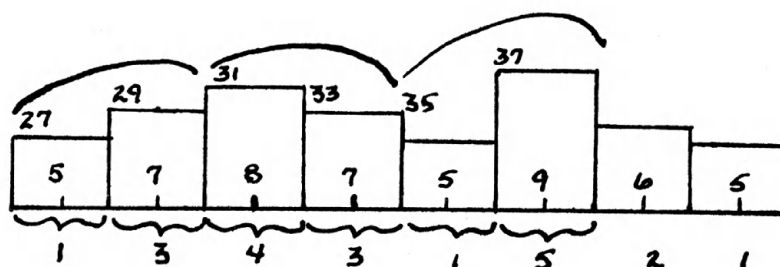
Musical notation for the 3rd stage, measures 37-38. The notation is arranged in three staves. Measure 37 shows notes on the top and middle staves. Measure 38 shows notes on the top and middle staves. A bracket below the staves groups measures 37-38 as '4'.

A long horizontal musical notation strip consisting of a single staff with notes. Brackets below the staff group the notes into four sections labeled 1, 2, 3, and 4.

Figure 3 shows where these areas of activity are located in the form.

Fig. 3

Part I



The figures in the boxes represent the number of note impulses in each figure.

Greatest rhythmic activity occurs in the last segment of the third phrase. Important is the sudden intensification from five to nine impulses in the third phrase.

In Variation II both the principle melody and counter melody are shifted an octave higher but both retain their original form and rhythmic content.

The rhythmic activity is increased somewhat by the addition in the accompanying parts of the rhythmic figure shown in Fig. 4; it is used throughout the variation.

Fig. 4

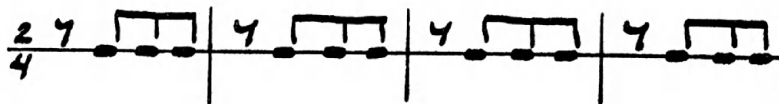


PLATE IV

Stages of Rhythmic Activity

Theme Part I

Musical notation for Theme Part I, measures 75-82. The notation is arranged in a grid of 5 staves. The first staff shows the melody with notes and stems. The second staff shows a rhythmic pattern with stems and flags. The third staff shows a rhythmic pattern with stems and flags. The fourth staff shows a rhythmic pattern with stems and flags. The fifth staff shows a rhythmic pattern with stems and flags. Brackets below the staves group measures into pairs (75-76, 77-78, 79-80, 81-82) and are labeled with the numbers 1, 2, 2, 2. Measure numbers 75, 76, 77, 78, 79, 80, 81, and 82 are written above the first staff.

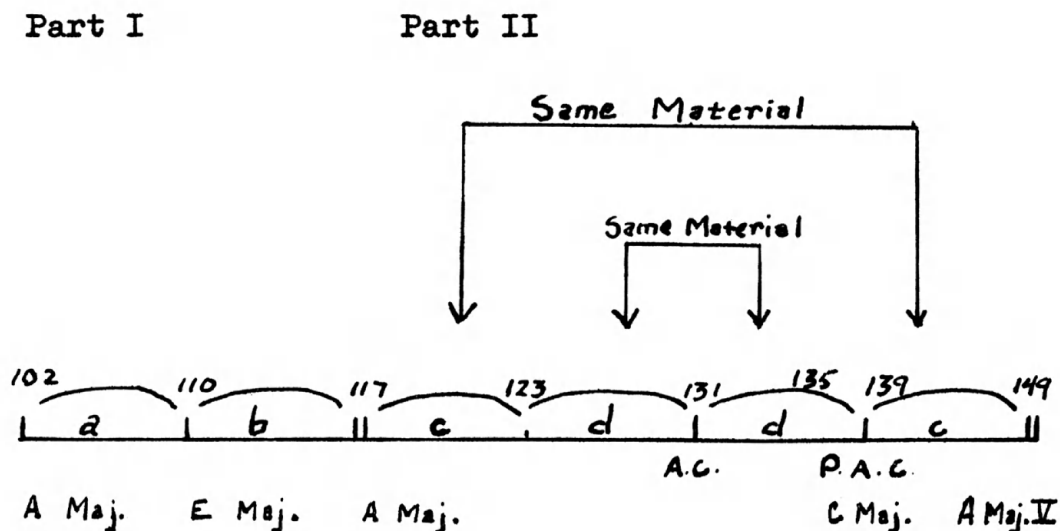
Part II a.

