A TECHNICAL AND HISTORICAL ANALYSIS OF ALBAN BERG'S
SONATA FOR PIANO, OP. 1

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A TECHNICAL AND HISTORICAL ANALYSIS OF ALBAN BERG'S

SONATA FOR PIANO, OP. 1

THESIS

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By

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CHAPTER I

BIOGRAPHY: A SKETCH OF BERG'S MUSICAL LIFE

Alban Berg was born in Vienna, Austria, on February 9, 1885. His parents, although they were not professional artists, were both artistically inclined. His mother was, in fact, a talented painter and musician. He had two older brothers, Charley and Hermann, and a younger sister, Smaragda. Charley sang quite well and Smaragda played the piano.

Such a family background and surroundings, and the environment of traditionally artistic Vienna had their effect upon the mentality of Alban. At first he was fascinated with the idea of becoming a poet. Then, around 1900, influenced probably by Charley and Smaragda, he began to compose. In 1904 Alban met Arnold Schoenberg. The meeting was brought about by his brother Charley, who took some of Alban's songs to Schoenberg for evaluation. Schoenberg then invited Alban to become his pupil. Berg studied with Schoenberg for about six years (from 1904 to 1910) and it was this experience that shaped his future life as a composer.

Before Berg met Schoenberg he was most strongly influenced by Brahms, Bruckner, and Mahler, the composers who dominated Vienna in the last decade of the nineteenth century. While studying with Schoenberg, he undoubtedly gained a greater insight into the works of these men; for Schoenberg was also a great admirer of them, particularly of Brahms. And since a basic tenet of Schoenberg's educational concept was that a composer should master traditional compositional techniques before departing therefrom, Berg undoubtedly received thorough instruction in the harmonic, contrapuntal, and structural techniques employed by these great composers.

During this period of apprenticeship, Berg produced the following works:

1. **Seven Early Songs** (between 1905 and 1907)
2. **Fugue for String Quartet and Piano** (1907)
3. **Compositions for 6-8 part Chorus** (1907)
4. **Twelve Variations for the Piano** (1907-1908)
5. **Sonata for Pianoforte, op. 1** (1907-1908)
6. **Four Songs for Voice and Piano, op. 2** (1909-1901)
7. **String Quartet, op. 3** (1910).

According to René Leibowitz, the set of variations for piano are very "Brahmsian in conception."\(^2\) In general, however, this early phase of Berg's development is characterized by "the gradual disintegration of the post-romantic harmony

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with its predominating altered chords and by the crystallization, increasingly evident, of a personal style. In the Sonate free harmonic turns and strict logic in the thematic treatment are already noticeable, traits that lead over to Berg's mature style."³

The Sonata for Pianoforte is in one movement. It was actually planned, however, as a sonata in three movements with a slow movement and finale to follow the first movement, written in traditional sonata form. But "when Berg complained to Schoenberg that inspiration for these later movements was slow in coming, the latter concluded that Berg had said all there was to say and persuaded him to let the completed first movement stand for the whole sonata."⁴

Berg's String Quartet, op. 3 is a "milestone" in several respects. It is the last work written under the direct supervision of Schoenberg. In this work Berg's mature style blooms forth. This work is Berg's first experience with composition for instrumental ensemble and, as such, is a large preparatory step toward his masterpiece, the opera Wozzeck.

Berg's maturity is not evidenced by an abrupt break with traditional music, but rather by a re-evaluation of all that he was taught and the adoption and fusion of those

⁴Redlich, op. cit., p. 47.
compositional techniques, both traditional and modern, which most appealed to his personality and thought. Paul Pisk states the following about Berg’s music:

Alban Berg is often called the romanticist of the Schoenberg school. His work is considered a bridge between the work of the late Richard Wagner and impressionism on one side, and, on the other, the radical tendencies in structure and emotional expression found in the works of the younger composers of the modern school.

His belief in emphasizing specific kinds of emotion was purely romantic. His music functioned as a link because he did not refuse to use passages of a more or less recognizable tonality even after having adopted the technique of the twelve-tone system. 5

His style continued to mature between 1911 and 1914 as the works which he produced at this time (Five Songs, op. 4, Four Pieces for Clarinet and Piano, op. 5, and Three Pieces for Orchestra, op. 6) seemed to prepare him step by step for the composition of Wozzeck. He worked on Wozzeck from 1914 to 1921, preparing both the libretto and the music.

At about the time that he finished Wozzeck, he estab-
lished himself in Vienna as a teacher of composition. During the remaining years of his life (from about 1920 to 1935), he produced the following works:

1. Chamber Concerto (1923-1925)
2. Schliesse mir die Augen beide (1925)

3. **Lyric Suite** (1925-1926)
4. **Der Wein** (1929)
5. **Four-part Canon** (1930)
6. **Lulu** (1928-1934)

Compared to that of most other composers, Berg's quantity of production seems very meager. This was due, mainly perhaps, to the fact that he was a rather slow, meticulous worker. There were, however, other factors involved.

As a man he had a large physique, but a frail constitution. During most of his life he was plagued with periodic, severe attacks of asthma which exhausted him physically and undoubtedly served as a drain on his mental energy.

Despite his poor health, however, he led a fairly varied professional life.

He was neither a speculative theorist like Schoenberg nor a musical scholar and professional conductor like Webern. As musical journalist with a strong polemic bias, however, and as a musical analyst of philological conscientiousness, he easily surpassed them both. Berg's analyses of Schoenberg's compositions, his articles on the music of his teacher and on his own *Wozzeck*, are among the classics of modern musical literature. He was neither a concert pianist nor a conductor, but as a teacher of composition he raised a new generation of pupils, comparable with those of Schoenberg himself in the 1920's.⁶

Throughout his professional life, much of his energy was spent in making adaptations of other composers' works. And after he became established as a teacher of composition, he

⁶Redlich, *op. cit.*, pp. 16-17.
became a sort of first lieutenant to Schoenberg. He was completely devoted to his teacher and in an effort to gain more public acceptance of Schoenberg's works, Berg wrote articles about them, lectured about them, and helped to prepare performances of them.

His professional activity, indeed his life as a whole, was centered in and around Vienna, although he did occasionally visit musical festivals in other parts of Europe. He loved the city and its surroundings so much that he refused to leave even during the Nazi oppression of the 1930's. He died there in 1935, of blood poisoning.
CHAPTER II

THE HISTORICAL DEVELOPMENT OF THE SONATA

The sonata of today is a complex structure composed of several basic elements. The evolution of that structure can perhaps be better understood from the standpoint of the historical development of each of those elements. For this reason, this chapter is divided into the following five sections:

1. The Origin of the Term "Sonata" and the Rise of Instrumental Music
2. Instrumentation
3. Movement Groupings
4. Sonata Style
5. Sonata Form.

The Origin of the Term "Sonata" and the Rise of Instrumental Music

The term "sonata" comes from the Italian verb "suonare," to sound. In its present-day meaning, it denotes

...an instrumental composition for piano (piano sonata), or for violin, cello, etc., with piano accompaniment (violin sonata, cello sonata), which consists of three or four independent pieces, called movements, each of which follows certain standards of character and form. It must be noted, however, that practically all
the features of the sonata are also found in certain other types of instrumental music, namely, the symphony, the various species of chamber music (quartet, trio, quintet, etc.), and, with certain modifications, the concerto. The difference lies only in the performing bodies, the symphony being a "sonata" for orchestra, the quartet a "sonata" for four strings, the concerto a "sonata" for a soloist plus orchestra.1

Thus, the word today denotes a number of specifics: a specific type of instrumentation (usually one instrument or one instrument with accompaniment), a specific number of movements, and a specific "character and form" for each movement. It has not always been so however. The word is derived from a verb with a very general meaning, and in the beginning and through much of the evolution of its usage the word had a very general connotation.

William S. Newman has stated that the term first resulted from the idea of instrumental performance versus vocal performance. He cites as an example a title used by A. Banchieri, in 1607: Ecclesiastiche Sinfonie dette canzoni in aria francese, a quatro voci, per sonare, et cantare, et sopra un basso sequente concertate entro l'organo.2 Undoubtedly such titles as this, which indicate that the pieces may be played and/or sung, were widely used during that era in which instrumental performance was just beginning to rival vocal performance.