Musical notation for Part II a, measures 83-90. The notation is arranged in a grid of 5 staves. The first staff shows the melody with notes and stems. The second staff shows a rhythmic pattern with stems and flags. The third staff shows a rhythmic pattern with stems and flags. The fourth staff shows a rhythmic pattern with stems and flags. The fifth staff shows a rhythmic pattern with stems and flags. Brackets below the staves group measures into groups of 2, 3, 1, and 4. Measure numbers 83, 84, 85, 86, 87, 88, 89, and 90 are written above the first staff.

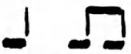
THE SECOND FORM UNIT

The Second Form Unit (the second theme, mm. 102 to 149) is an episodic section, the basic design of which is an extended bi-part form.







Fig. 6



Part I, mm. 102 to 116, is a period ending on a Perfect Authentic Cadence in the key of the dominant. Part II is made up of four phrases, the first two ending in an authentic cadence in A Major in mm. 123 and 130. The third phrase, mm. 131 to 134, starting as an extension by repetition of the second, modulates to a P. A. C. in C Major. The fourth phrase, beginning in m. 139, using the material of the first phrase, is a modulating section ending on the dominant of A Major in preparation for the entrance of the Third Form Unit.

In the Second F. U. the basic rhythm of the first theme, , is retained in the bass except in measure 107, where it reverts to an eighth note pattern for one measure's duration.

The triplet figure introduced in Variation III of F. U. I is now utilized in the first violin part throughout the second theme, interrupted only in mm. 144, 147, 148, and 149, which are included in the modulating section preparing for the introduction of Form Unit Three.

The cumulative rhythm pattern in measure units,  ,  ,  , are created in alternate phrases as dictated by rhythmic patterns of the second theme, the first theme, and the accompanying voices as described above.



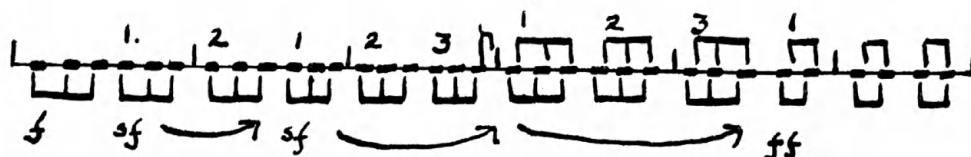
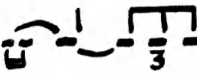
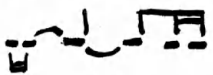
The rhythmic designs are continuous until a background of triplets is developed in the passage leading from C Major back to A Minor in preparation for the Third Form Unit, mm. 139 to 149. Though this simplifies the  figure to , the loss of rhythmic intensity is compensated for by the concentration of the sonority into octaves on a high dynamic level. Significantly, there is a displacement of the metrical accent.

Fig. 7



THE THIRD FORM UNIT

The Third Form Unit, or fourth variation, is a restatement of the first theme which occurs in the bass line. The theme retains its original binary design and its original rhythmic character.

The counter theme, which is introduced by the flutes, clarinets, and bassoons, results in an increased sonority of three octaves. This theme retains its essential characteristics except for a triplet figure  which replaces  in such places where the latter figure was used in earlier versions.

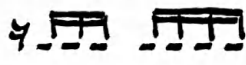
Rhythmic intensification is developed in the accompanying sixteenth note pattern, , which persists throughout the variation in alternate voices. This pattern combined with the rhythmic pattern of the theme and the counter theme and its variation develops great rhythmic intensity.