Prior to and during that era, which began around 1300 and ended around 1600, art music of the West was primarily vocal. W. H. Hadow attributes that situation to the fact that the Church, which had a natural preference for vocal music, dominated the art music of the day. Undoubtedly, another reason was simply that, for a long time, musical instruments were not as adequate for musical expression as were voices. A long tradition of vocal writing resulted.

Between approximately 1300 and 1600, several factors led to the practice of using instruments to accompany and double the vocal parts. These factors were the development of the harpsichord, the improvement of the organ and other instruments, and the fact, as Hadow suggests, that vocal counterpoint was becoming more and more intricate. This was the practice in performance of secular pieces between 1300 and 1450, particularly in the accompanied songs (e.g., ballades) of the fourteenth century, and in the frottole of the early sixteenth century. Hadow goes on to say that

...from this it was a natural step to have the accompaniments given separately as instrumental pieces; and thus the madrigals came to be written with a double purpose, to be played or sung as occasion served. We find examples marked "Buone de Cantare e Suonare" as early as 1539, and it is probable that the practice dates from a still more remote period.

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4Ibid., p. 7.
5Ibid.
"Sonata" was gradually used to refer to that music written specifically for instrumental performance, and it is Newman's opinion that...

...those rare subsequent sonatas that did use voices, such as one each by Monteverdi and Kindermann, must be regarded merely as sports in the main historical trend. "Sonada" or "Sonado" to mean not merely instrumental performance but a piece for instruments was already used in 1535 to distinguish some of the lute-tablature danses in El Maestro by the Spaniard Luis Milan. "Sonata" as an actual title is first known in a Venetian publication of 1561. This is another Intabolatura di liuto, the Book I by the blind Italian lutist Giacomo Gorzanis.6

Even as the term came to mean music specifically "for instruments" it still had many loose connotations. It did not specify any particular type of instrumentation, any particular number of movements, any particular style, or any particular form.

Instrumentation

It is commonly known that during the period when music was just beginning to be written specifically for instrumental performance, much latitude was given performers in the choice of instruments. It is easy to understand therefore why the term "sonata", with its history of ambiguity, should not for a long time come to denote any particular type of instrumentation.

When transcriptions of vocal music were being made for instrumental performance, the term "sonata" was often applied. But the transcription might be for almost any type of instrumentation. "The canzona or canzon francese first appeared not later than 1520, as an Italian instrumental transcription of a French or Flemish chanson. It was cultivated especially in the keyboard and ensemble music of Italy and Germany, with original compositions gradually replacing the transcriptions." As a result, the term "sonata" was used interchangeably with "canzona". Because the music was originally vocal, the transcriptions were often known as canzoni; because the transcriptions were for instruments, they were often called sonatas. This particular confusion lasted until 1687 when G. Strozzi emphasized that canzon francese was no longer the proper term for the sonata.

During the Baroque era, the sonata enjoyed a variety of instrumentations which gradually inclined toward the soloistic form of today.

But by this time it is already possible to find most of the important firsts that are known in the mainstream of sonata history. G. Gabrieli led the way in 1597 with his polychoir sonatas. Banchieri published little organ pieces in 1605 to which he applied the title of "sonatas". And G. P. Cima used the same title in 1610 for the first known "solo" (s/bass) as well as the

7Ibid., p. 20.
8Ibid.
first known "trio" (ss/bass) sonatas. Fantani published the first sonatas for two high, unaccompanied instruments, in his trumpet method of 1638; Del Buono published the first solo sonatas to specify a stringed keyboard instrument (harpsichord, 1641); Biber composed the first sonata for unaccompanied violin that is known, in about 1664, and Pachelbel the first for violin and realized keyboard probably in the 1690's.9

Two other terms often confused with "sonata" during the Baroque era were "sinfonia" and "concerto." Both of these terms usually called for some type of orchestral scoring. In 1713, Johann Mattheson described the "symphonie" as a free instrumental composition and identified it as "an 'overture' when it precedes a dramatic work and a 'sonata' when it precedes a church work."10

Willi Apel states that "according to medium the repertory of the Baroque sonata falls into four categories: those written in one part, in two parts (a due), in three parts (a tre), and in four or more parts."11 The first two categories agree with the modern connotation of the term; but the last two categories would today fall into that category known as "chamber music" and would be called "trios", "quartets", etc., according to the number of parts. Apel goes on to say that this distinction did finally come about during the period approximately between 1730-1780 and so continues to the present day.12

Undoubtedly a main factor in the stabilization of the term "sonata" in its modern sense was the great popularity and success of Corelli's violin sonatas. Most of these sonatas were for solo violin and figured bass.

Movement Grouping

The sonata has not always been composed of three or four movements. Banchieri, in 1611, and Turini, in 1624, published some short keyboard sonatas each of which had only one movement. At about the same time, a large number of instrumental ensemble pieces entitled Canzone, Canzone da sonar, Sonate, and Sinfonie were published. These pieces were usually in one movement composed of several contrasting sections. "Around 1635 there begins a tendency to decrease the number of sections and, as a recompense, to enlarge their extension. An early example is Tarquinio Merula's canzona La Gallina which falls into three distinct movements, the first and the last based on the same theme."

Actually, the idea of alternating and grouping contrasting movements was well known in the sixteenth century. Thomas Morley, in his Plain and Easy Introduction to Practical Music, 1597, speaks of the desirability of alternating Pavans and Galliards, the one being "a kind of staid musik ordained for

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14Apel, op. cit., p. 692.
grave dancing," and the other "a lighter and more stirring kind of dancing."  

After 1650 there developed, chiefly in Venice under Legrenzi (1625-90), a certain standard three-movement structure consisting of two polyphonic allegro movements divided by a homophonic adagio movement. This scheme was often enlarged by the insertion of two shorter adagios before and/or after the slow movement. G. Torelli (c. 1650-1702) introduced, in his *Sinfonie a 2, 3, 4 instrumenti* (1687), a four-movement form (Adagio--Allegro--Adagio--Allegro) which, under the title *Sonata da chiesa*, was adopted by all the later composers. But, although this form was a favorite of such composers as Corelli, Bach, and Handel, it did not by any means dominate the sonata form of the day. The violin sonatas by Veracini (1685-1750) have from five to eight movements; those of Tartini, usually three; those of Locatelli, always three.  

Toward the end of the seventeenth century Alessandro Scarlatti established the three-movement form (Allegro--Adagio--Allegro) of the Italian overture. The tremendous influence of this form was felt in other styles of composition, including the sonata. Vivaldi established it as the standard  

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15 Thomas Morley, *A Plaine and Easye Introduction to Practicall Musick* (London, 1937), p. 181. (This is a modern reprint.)  

16 Apel, *op. cit.*, p. 693.
form of the concerto. Bach employed this form for his Brandenburg Concerti, his Italian Concerto, and his organ sonatas.

Although some Italian composers of harpsichord sonatas, such as Sammartini and Paradisi, frequently reduced the sonata to two movements and, in the case of Dominico Scarlatti, one movement, the three-movement form remained most in vogue. C.P.E. Bach preferred it as did Haydn and Mozart.

However, Johann Stamitz (1717-57), founder of the Mannheim School, introduced the four-movement form Allegro--Adagio--Minuet--Allegro and used it in all his symphonies and chamber pieces. Practically all the symphonies and quartets by Mozart and Haydn follow this scheme, the influence of which led Beethoven and, later, Schubert and Brahms to write sonatas in four movements.

Sonata Style

The evolution of classical sonata style is largely a matter of the change from the polyphonic style of the Baroque and pre-Baroque periods to a more homophonic style in which a single melody is supported by a harmonic accompaniment. The early sonatas were written in much the same style as the vocal polyphony of the time. The sonatas for keyboard by Banchieri and Turini were, according to Shedlock, "in only one movement, in fugue and imitation throughout." 17

17Shedlock, op. cit., p. 6.
As the term "sonata" began to suggest something more specific than just music for instruments, theorists and musical scholars began to make a stylistic distinction between the sonata and the canzona (which retained its polyphonic character throughout its history). The first theorist to write about the sonata was Michael Praetorius (1571-1621). In the third volume of *Syntagma musicum* (1618-19), he makes this distinction between the sonata and the canzona: "The sonatas are made to be grave and imposing in the manner of the motet, whereas the canzonas have many black notes running briskly, gayly, and rapidly through them."

During the Baroque era, homophony was coming more and more into vogue. Legrenzi's sonatas (c. 1650) always contained at least one homophonic movement.

But Baroque style was contained mainly in a peculiar synthesis of polyphony and homophony. With the advent of basso continuo, the most common setting for a Baroque sonata was that of two soprano instruments, a "chording" instrument for the realization of the basso continuo, and usually a third solo instrument to ornament the basso continuo line melodically. What resulted was a three-part polyphonic structure supported by a homophonic realization above the bass voice. A sonata written for the type of setting just described was commonly called a "trio sonata."

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However, as Newman points out,

...the broad trend throughout the era was from many to few parts--from multivoice to 'trio' to 'solo' settings, the last being mostly that melo/bass type for one soprano instrument and b.c. (again, with or without a concertante bass part). Between the early multivoice and late "solo" predominence the "trio" sonata marked a "classic" peak, a peak that coincided with the advent of both Corelli and the Stradivari violin. The end of the Baroque sonata is defined at least in part by the break down of the melo/bass principle, the deterioration of b.c. practice, and the invasion of the new pre-Classic phenomenon, the accompanied clavier sonata.21

Midway through the Baroque era there came into vogue three styles of sonata writing which were quite similar although distinct: Sonata da Chiesa, Sonata da Ballo, and Sonata da Camera. They all contained about the same number of movements and all were predominantly polyphonic. Their differences are described thus by Hadow:

If the movements were all derived from the instrumental Canzona and its variants, the work was known as a Sonata da Chiesa; if they were all dance tunes, as a Sonata da Ballo; if they were partly the one and partly the other, as a Sonata da Camera. Then, in the course of time, the Sonata da Chiesa began to drop out of use /i.e., the "da Chiesa" was dropped/, and the other two came to be known respectively as Suites and Partitas.22

Because of its ambiguous connotation of style during this period, the term "sonata" was often confused with such

22Hadow, op. cit., p. 10.
titles as "capriccio," "toccata," "preludio," and even "fantasia." It is interesting to note that as late as 1762 Marpurg still identified the keyboard sonata with "toccata," and Rousseau in 1768 still identified suite with sonata.\(^2^3\)

The movement toward a more homophonic style of writing is seen in the sonatas of Corelli, in the concertos of Vivaldi, and in the reactionary melody-style of the Rococo composers.

The change toward a more dramatic manner of writing is usually credited to the Mannheim School, although Italian composers (particularly Sammartini 1701-75) worked in the same direction. C.F.E. Bach cultivated a highly expressive style which exercised considerable influence on the young Haydn, while his younger brother Johann Christian Bach represents the link between the Italian gallant style and Mozart. Muzio Clementi's sonatas anticipated many of the dramatic elements of the Beethoven sonatas.\(^2^4\)

In the late sonatas of Beethoven and in the sonatas of many twentieth century composers, there is a mixture of polyphonic sections with homophonic sections. But, although there is some polyphony in the sonatas of Schubert and in the sonata by Liszt, both of those composers, as well as Chopin and Brahms, seemed to concentrate on developing the "toccata" style in their piano sonatas. In alternation with regular homophonic sections they used highly expressive and virtuosic

\(^{23}\text{Newman, op. cit., p. 28.}\)

\(^{24}\text{Apel, op. cit., pp. 694-695.}\)
harmonic and melodic figurations. To be sure, harmonic figuration was used by Haydn, Mozart, and Beethoven, but as harmony became more complex during the Romantic era, such figurations became a central factor of style.

**Sonata Form**

The term "sonata form" is used in this section to refer to that form most generally used during the Classical era for the first movement. It has also been called "sonata-allegro form."

Sonata form reached the peak of its development during the Classical era. After that time, composers often modified it to suit their own personal tastes, but it could not be said that they had expanded or further developed it by so doing.

Classical sonata form is an expanded binary form directly descended from what is known as "rounded binary" form, the structure of which is \(A - B - A\). The ancestor of binary form seems to have been "barform," one of the oldest and most important musical forms, the structure of which is AAB. The name "barform" is derived from the medieval German term for this form, namely "Bar."

The Bar was the form most frequently used by the Minnesinger and Meistersinger as well as by the troubadours and trouveres. But the form is found earlier in the ancient Greek ode which consisted of "strophe" (A), "antistrophe" (A), and "epode" (B). It is found also in the early medieval music of the Eastern churches.
Of particular importance is that type of Bar in which the Stollen is repeated "in toto" at the end of the Abgesang, thus leading to the scheme aaba or \( \text{a:b} \). A very early example of this form is the liturgical melody to a hymn, *Ales diei nuntius*, by Prudentius (d.c. 450), which probably is one of the oldest Christian melodies preserved.25

Barform was used in the French chanson of the early sixteenth century. It was adopted, in turn, in the instrumental transcriptions and, later, original instrumental compositions which bore the titles Canzone da sonar and Sonate.

By 1720, rounded binary form was well established in the movements of the suite and other types of composition. The main difference between its structure and that of early sonata form is "the use of two contrasting themes (for A) in the latter, as against the continuous style in the former."26

This development (of two contrasting themes) came about through the Neapolitan operatic sinfonia.

The first movement of the Overture (Sinfonia) to Francesco Conti's opera *Pallade triunfante* of 1721 is a fully developed example of sonata-form. The same form was applied to chamber music by Maria Veracini (1721) and Giov. Batt. Pergolero (c. 1730), to the piano sonata by C.P.E. Bach ("Prussian" Sonatas, 1742), and, at about the same time, by Giovanni Platti (b.c. 1700).27

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In most of Haydn's sonatas and in the early sonatas of Mozart, the "continuous style" of rounded binary form was used for the exposition of the first movement. Not until the later sonatas of Mozart and the Beethoven sonatas does one find the use of two or more contrasting themes in the exposition. Also, in these last mentioned sonatas, three other changes occur: (1) :A: :BA: becomes :A: BA; (2) the use of the main theme to begin the development section is dropped; (3) a coda is frequently added to the recapitulation. With Beethoven and Schubert, sonata form reaches its peak.

The harmonic scheme of Classical sonata form, which calls for adjacent sections to be in different keys, was only possible through the establishment of clear-cut tonal and key relationships. One of the first influences in that direction was embodied in the secular music of the Middle Ages.

The troubadour, trouvere, and Minnesinger rapidly developed the art of accompanied melody and greatly aided the evolution of tonality. The French dance tunes, collected in Arbeau's "Orchesographie," show far more sense of tonality and are far more modern in character than all the masses and madrigals that contemporary learning could produce. 28

With the Florentine revolution in 1600 came official recognition of the modern major-minor tonalities and by the

28 Hadow, op. cit., p. 6.
time of the sonatas of D. Scarlatti (1685-1757) and the
suites of J. S. Bach, tonal and key relationships were well
established. By this time also, the practice of starting the
B section of binary form in a key different from that of sec-
tion A and then modulating back to end in the original key, a
practice evidenced in the last-mentioned works, had become
standard. This harmonic scheme was expanded by sonata com-
posers to meet the greater sectional complexities of sonata
form, but the principle remained the same.
CHAPTER III

ANALYSIS

Structure and Form

This work is a sonata in one movement. The movement is in sonata form.*

The exposition contains two separate thematic sections divided into three parts (I, II, and III). Part III is primarily a slight development of the material of parts I and II, and it contains only a small piece of new material: the sixteenth-note "turn" found first in measure 21. The second thematic section (B) is divided into two parts (I and II), each having, in the main, different material. The closing section (C) incorporates material from section B while at the same time using a "new" motive.