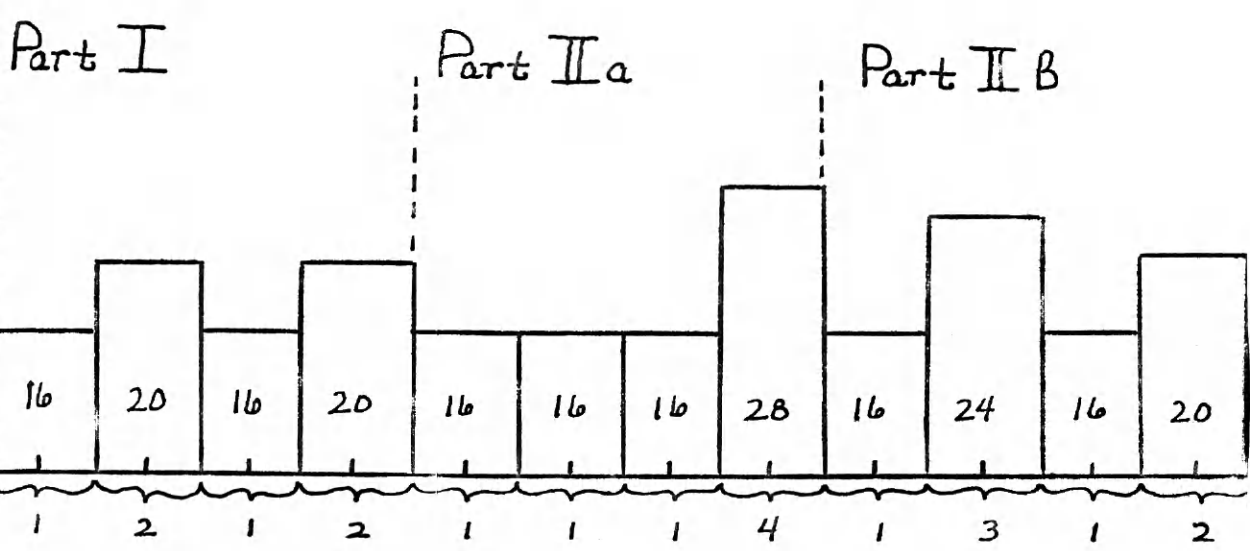
Plate V shows how the cumulative rhythmic plan is achieved by the interaction of these separate rhythmic factors and by the distribution of the sixteenth note grouping from voice to voice without interrupting its coherency.

The summary of rhythmic activity in Plate V reveals that the greatest rhythmic intensity occurs in mm. 164 to 165 which is the cadence area of Part II a. This intensity is caused by the use of an anacrusis preparatory to the first strong beat in Part II b. It is interesting that the rhythmic activity is usually increased in cadence areas. It also reveals that there

PLATE V
Third Form Unit

Musical score for measures 150-167. The score is written on five staves. Measures 150-155 are grouped by a large slur. Measures 156-162 are grouped by another large slur. Measures 163-167 are grouped by a third large slur. The notation includes various rhythmic values, accidentals, and articulation marks.

Musical score for measures 168-173. The score is written on five staves. Measures 168-170 are grouped by a large slur. Measures 171-173 are grouped by another large slur. The notation includes various rhythmic values, accidentals, and articulation marks.



is considerably more rhythmic activity between mm. 168 to 169 in Part II b than between the parallel measures, mm. 160 to 161 in Part II a. All of these features are manifestations of "rhythmic growth" as the form proceeds.

The theme and counter theme in their binary form span the area from mm. 150 to 173. Measures 174 to 182 form a codetta to the Third Form Unit.

THE FOURTH FORM UNIT

The Fourth Form Unit, or development section, is a fugetta form spanning the area from mm. 183 to 214. The whole form unit is built on a basic rhythmic pattern of sixteenth notes yielding four note impulses per beat. This is never exceeded; i. e., all rhythmic action is conditioned by this ceiling.

The preceding form unit ends on an elision on the first beat of measure 183. The unit begins in only two voices, the melody being a four measure phrase derived from the third and fourth measures of the theme proper, with the underlying rhythmic figure of eight sixteenth notes to the measure.

The third voice carrying melodic material is added at measure 191 in the bass. At this time a secondary counter theme using syncopations is developed. Plate VI reveals how this syncopated figure adds appreciably to the rhythmic interest while in no way disturbing the cumulative effect of the continuous sixteenth note pattern. The three voices are sounding simultaneously to measure 201 where the fourth voice

PLATE VI

Form Unit IV

Musical notation for measures 183 through 200. The notation is arranged in a grid with five horizontal staves. Each measure is labeled with its number above the staff. The notation includes various rhythmic patterns, such as eighth and sixteenth notes, and rests. Some measures contain specific markings like '3' or '4'.