The development section (D) is also organized in three parts (I, II, and III). Although this section is concerned, as it should be, with the material introduced in the exposition, nevertheless a new motive is introduced in part I of the development and from this motive is derived a second

*A diagram has been made of the formal design of this work and has been placed in the Appendix (Figure 5) for convenient reference. Those keys which have been circled on the diagram were not definitely established.
motive for part II. This material is used extensively in the course of development. However, parts I and II are concerned mainly with material from section A of the exposition. Part III is concerned with material from section B of the exposition.

The recapitulation is not exact. Although the material used is that of the exposition, and although the material is introduced in the same order, nevertheless the recapitulation is, instead of a mere repetition of the exposition, a further development of the material.

The recapitulation contains two thematic sections and a closing section, corresponding to the three main sections of the exposition. The first thematic section (A') is divided into two parts (I and II). Part I is a development of the material of section A, part I of the exposition. Part II is a development of section A, part II of the exposition. The second thematic section (B') is divided into two parts. Part I is mainly a repetition of the first measures of section B, part I of the exposition. Part II is a further development of the material of section B, part II of the exposition. The closing section (C') is concerned with the material of section C of the exposition. The material is treated somewhat differently, however, and is lengthened by extension.

In order to demonstrate as clearly as possible the linear organization and construction of this work, the basic thematic material used by the composer has been extracted, compiled, and
labeled (See Figure 1 in the Appendix).* Also, the measure in which the material first appeared has been indicated (The measure number is circled.).

Sometimes not only a motive but also its elements have been labeled. This is necessitated by the fact that a basic part of the composer's technique is the use of a motive or a motivic element to produce a fluid movement between sections or thematic statements. He also uses motives and motivic elements in widely varying combinations during the course of development.

The labels are used to chart, on the score in the appendix, the use of thematic material in order that, by comparing the table of extracted material with the labeled score, the linear, thematic construction of the work may be clearly understood. As indication of that basic compositional technique mentioned earlier, the following examples may be considered:

1. The introduction of motive Alc, inv. in measure 4; its incorporation into motive Alb in measure 8; its use as a link between parts I and II of section A, in measure 10; its subsequent incorporation into the material of part II in measure 13.

2. The great resemblance between motives BIdb and Bid; the use of Bid ↓ as a link between parts I and II of section

*An explanation of the labels used in Figure 1 and of other symbols and abbreviations used in the process of analysis can be found in the Appendix.
B, in measure 38; its subsequent incorporation into motive BIIa in measure 40 and, even more so, in the sixteenth-note figure in measure 45.

3. The resemblance between motives BIb and BId and CIIa; the resemblance between motive CIIb and motive AIIa; CIIa (measure 49) is the link with the foregoing material; CIIb (measure 50) is used to prepare the repetition of the exposition.

4. The technique employed to derive motive DIIa from motive DIA (measures 69-70).

Motivic Variation

It is the opinion of Rene Leibowitz¹ that the entire sonata is based upon the first three soprano motives which in Figure 1 have been labeled AIIa, AIIb, and AIIc. The remaining material was derived from these three motives by a process called "motivic variation."

It is quite probable that Berg did use this particular compositional technique to a great extent; for he was studying with Schoenberg at the time and Schoenberg had devised a system of motivic variation which he undoubtedly taught to all his students.

We find several methods of varying a motive as explained by Adolph Weiss, who was a student in Schoenberg's master class at the Berlin State Academy of Fine Arts ("The Lyceum of Schoenberg" in Modern Music, March-April 1932.) Schoenberg seeks co-ordination, or relation

¹Rene Leibowitz, Schoenberg and His School (New York, 1949), pp. 143-144.
of parts to the whole, through the subdivision of a germ-cell which for him is a single motive. "The forms of variation which the motive undergoes might be called musical mitosis", says Mr. Weiss, and he tabulates the methods of varying a motive thus:

1. changing the intervals or notes and holding the rhythms;
2. changing the rhythm and using the same tones or intervals;
3. simultaneous combinations of both these methods;
4. inversion;
5. elongation;
6. contraction;
7. elision (of one or more notes);
8. interpolation (of one or more notes);
9. the crab-form.

In order to account for some of Berg's variations, it is necessary to introduce a tenth method, not included in the above list:

10. changing the order of notes so as to produce a change in melodic contour.

Figure 1 shows the basic thematic material used in the entire sonata. The first three motives, labeled A1a, A1b, and A1c, are located in the score in the first two measures and the anacrusis. The remaining fragments of Figure 1, though labeled as additional motivic material (A1d, etc.), are actually the basic variations of the first three motives. In Figure 2 in the Appendix, the fragments of Figure 1 are reproduced and each is labeled A1a, A1b, or A1c (the three basic motives) to denote from which of these motives it was derived. Underneath the label (A1a, etc.) and in parentheses, there is

---

a number or group of numbers which refers to the aforesaid list of methods for varying a motive (page 17), to denote which method or methods were used in the derivation of the fragment.

Berg used the same methods in making further changes in the basic variations. But it is important to discover the underlying principle which guided the great majority of those changes. It may be ascertained through examination of a few of the motives involved.

Consider, for example, motive AId2.* As it first appeared in measure 3, it contained a M3 (d4) and a M7.** But in measure 5, in the left hand and right hand, the M3 has been changed to P4, a difference of a m2. The same change is found in measures 20-21.

In motive AId* the last interval is usually a M7. However, in measure 22 it has been changed to a m7, a difference of a m2. (The arrows on the score in this and subsequent measures indicate the chromatic movement of voices.)

The last interval within motive AIIa1* is normally an augmented 4, which inverted is the same sound. In measures 26-29, Berg repeats the final interval of AIIa1 in the right

*See Figure 1 in the Appendix.

**At times, in spelling out a structure or naming an interval notated by the composer, an enharmonic spelling or name is used. The composer was not interested in a traditional, theoretical notation for this work, and the explanation of some of his structures necessitates their rearrangement enharmonically.
hand, and with each repetition enlarges it by the difference of a m2. Also, in the left hand, measures 27-28, he has repeated the last two chords of measure 26 and given them the contour of motive AIa1, inverted.

In examining the next and final example, the great similarity between motive AIa and the first three notes of motive C1b must first be noted.* They have the same contour and rhythm. The difference lies in the intervals between the first two notes of each and between the first and third notes of each. In motive AIa, the interval between notes 1 and 2 is a P4, and the interval between notes 1 and 3 is a M7. In motive C1b, the interval between notes 1 and 2 is a m3 and between notes 1 and 3, a m7. The composer has enlarged both intervals of motive C1b in measure 54, beats 1 and 2, by the difference of a m2, and again the lower interval by the difference of a m2 in measure 55, beats 2 and 3, to produce motive AIa.

Further examples might be cited, but those already given should suffice for the following conclusions concerning the composer's motivic changes:

1. that every change produced a difference of a m2;
2. that every change was used apparently for the facilitation of chromatic progression of parts and/or for a chromatic movement from one motive to another.

*See Figure 1 in the Appendix.
Contrapuntal Technique

Berg's peculiar treatment of thematic material has already been discussed at some length: how he divides a motive into its basic parts or submotives and how he combines and fuses various submotives into new and different motivic structures. In conjunction with this technique he uses a contrapuntal technique which, in addition to being highly imitative, is a means of combining polyphonically various motives and submotives apart from their original consecutive order. His style of imitation is not strict, but very free and produces a peculiar echoic effect much of the time.

The first example of imitation comes in measure 2, between the alto and soprano lines. The alto line seems to be a diminution of motive A1c, in the soprano, and to form a kind of imitation even before the motive is completed in the soprano.

In measure 4, motive A1c in the right hand is imitated by motive A1c, inverted in the left hand. In measures 11-13, motives A1Ia and A1Ib in the right hand are imitated in the same order in the left hand. In measure 15, there is a stretto-like imitation of motives A1Ia, alternating between the two hands.

In measures 17-20, the counterpoint is not entirely imitative. In measure 17, the soprano line begins the order of motives as originally stated in the soprano, measures 1-5. In measure 17, beat 2\(\frac{2}{3}\), the order of motives is taken up in the
left hand with motive AId. At the same point, in the soprano, there begins a repetition of the first two motives of the group, AlA (which is now in the form of AlIA1) and AlB. In measure 21 there is a "criss-cross" imitation of motives AId2 and AlIA1.

Motive BlA is used imitatively in measure 29. In measure 33 and again in measure 35, the dotted-eighth-and-sixteenth-note figure of motive BlA rises in imitation. In measures 34 and 36, motive B1C in the right hand is imitated in the left hand. In measures 38 and 39, motives BlIA and BlIB in the right hand are imitated in that order in the left hand.

In measures 40-41, Berg combines polyphonically motives BlIA and BlIB3 in the right hand with motive AlG in the left hand. In measures 45-47, motive BlIB3 in the right hand is combined polyphonically with motive BlIA in the left hand. In measures 49-51, he combines polyphonically motives CIa and CIb in the right hand first with motive BlIB3 in the left hand, then with motive AlA, retr.inv.

Again, many more cases might be cited to exemplify Berg's contrapuntal technique in this piece. However, those already cited should suffice in the understanding of the composer's method of contrapuntal organization.

Harmony and Tonality

For the purposes of this analysis, the terms "functional harmony" and "tonality" will be defined in the following
manner: "Tonality" consists of a particular group of notes and the chords made therefrom, among which there exists a primary note (tonic note), to which all other notes are related, and a primary chord (built on the primary note and called tonic chord), in relation to which all other chords have certain "functions". These "functions" manifest themselves for each chord in two sets of relationships:

1. the relationship, within a progression, of each particular chord to the tonic chord, hereafter known as the "tonic relationship";

2. the relationship, within a progression, of each chord to the chord preceding it and to the chord succeeding it, hereafter known as the "proximity relationship".

The tonic relationship may be illustrated in this manner. In the common progression vi-ii-V7-I, each chord serves as a link in the movement toward the tonic chord. The vi chord stands in third position from tonic; the ii chord, in second position; and the V7, in first position. The strength of the tonic relationship of each chord depends upon the "distance", reckoning in root movements of the P5, that each chord is from the tonic chord. 3

The proximity relationships in the foregoing progression would be the relationships between the vi chord and the ii

chord, between the ii chord and the V7 chord, and between the V7 chord and the I chord. For the purpose of this paper, the strength or closeness of the proximity relationship of two chords depends upon several factors: the interval of root movement, the existence or non-existence of common tones, the closeness of voice movements (by step, half step), the directions of voice movements, and, to some extent, the integral position of the chords (root position, first inversion, etc.)

A chord in a progression may be altered to strengthen its proximity relationship with its neighbor. In the following example, the various factors which contribute to the strength of proximity relationship have been labeled.

It is easily seen that the proximity relationship between the V7 and I chords is the strongest. This relationship is bound by two half steps as well as a common tone and the root movement of a P5. So by altering the other chords in the following manner, and adding their tonal sevenths,
the proximity relationships are strengthened to the point that all have that "dominant seventh" sound and are called by some theorists "secondary dominants". It should be pointed out, however, that, although the proximity relationships are strengthened, the tonic relationship of each altered chord is weakened by the substitution of a note foreign to the tonality in place of a note belonging to the tonality (C# for C; F# for F).

In examining a passage of music for tonality, it is necessary to examine the harmony for tonic relationships. Of course, it is vital that the tonic chord be used in some context which would indicate its primacy, such as a V-I or a vii⁰-I cadence. If the tonic chord is never used, but only implied in a certain progression, it is impossible to define with any certainty a particular tonality. It can only be noted that a certain tonality might be implied.
In this analysis, therefore, a tonality will be indicated only in those passages in which it is plainly evident or implied. In those places where no particular tonality is apparent, emphasis will be placed upon analysis of the proximity relationships of the harmonic functions. Of particular value in this respect will be Hendemith's system of chord analysis.\textsuperscript{5} It will be used to classify the chords and determine their roots.

**Exposition**

**Section A, Part I**

The first passage, from the opening up-beat through the second beat of measure 3 is in B minor. The chords might be analyzed thus:*  

\begin{center}
\begin{tabular}{|c|c|c|}
\hline
Measure & 1 & 2 & 3 \\
\hline
C\#7 & C7 & E7 & Bm \\
\hline
ii7 & ? & iV7 & i \\
\hline
Beat & 3 & 1 & 2 & 3 & 1 & 2 \\
Key & Bm & \\
\hline
\end{tabular}
\end{center}

\textsuperscript{5}Paul Hindemith, The Craft of Musical Composition (London, 1942), Book I, pp. 94-108.

*The symbols in the line beginning with C\#7 designate chords by naming their roots. Thus C\#7 designates a diminished triad with a minor seventh, the root of which is C#. The symbols in the line beginning ii7 relate those same chords to the key indicated for the passage. Thus the C\#7 chord would be the ii7 chord in the key of B minor.
Although the framework for this passage is clearly a ii-V-I cadential progression, the functions of the chords on beats 2 and 3 of measure 1 and perhaps the chord on beat 1 of measure 2 seem to be quite unclear, tonally speaking. As a matter of fact, one having a highly developed aural perception, taking the suggestion of the bass line's chromatic movement downward, might conceivably analyze the passage as follows:

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C#7</td>
<td>A#5</td>
<td>Fm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beat</th>
<th>3</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key</td>
<td>E-</td>
<td></td>
<td>B-</td>
</tr>
</tbody>
</table>

Now although the latter analysis of the chord on beat 1 of measure 2 is feasible (for the reason that the soprano part in measure 3 seems to be the prototype of the diminished figures in the also part, beats 1 and 3 of measure 2), either explanation of the chords on beats 2 and 3 of measure 1 is unsatisfactory.

The structures in question do not function, in the traditional sense, as chords, because the effect of root movement, which should accompany true chordal progression, is not felt. What is heard most strongly is the downward chromatic progression of both the bass line and the inner parts in accompaniment to the melodic figures of the soprano. Therefore, it seems
inappropriate to classify the structures as chords. Instead, let it be seen that the composer seems to have chosen the method of gradual, overlapping chromatic progression of parts in order to move from a I17 chord to a V-I cadence.

The next passage, from beat 2½ of measure 3 through beat 1 of measure 6, might be analyzed as a modulation, direct and by chromatic movement, from B minor to F# major.

<table>
<thead>
<tr>
<th>Measure</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>D5</td>
<td>C5</td>
<td>D5</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>III+</td>
<td></td>
<td>III+</td>
<td>V6</td>
<td></td>
</tr>
</tbody>
</table>

The chord on beat 1 of measure 4 seems to function only as a "lower-neighboring chord", an auxiliary function of harmonic embellishment. The chord on beat 3 of measure 4 might be interpreted as an Em7 chord thus being IV/2 in the tonality.

In measure 6, all tonal functions disappear. Even the chord on beat 1, which would seem to function as tonic, immediately becomes an augmented triad, and loses its strength. In measure 6, the augmented triads of the melody are pitted against chromatically rising major thirds. The resulting structures would probably be heard in these combinations: F#/A#/D--GBA#--G#/B#/FA.*

*See Figure 6 in the Appendix.
Measure 7 is composed of major thirds descending along a whole-tone scale against an outlined augmented triad in the melody. Through measures 8 and 9, in the inner parts, the major thirds continue to descend, now chromatically.

On beat 1 of measure 10 the harmony seems to be an $A^{b}_7$ chord, which resolves through the chromatic movement of the inner parts into a $D7$ chord on beat 1 of measure 11. Now this passage, from measure 7 through beat 1 of measure 11, might be interpreted tonally in this way:

However, the $B7^{5}$ chord in measure 7 and even the $E7^{5}$ chord in measure 8 seem too vague or too separated from the $D7$ chord in measure 11 for real tonal significance. The chord on beat 2 of measure 8 and the three chromatically descending chords of measure 9 function only as embellishing harmonies which finally resolve chromatically, on beat 3 of measure 9, into the $ii^{b}_7$ chord.
Section A, Part II

The tonalities indicated in the above illustration and in the following illustration are only the tonalities that seem to be implied. The composer does not, at this point, definitely establish a key.