Musical notation for measures 201 through 214. The notation is arranged in a grid with five horizontal staves. Each measure is labeled with its number above the staff. The notation includes various rhythmic patterns, such as eighth and sixteenth notes, and rests. Some measures contain specific markings like '3' or '4'.

begins, but continues only intermittently.

A modulating passage from A Minor to C Major is begun at measure 201. A sequence back to A Minor appears in measures 204 and 205. The four voices begin sounding consistently in F Major in measures 206 and 207. This also signals the build-up of the sonority pattern.

As shown in Plate VI, the interest does not stem from the amount of rhythmic activity which remains constant after measure 183. The unit, however, is, of an episodic nature with the number of voices increasing, the syncopation, and the gradual accumulation of sonority ending in a crescendo which develops this high degree of activity preparatory to Form Unit Five.

Throughout mm. 210 to 213, which is a preparation on the dominant for the next form unit, the sonority become very intense and the thematic material is no longer treated contrapuntally. Preceding this passage, the sixteenth note figure had been carried in a single voice, but here it is proclaimed by the entire string section with the second violin and viola sections playing double stops where practical.

THE FIFTH FORM UNIT

The Fifth Form Unit serves as a climax, not only to the form unit immediately preceding it, but to all other preceding units. This unit begins on the high dynamic level of fortissimo and the theme is supported by chords having great sonority.

The theme is taken from the last phrase of Part II a and b of the first theme and the counter theme is abandoned. The accompanying parts, over the theme, are a continuation of the eight note per measure rhythmic figure, with no increase in rhythmic activity.

The counterpoint, utilizing the above mentioned rhythmic pattern, is maintained by unisons and octaves in the entire woodwind section thereby adding greatly to the sonority of the form unit.

The counterpoint is ended at measure 221 by a four measure codetta preparatory to the final form unit.

THE SIXTH FORM UNIT

Form Unit Six, mm. 224 to 278, the coda of the movement, is divided into three sections. The first section, mm. 224 to 242, is a restatement of the second theme which ends in an imperfect authentic cadence in measures 238 and 239. The cadence which is repeated in mm. 240 to 242, enters measure 243 on an elision into the second section. The theme material in the first section is presented under a rhythmic ceiling which is an accumulation of triplets, $\overset{\frown}{\text{—}} \underset{\text{3}}{\text{—}} \text{—}$ $\overset{\frown}{\text{—}} \underset{\text{3}}{\text{—}} \text{—}$, and the basic rhythm, $\downarrow \text{—}$, $\downarrow \text{—}$, of the first theme.

Rhythmic activity is further reduced in section two, mm. 243 to 254, to the pattern of note impulses found in the original rhythmic statement. Interest under this activity is carried out by dramatic contrasts in dynamics and sonority.

Measures 243 to 246 are marked pianissimo; the next two measures are marked fortissimo, and the voicing is full. The remainder of this section is presented in a series of two measure spans in which low sonority combined with a low dynamic level is alternated with full sonority combined with a high dynamic level.

There is no change in rhythmic activity in the third and final section, mm. 255 to 278, except for reinforcement of the second beat of each measure. The interest in this section is upheld by statement of the entire theme being passed, in two measure groups, from one section and register to another throughout the orchestra. The coda and the movement ends on the first beat of the 278th and final measure as it began, with little sonority in the woodwinds alone and on a low dynamic level.

CONCLUSIONS

The rhythm of the basic theme is very simple; it is never altered in any of the variations.

Rhythmic intensity in the variation is increased by these means:

1. Addition of a counter-theme moving on a different rhythmic plan.
2. Development in each successive variation of more complex rhythmic patterns in the accompanying voices.

The fifth variation shows a reduction of rhythmic activity when compared with the fourth, because the counter theme is abandoned. This is compensated for by the extremely heavy sonority and the high dynamic level. It is climactic because of the great body of sound it contains. It is also by far the shortest.

In the variations, a study of the Plates reveals that there is usually an increase of rhythmic activity in the measures immediately preceding the cadences. There is increased rhythmic activity in the cadence measures ending Part II a when Part II b follows. This is in the form of an anacrusis leading into the first measure of Part II b which is important in binding these two parts together. Activity drops at the Perfect Authentic Cadence ending Parts I and II b.