<table>
<thead>
<tr>
<th>Measure</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>( D_7 )</td>
<td>( m_7^{11} )</td>
<td>( D_7^{11} )</td>
<td>?</td>
<td>( A_7 )</td>
</tr>
<tr>
<td>( V_7 )</td>
<td>( V_7 )</td>
<td>( \text{vii} )</td>
<td>?</td>
<td>( V_7 )</td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1</td>
</tr>
<tr>
<td>Key</td>
<td>G</td>
<td>G</td>
<td>G</td>
<td>D</td>
</tr>
</tbody>
</table>

The structure on beat 1 of measure 13 seems to function only as a group of appoggiaturas. The chords from beat 3 of measure 14 to beat 1 of measure 16 have little or no tonal significance and the proximity relationships seem to be concerned mainly with chromatic movement toward the chord on beat 1 of measure 16. The upward chromatic movement of the bass line and the downward chromatic movement of the soprano line indicate such. Analyzed note for note, however, the result is this:
Section A, Part III

At this point the tonality seems to have reverted to B minor.

The structure on beat 2 of measure 16 and the structure on beat 1 of measure 17 are further examples of his use of "neighboring chords", the harmonic application of the use of the "neighboring tone" in melodic embellishment. What seems more important here than the actual composition of these structures is that all voices move to and from the principal chord (the C♯7 chord, which has a tonic relationship) chromatically.
On beat 1 of measure 19 he evades the cadence and modulates at the same time, all voices moving chromatically.

The tonality of the next passage, from beat 1 of measure 21 through beat 1 of measure 28, is very vague. Even the construction of the chords varies.* In measures 21 and 22, chords vascillate between quartal and tertiary construction. From measure 23 to beat 3 of measure 25, the chords are tertiary. In measure 24, one can easily recognize an $AM^7$ chord moving to a $D^+5$ chord, which moves to a $EmM7M9$ chord on beat 1 of measure 25. In beat 3 of measure 25, the composer lapses into the use of quartal structures, descending chromatically in the left hand, against the melodic figure in the right hand. In beats 2 and 3 of measure 28, the harmony resolves into an $E7^+5$ chord. At this point the tonality of $D$ would seem to be implied.

*See Figure 6 in the Appendix.
The harmony in measure 30 functions very much as a sort of augmented sixth chord would in the key of A major. It would be spelled D#FAO# and be in first inversion, like the #iv6. F would resolve down to E, as it does in the tenor voice. D# would resolve up to E, as it does in measure 31 in the upper voice. However, if the tonality is D here, then this chord should probably be called a "secondary augmented sixth" chord. On beat 3 of measure 31 there is a direct modulation, made chromatically, to E minor.
Disregarding the anticipatory structure on beat 2 of measure 34, the structure on beat 1 of measure 34 seems to function as an extended augmented sixth chord. An abrupt, direct modulation is made chromatically to the key of G# minor on beat 1, measure 36. The harmony of measure 37 is concerned primarily with arriving, with the aid of the downward chromatic movement of the bass line, at the diminished-seventh chord on beat 1 of measure 38.

**Section B, Part II**

<table>
<thead>
<tr>
<th>Measure</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key</td>
<td>Bbm</td>
<td>Bbm</td>
<td>Bbm</td>
<td>Bbm</td>
</tr>
<tr>
<td>Beat 1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Beat 2</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Beat 3</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>41</th>
<th>42</th>
<th>43</th>
<th>44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Beat 1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Beat 2</td>
<td>F7</td>
<td>E7</td>
<td>?</td>
<td>C#7</td>
</tr>
<tr>
<td>Beat 3</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>
The tonality of this section dissolves on beat 3 of measure 39 into a succession of seventh and ninth chords, the roots of which move downward chromatically.* In measure 44 the tonality seems to have returned to B minor (with the C#m7 chord on beat 1, 11m7 in the key), although the chords on beats 2 and 3 of measure 44, and on beats 1 and 2 of measures 45 and 46 seem to have no tonal significance. It should be noted however that he evades the cadence which he has set up (On beat 3 of measures 45 and 46 is an F#7 chord, V7 in B minor.).

*See Figure 6 in the Appendix.
The tonality of this section is vague. Notable are the chords in measures 49 and 50 in their chromatic downward movement. The composer seems intent in this section upon returning to the mood and texture of section A. In the repetition of the section A, the evaded cadence of measure 46 is resolved in measure 3. The passage containing measures 51 and 59 is not analyzed harmonically for it is obvious that the composer's primary concern here is with polyphony and that any harmonic structures which arise are secondary to and caused by the contrapuntal technique involved.

Development

**Section D, Part I**

There is no recognizable tonality in either this part or the next part. Therefore, most of the structures of parts I and II are analyzed with Hindemith's system.* However, there are a few recognizable functions in part I, shown in the following illustration:

*See Figure 6 in the Appendix.*
Nevertheless, the above progressions do not serve to establish any tonality; they are only fragments of what could have been a tonality. The principle used by the composer to unify part I seems to be the insistent chromatic descent of the bass line in the last two measures of part II, the composer resolves into a B9, which serves as a tonal link into part III. This is shown in the following illustration:

<table>
<thead>
<tr>
<th>Measure</th>
<th>93</th>
<th>94</th>
<th>103</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B9</td>
<td>B9</td>
<td>E9</td>
</tr>
<tr>
<td></td>
<td>V9</td>
<td>V9</td>
<td></td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td></td>
</tr>
<tr>
<td>Key</td>
<td></td>
<td></td>
<td>A</td>
</tr>
</tbody>
</table>

**Section D, Part III**

<table>
<thead>
<tr>
<th>Measure</th>
<th>100</th>
<th>101</th>
<th>102</th>
<th>103</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E9</td>
<td>? F7 B9</td>
<td>E9</td>
<td>E♭9</td>
</tr>
<tr>
<td></td>
<td>V9</td>
<td>? V7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1</td>
</tr>
<tr>
<td>Key</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Here also, as in measure 29 of the exposition, the tonality indicated is only implied by the harmony. The structure on beat 1 of measure 101 seems to have no tonal significance.
The composer seems primarily concerned with chromatic voice-leading.

On beat 1 of measure 103, even the implied tonality is dissolved although a few harmonic functions are apparent.

- $E_b^9 - A_b^9$ in measure 103
- $D_b^7 - 9$
- $V_9$ of $V_9$ of $V_7 - 9$ of?
- Key: 1 2 3 4

The last function of this part seems to be a cadence.

- Measure 109: $G^7$
- Measure 110: $I^7$
- Key: 1 2 3 4

It seems totally inappropriate, however, to give the passage from measure 104 to 110 the tonality of $G$ merely for the sake of this cadence. Therefore, the passage is analyzed with Hindemith's system.*

---

*See Figure 6 in the Appendix.
Recapitulation

Section A', Part I

It is mentioned in the section of this chapter concerning structure and form that the recapitulation of this work is more development than repetition of the exposition. In the process of further expanding his material, the composer also further obscures his tonalities. However, although harmonic contexts become vague, there are measures in the recapitulation that are either exact repetitions of or greatly similar to corresponding measures of the exposition.

Measure 111 is an exact repetition of measure 1, and beat 1 of measure 112 corresponds to beat 1 of measure 2. But there is no resolving of the cadence in measure 113 as there is in measure 3. Instead, the composer evades and extends. Measures 114 and 115 correspond to measures 4 and 5. The composer extends in measure 116 and the remainder of this part is devoted to development without establishing a definite tonality.

Section A', Part II

This part corresponds to part II of section A of the exposition only in the fact that they both begin on a D7 chord (measure 131 = measure 11). But the tonality is even more vague here than in the exposition. The chord on the last half of beat 3 in measure 136 provides a tonal link into section B', which corresponds to the chord on beat 3 of measure 28. The chord in measure 136 is an F#7+5 chord and would be analyzed as V7 of V9.
**Section B', Part I**

The first three measures (137-139) are quite similar to the first three measures of section B of the exposition (29-31), and they may be correspondingly analyzed. The tonality implied here is B major.

<table>
<thead>
<tr>
<th>Measure</th>
<th>137</th>
<th>138</th>
<th>139</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B^\flat$ - C$^\natural$</td>
<td>Aug. 6</td>
<td>B$^\flat$</td>
</tr>
<tr>
<td></td>
<td>E$^\natural$ G$^\natural$ B$^\natural$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_7 - vi^\natural_7$</td>
<td># iv$^\natural_6$</td>
<td>$V_7$</td>
<td></td>
</tr>
</tbody>
</table>

**Key** E

During the remainder of section B', the tonality becomes increasingly obscure. However, measures 144 and 146 correspond somewhat to measure 36. In measure 146, the tonality of E minor lingers.

<table>
<thead>
<tr>
<th>Measure</th>
<th>145</th>
<th>146</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B^\natural$</td>
<td>$A^\natural_{13}$ $E^\natural$</td>
</tr>
<tr>
<td>$V_7$</td>
<td>iv</td>
<td>i</td>
</tr>
</tbody>
</table>

**Key** E

Measure 145 corresponds to measure 39. Measures 150-154 are repetitions of measures 40-44. Measures 164 corresponds to
measure 46. On beat 3 of measure 164, a cadence point seems to have been reached with the F#7 chord, V7 in B minor. However, he evades here as he did in the exposition, measure 46, and moves into section 0'.

Section 0'

Measures 165-168 correspond to measures 47-50. The cadence is finally resolved in measure 175.

<table>
<thead>
<tr>
<th>Measure</th>
<th>174</th>
<th>175</th>
<th>176</th>
<th>177</th>
<th>178</th>
<th>179</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chord</td>
<td>F#7</td>
<td>Bm</td>
<td>F#7</td>
<td>—</td>
<td>Bm</td>
<td>—</td>
</tr>
<tr>
<td>V7</td>
<td>i</td>
<td>i</td>
<td>—</td>
<td>—</td>
<td>i</td>
<td>—</td>
</tr>
<tr>
<td>Key</td>
<td>Bm</td>
<td>Bm</td>
<td>Bm</td>
<td>Bm</td>
<td>Bm</td>
<td>Bm</td>
</tr>
</tbody>
</table>

Since the tonalities of the recapitulation are very vague, most of the harmonic structures have been analyzed with Hindemith's system.*

Melody

In analyzing the melodic tendencies of this piece, only the extracted thematic material already presented in the discussion of structure and form has been considered, and that, in its original harmonic context (See Figure 1 in the Appendix). That material is repeated and analyzed in the following aspects:

*See Figure 6 in the Appendix.
1. the intervals used in linear construction (See Figure 3 in the Appendix.);

2. the intervals used in vertical construction, i.e., the interval between each melodic note and the root of the harmonic construction below it (See Figure 4 in the Appendix.);

3. the types of nonharmonic tones used (See Figure 4 in the Appendix.).

The intervals used in the extracted material for linear construction are tabulated in Table I.

**TABLE I**

**INTERVALS USED IN LINEAR CONSTRUCTION**

<table>
<thead>
<tr>
<th>Interval</th>
<th>Frequency</th>
<th>Interval</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>m2</td>
<td>27</td>
<td>M6</td>
<td>2</td>
</tr>
<tr>
<td>M2</td>
<td>19</td>
<td>m7</td>
<td>4</td>
</tr>
<tr>
<td>m3</td>
<td>6</td>
<td>M7</td>
<td>4</td>
</tr>
<tr>
<td>M3</td>
<td>18</td>
<td>m9</td>
<td>0</td>
</tr>
<tr>
<td>P4</td>
<td>6</td>
<td>M9</td>
<td>1</td>
</tr>
<tr>
<td>+4</td>
<td>11</td>
<td>Aug. triad</td>
<td>8</td>
</tr>
<tr>
<td>P5</td>
<td>6</td>
<td>M triad</td>
<td>1</td>
</tr>
<tr>
<td>m6</td>
<td>2</td>
<td>m triad</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d triad</td>
<td>2</td>
</tr>
</tbody>
</table>

What is noticed first of all is the composer's extensive use of the m2. Secondly, the composer makes great use of the M3, resulting, consequently, in frequent use of the augmented triad, probably the influence of the whole-tone scale upon the consciousness of the composer. The influence is found in scale form in the following places:
1. measure 7, left hand
2. measure 57, right hand
3. measure 62, right hand
4. measure 63, left hand
5. measures 64-65, right hand
6. measures 68-69, right hand
7. measure 83, right hand.

The other measures in which this scale form is found are repetitious of those just cited (for example, in measure 90, right hand, and measure 127, right hand). Thirdly, the composer makes rather extensive use of the tritone interval (+4). He does not usually resolve the tritone. Finally, more conjunct than disjunct motion is used, but the composer nevertheless achieves, by his use of the tritone and intervals of the seventh, a certain angularity of contour.

The extracted material was examined for the frequency of intervals between melodic notes (highest sounding notes) and harmonic roots. Table II shows the results.

**TABLE II**

INTERVALS USED BETWEEN MELODIC NOTES AND HARMONIC ROOTS

<table>
<thead>
<tr>
<th>Interval</th>
<th>Frequency</th>
<th>Interval</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root or octave</td>
<td>10</td>
<td>+4</td>
<td>8</td>
</tr>
<tr>
<td>m2</td>
<td>1</td>
<td>m6</td>
<td>6</td>
</tr>
<tr>
<td>M2</td>
<td>1</td>
<td>M6</td>
<td>2</td>
</tr>
<tr>
<td>m3</td>
<td>8</td>
<td>m7</td>
<td>6</td>
</tr>
<tr>
<td>M3</td>
<td>8</td>
<td>M7</td>
<td>2</td>
</tr>
<tr>
<td>P4</td>
<td>1</td>
<td>m9</td>
<td>1</td>
</tr>
<tr>
<td>P5</td>
<td>11</td>
<td>M9</td>
<td>4</td>
</tr>
</tbody>
</table>

Table II indicates that approximately half of the melodic notes are not primary notes (root, octave, third, or P5) of
the harmonic structure beneath them. A glance at the score will suffice to ascertain that most of these notes are not treated as traditional nonharmonic tones. The tritone is rarely resolved. Although the melodic lines occasionally follow chord lines, as in measures 11 and 30, harmonic structures change so frequently (usually every beat) that a combination of more than two adjacent melodic notes within a single harmonic structure is rare. (Some of the material, measures 3, 56-60, 69, 70, was not analyzed because there was no particular harmonic structure to which to relate the notes.)

Table III contains a tabulation of the principal nonharmonic tones which are treated in a traditional manner.  

**TABLE III**

**NONHARMONIC TONES USED IN MELODIC CONSTRUCTION**

<table>
<thead>
<tr>
<th>Nonharmonic Tone</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appoggiatura.</td>
<td>9</td>
</tr>
<tr>
<td>Anticipation.</td>
<td>4</td>
</tr>
<tr>
<td>Suspension.</td>
<td>1</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>1</td>
</tr>
<tr>
<td>Passing Tone.</td>
<td>2</td>
</tr>
<tr>
<td>Retardation</td>
<td>1</td>
</tr>
</tbody>
</table>

His insistent use of the appoggiatura is a primary characteristic of his melodic style and a major link between the composer and the romantic school.

---

Rhythm and Meter

The meter of this work is always notated as 3/4; however, it is not always easy to ascertain aurally the metrical construction of the work. The ambiguity of the strong beat (the placement of which among regular beats is, of course, the deciding factor in metrical construction) is due mainly to the following two characteristics of the work:

1. weak tonal organization;
2. rhythmically overlapping construction of motives.

It was noted in the section of this chapter concerning harmony and tonality that the composer used but few tonic relationships and that the work as a whole had little definite tonal organization. With the weakening of a primary chord and its use comes inevitably the weakening of harmonic rhythm. For harmonic rhythm requires a "strength" relationship between chords just as meter requires a "strength" relationship between beats. Harmonic rhythm has always been used, at least partially, for the aural conveyance of meter and with its demise the meter becomes vague.