All rhythmic elements in each theme or variation combine to yield cumulative rhythmic patterns in which basic patterns or regular rhythmic ceilings occur, the rhythmic ceiling being the cumulative line compounded from the orchestration as shown in Plate I. Each line of patterns, when scanned, makes a unified whole. Those underlying each phrase could form an excellent drum cadence.

In spite of this rather regular organization, there is great rhythmic variety in the elements which create it. For instance, there is much rhythmic variety in the counter theme, but this, instead of disrupting the organization of the cumulative rhythm, merely agrees with it and reinforces it.

Especially under a rhythmic ceiling, where the cumulative rhythm is regular, as in the Fourth Form Unit, there will be considerable rhythmic interest in the separate parts. This interest is created by the addition of the syncopated rhythmic lines, which result in very strong cross rhythms, due to the strong accents which, by nature, accompany the syncopations. When, near the end of such themes, there ceases to be interplay among the parts, unisons and octaves at high dynamic level are inclined to develop. This creates great sonority which offsets the relaxation of rhythmic interplay among the parts.

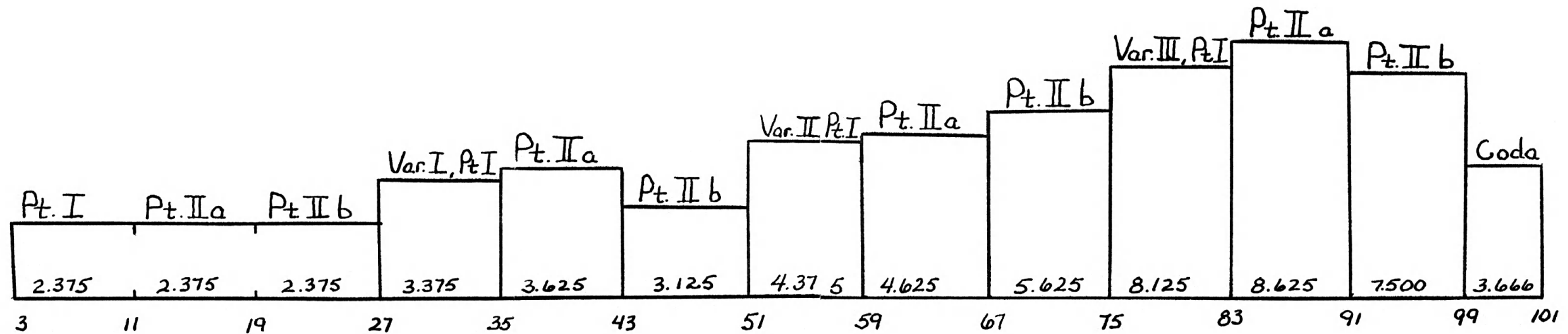
In summation, there is always growth, as where the theme and its first three variations are grouped together, each being progressively more complex. There is even rhythmic growth within the phrases, with rhythmic activity generally centering just before the cadence. But there are other manifestations of growth such as movement from low to high dynamic levels, and from light to heavy sonorities. All of these, working in relation one to the other, give the movement a sense of continued expansion and progression.

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APPENDIX

FORM UNIT I

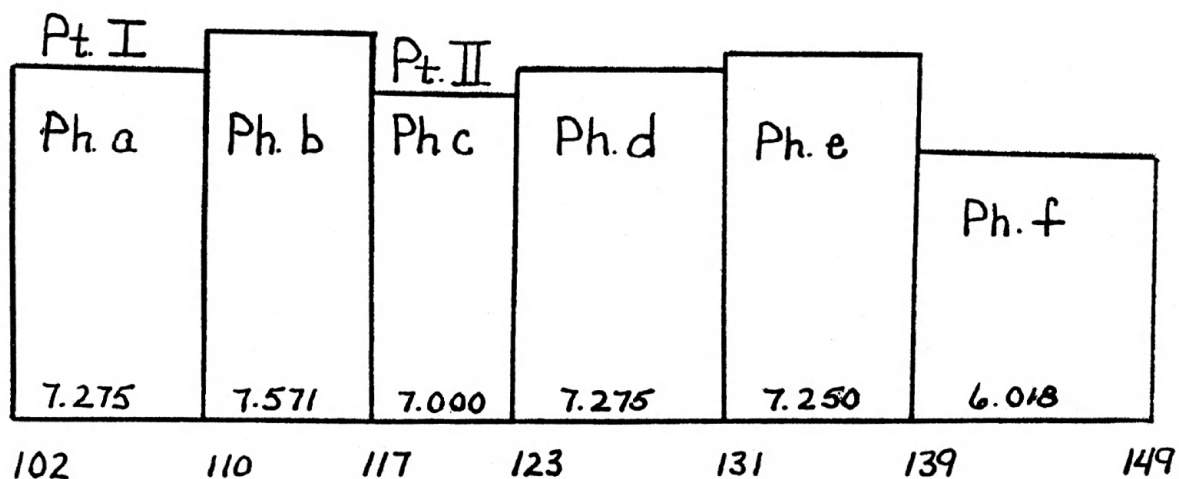


The numbers within the boxes, which represent phrases or sections of each form unit, indicate the average number of note impulses per measure in each phrase or section.

Part I-----mm. 3 to 10, 8 measures, 19 note impulses.
 Part II a-----mm. 11 to 18, 8 measures, 19 note impulses.
 Part II b-----mm. 19 to 26, 8 measures, 19 note impulses.
 Variation I, Part I-----mm. 27 to 34, 8 measures, 27 note impulses.
 Variation I, Part II a---mm. 35 to 42, 8 measures, 29 note impulses.
 Variation I, Part II b---mm. 43 to 50, 8 measures, 25 note impulses.

Variation II, Part I-----mm. 51 to 58, 8 measures, 35 note impulses.
 Variation II, Part II a----mm. 59 to 66, 8 measures, 37 note impulses.
 Variation II, Part II b----mm. 67 to 74, 8 measures, 45 note impulses.
 Variation III, Part I-----mm. 75 to 82, 8 measures, 65 note impulses.
 Variation III, Part II a---mm. 83 to 90, 8 measures, 69 note impulses.
 Variation III, Part II b---mm. 91 to 98, 8 measures, 60 note impulses.
 Coda-----mm. 99 to 101, 3 measures, 11 note impulses.

FORM UNIT II



Theme II, Part I, Phrase a---mm. 102 to 109, 8 measures,
59 note impulses.

Theme II, Part I, Phrase b---mm. 110 to 116, 7 measures,
53 note impulses.

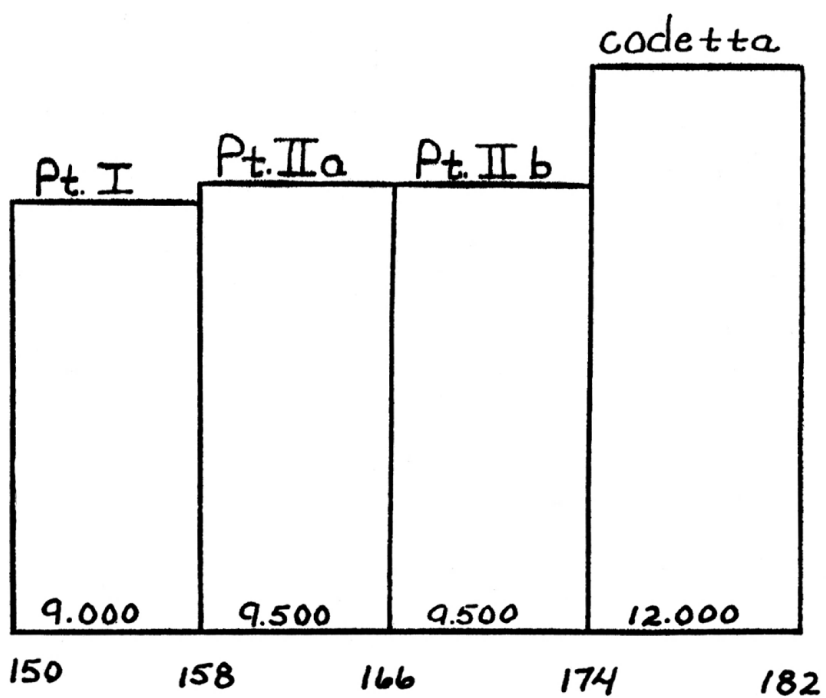
Theme II, Part II, Phrase c---mm. 117 to 122, 6 measures,
42 note impulses.

Theme II, Part II, Phrase d---mm. 123 to 130, 8 measures,
59 note impulses.

Theme II, Part II, Phrase e---mm. 131 to 138, 8 measures,
58 note impulses.

Theme II, Part II, Phrase f---mm. 139 to 149, 11 measures,
68 note impulses.

FORM UNIT III



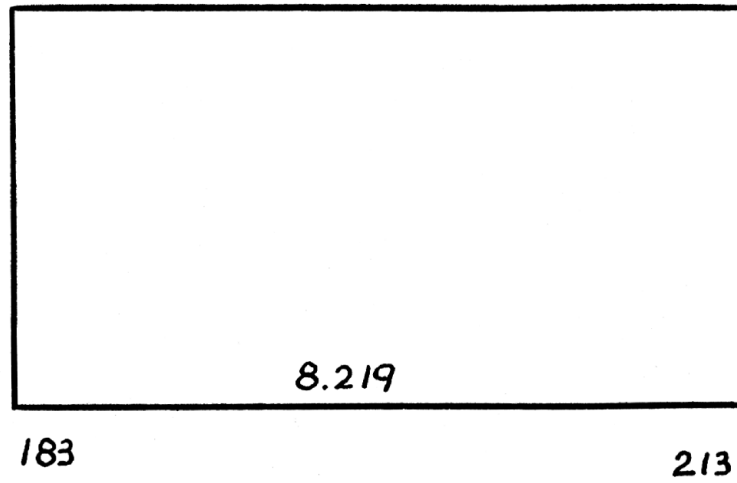
Form Unit III, Part I-----mm. 150 to 157, 8 measures,
72 note impulses.

Form Unit III, Part II a---mm. 158 to 165, 8 measures,
76 note impulses.

Form Unit III, Part II b---mm. 166 to 173, 8 measures,
76 note impulses.

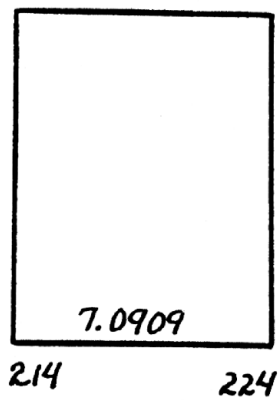
Form Unit III, Codetta-----mm. 174 to 182, 9 measures,
108 note impulses.

FORM UNIT IV



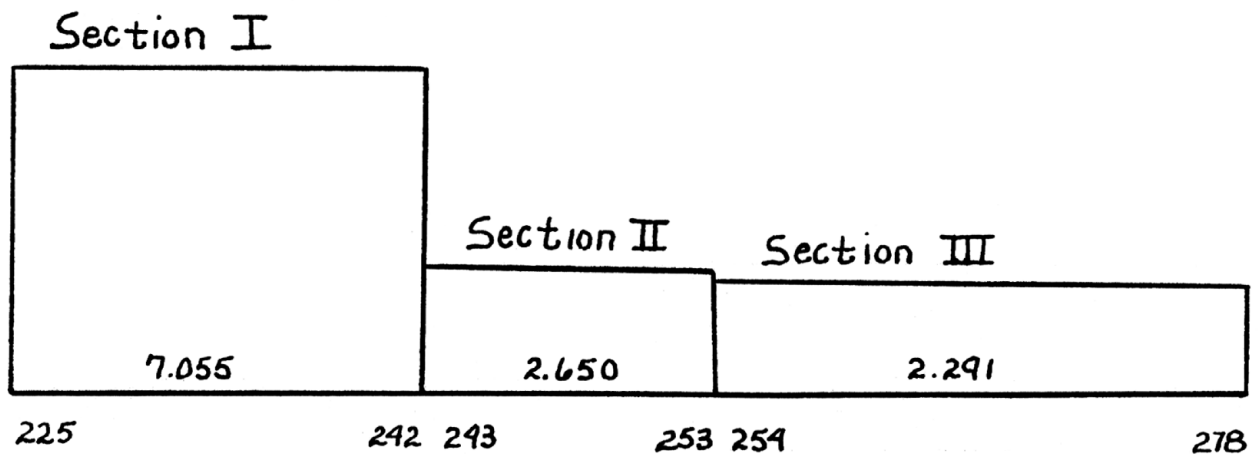
Form Unit IV-----mm. 183 to 213, 31 measures,
252 note impulses.

FORM UNIT V



Form Unit V-----mm. 214 to 224, 11 measures, 78 note impulses.

FORM UNIT VI



Form Unit VI, Section I----mm. 225 to 242, 18 measures,
127 note impulses.

Form Unit VI, Section II---mm. 243 to 253, 12 measures,
32 note impulses.

Form Unit VI, Section III--mm. 254 to 278, 24 measures,
55 note impulses.

A RHYTHMIC ANALYSIS OF THE ALLEGRETTO MOVEMENT
FROM BEETHOVEN'S SEVENTH SYMPHONY

by

PAUL EUGENE KELLY

B. S., Kansas State College, 1951

AN ABSTRACT OF A MASTER'S REPORT

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requirements for the degree

MASTER OF SCIENCE

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While listening to the recordings and studying the scores of this music one is impressed by the feeling of growth generated by the music of the 18th century and early 19th century composers. The works, especially in the slow movements, possess a continuity which is difficult to explain. This continuity seems to be based on a growth of rhythmic activity from section to section, and ever-changing patterns of sonority values and dynamic levels.

The Allegretto movement of the Beethoven Seventh Symphony is a particularly good example of this kind of growth.

The purpose of this study was to gain an insight into how continuity was attained by studying the rhythmic organization of the work. This was the most important aspect of the study. Secondary importance was given to the relation of different levels of sonority to the rhythmic organization and dynamic levels.

The complete work was analysed in this way:

Cadences, especially perfect authentic cadences, were located and form units were defined.

Key areas were located and form units were defined as cadential or episodic, depending upon their function within the form.

Each form unit was subjected to a rhythmic analysis. This was done by reducing each voice part to only its rhythmic notation. Under this structure was added a line on which the sum total of the individual rhythms is entered; this is the

cumulative rhythm.

The phrase structure was then determined in order that the behaviour of the rhythmic activity within different areas of the form unit could be determined.

Sonority was studied from these aspects:

The number of voices being used in any given phrase.

Whether block chords or contrapuntal structure predominated.

The treatment of doubling in unison passages.

Dynamic values were studied mostly in relation to rhythmic activity; i. e., the dynamic levels of passages containing much rhythmic activity versus those in passages of comparatively little activity.

The rhythm of the basic theme is very simple; it is never altered in any of the variations.

Rhythmic intensity in the variation is increased by these means:

1. Addition of a counter theme moving on a different rhythmic plan.
2. Development in each successive variation of more complex rhythmic patterns in the accompanying voices.

The fifth variation shows a reduction of rhythmic activity when compared with the fourth, because the counter theme is abandoned. This is compensated for by the extremely heavy sonority and the high dynamic level. It is climactic because

of the great body of sound it contains. It is also by far the shortest.

In the variations, a study of the score reveals that there is usually an increase of rhythmic activity in the measures immediately preceding the cadences. There is increased rhythmic activity in the cadence measures ending Part II a when Part II b follows. This is in the form of an anacrusis leading into the first measure of Part II b which is important in binding these two parts together. Activity drops at the Perfect Authentic Cadence ending Parts I and II b.

All rhythmic elements in each theme or variation combine to yield cumulative rhythmic patterns in which basic patterns or regular rhythmic ceilings occur, the rhythmic ceiling being the cumulative line compounded from the orchestration. Each line of patterns, when scanned, makes a unified whole. Those underlying each phrase could form an excellent drum cadence.

In spite of this rather regular organization, there is great rhythmic variety in the elements which create it. For instance, there is much rhythmic variety in the counter theme, but this, instead of disrupting the organization of the cumulative rhythm, merely agrees with it and reinforces it.

In summation, there is always growth, as where the theme and its first three variations are grouped together, each being progressively more complex. There is even rhythmic growth within the phrases, with rhythmic activity generally centering just before the cadence. But there are other manifestations of growth such as movement from low to high dynamic levels, and

from light to heavy sonorities. All of these, working in relation one to the other, give the movement a sense of continued expansion and progression.