It is easily noticed throughout the work that the motives are often constructed or used so that they overlap the bar irregularly and tend to obscure the regular metrical indication. Even in measure 1 there is no movement on beat 1 and the lull causes the beat to appear aurally as one of the weaker beats. The opening bars might be heard by one who is unfamiliar with the notation as the following metrical notation:
In measure 6, motive AId* tends to confuse the meter as notated. In measures 26-28, motive AIIa1, inv.* is used to suspend the strict metrical pulse. Further examples of metrical suspension or confusion are found in the following places:

1. in measures 57-59, by motives CIb and A1a*
2. in measures 67-69, by motive DIa*
3. in measures 81-83, by motives AIIa and BIIb2*
4. in measures 86-87, by motive BIIb2*
5. in measures 97-99, by motive BIIb3*
6. in measures 120-121, by motive A1a*
7. in measures 159-163, by motives BIIb2 and A1a*.

The rhythms of this piece are all symmetrical; i.e., each rhythmic figure is in itself composed of two, three, four, or six units. There are no figures of five, seven, or ten notes.

But the rhythmic units are not always combined in regular or symmetrical fashion, such as two units against one, or three against one. There are numerous measures in which the

*See Figure 1 in the Appendix.
rhythms are combined two units against three or three against four. The examples of two against three are:

1. measure 18, beat 2
2. measure 25, beat 2
3. measure 26, beats 1 and 3
4. measure 27, beat 2
5. measure 28, beat 1
6. measure 57, beat 3
7. measure 59, beat 3
8. measure 61, beat 3
9. measure 63, beat 3
10. measure 68, beat 3
11. measure 69, beats 1, 2, and 3
12. measure 70, beat 1
13. measure 78, beat 3
14. measure 79, beat 2
15. measure 80, beat 2
16. measure 81, beat 3
17. measure 82, beat 2
18. measure 83, beat 1
19. measure 85, beat 3
20. measure 87, beat 2
21. measure 101, beat 2
22. measure 103, beat 2
23. measure 123, beat 2
24. measure 124, beat 2
25. measure 143, beat 3.

The examples of three against four are:

1. measure 72, beat 3
2. measure 74, beat 3
3. measure 75, beats 2 and 3
4. measure 76, beats 2 and 3
5. measure 78, beats 1, 2, and 3
6. measure 79, beat 2
7. measure 80, beat 2
8. measure 83, beat 3
CHAPTER IV

CONCLUSIONS

This sonata by Alban Berg is a product of Arnold Schoenberg's teachings and is, indeed, a musical reflection of the Schoenberg of 1907-1908. At this time the musical thought of Schoenberg himself was in a state of metamorphosis, developing from the chromaticism of the late Romantic composers toward the twelve-tone technique which he was to formulate a few years later.

At the time Berg wrote this work, he seems to have been primarily concerned with the compositional possibilities of polyphony and motivic variation. These two musical techniques are the basic tools with which he molded the composition.

His use of sonata form exemplifies his predilection for traditional musical forms. Berg's use of that form does not adhere strictly to the academic formula for Classical sonata form, but it retains the salient features thereof: the use of contrasting thematic material, the development of that material, the repetition of musical contexts, and the use of different tonalities for different musical sections.

The technique of motivic variation is used not only in the development of thematic material, but also in the very formulation of thematic contrast. It is the latter use which
enables Berg to exploit the formal principle of contrasting thematic sections. Above all, however, the technique of motivic variation is used as a unifying principle to relate all the notes of the piece to a few short motives.

Berg's harmonic technique vacillates continually between passages of a more or less recognizable tonality and passages in which no tonality is evident. The latter result from his use of polyphony, and the dominance of a tonality indeed seems irrelevant. The former are used mainly as a contrast to the latter. Classical sonata form derived much strength from the use of different tonalities for different thematic sections. The contrast between "atonal" sections and tonal sections serves a similar purpose. The underlying impetus for both kinds of passages is that of chromatic movement.

Berg's use of polyphony and motivic variation constitutes a definite departure from the style of the Classical piano sonata. The Classical sonata style was mainly homophonic, the accompaniment to the melody being primarily harmonic. In Berg's sonata the accompaniment is derived much of the time from the melody and combined polyphonically with it to produce a style very much akin to that of the string quartet.

The sonata, as a whole and above all, reflects the growth of an important composer, one who is perhaps the most important link between the traditional Classical and Romantic schools and the modern schools. His growth was based on a thorough knowledge of traditional styles and techniques,
vestiges of which are seen in the formal design, chromaticism, and evasive harmony of the work. His advance is seen in his peculiar use of polyphony and motivic variation. Compared with many other works for piano, Berg's sonata is perhaps not among the most celebrated. But as indication of the attitude of a great composer who wished to build upon rather than break with his heritage, it is a most significant work.
APPENDIX

EXPLANATION OF SYMBOLS AND ABBREVIATIONS

**Capital letters**—These may refer to tonality or form.

**Tonality:** A, B, C, D, E, F, G signify major triads (A = A major; B = B major) or major keys.

M signifies a major interval when placed before an Arabic numeral (M2 = Major second).

A capital letter followed by 7 always signifies a major triad with a minor seventh (07 is spelled CEGBb.).

A capital letter followed by a 9 always signifies a major triad with a minor seventh and a major ninth (09 is spelled CEGBbD.).

**Form:** In Figure 1 in the Appendix, capital letters refer to thematic sections as outlined in the section of Chapter III on structure and form (A = first thematic section; B = second thematic section.).

**Small letters**—These may refer to tonality, form, or Hindemith chord classification.

**Tonality:** m signifies a minor triad or minor key when placed after a capital letter (Am = A minor, or minor interval when placed before an Arabic numeral.)
(m2 = minor second; Dm7 = D minor triad with a minor seventh).

b signifies flat when placed after a capital letter (Bb = B flat).

Form: In Figure 1 in the Appendix, small letters refer to particular motives of thematic sections. Thus A1c signifies the third motive (c) of part I of section A.

Hindemith chord classification: Small letters are a part of Hindemith's symbology for chord classification and are used in that connection in Figure 6 in the Appendix (See footnote 5 of Chapter III.).

Roman numerals, large—These may refer to tonality, form, or Hindemith chord classification.

Tonality: They signify the chord numbers of major triads

(III = major triad built on the third degree of the scale of the key).

Form: In Figure 1 in the Appendix, these refer to particular divisions (parts) of thematic sections. Thus AII signifies the second part (II) of section A.

Hindemith chord classification: These are a part of Hindemith's symbology for chord classification and are used in that connection in Figure 6 in the Appendix (See footnote 5 of Chapter III.).

Roman numerals, small—These are used to indicate the chord numbers of minor triads (ii = minor triad built on the second degree of the scale of the key.).
Arabic numerals--These may refer to intervals, form, or Hindemith chord classification.

Intervals: When used with letters they signify intervals as measured up from the roots of the chords indicated (Cm7 = minor seventh from C). When used with Roman numerals they indicate chord inversions according to the symbology of figured bass. When not preceded by M, m, +, or −, these signify tonal intervals (intervals which use only notes of the key).

Form: In Figure 1 in the Appendix, these refer to elements of motives. Thus BIIb1 signifies the first element (1) of the second motive (b) of part II of section B.

Hindemith chord classification: These are a part of Hindemith's symbology for chord classification and are used in that connection in Figure 6 in the Appendix (See footnote 5 of Chapter III.).

Symbols-- + indicates, when placed before an Arabic numeral, that that interval from the root has been raised a minor second. (C7+5 means that the fifth from C has been raised.) When placed after a large Roman numeral, it indicates an augmented triad (III+ = augmented triad built on the third degree of the scale.)
- indicates, when placed before an Arabic numeral, that that interval has been lowered a minor second. \((07\rightarrow 5\) means that the fifth from C has been lowered.)

\(\circ\) signifies, when placed after a letter or small Roman numeral, a diminished triad \((E^\circ =\) diminished triad built on \(E; ii^\circ =\) diminished triad built on the second degree of the scale.) When placed before an Arabic numeral it indicates that the interval is diminished \((07 =\) diminished seventh).

\(\#7\) signifies, when placed after a letter or small Roman numeral, a diminished triad with a minor seventh \((E^\#7 =\) diminished triad with a minor seventh, built on \(E; ii^\#7 =\) diminished triad with a minor seventh, built on the second degree of the scale).

\(#\) means sharp when placed after a capital letter \((C# =\) C sharp). When placed before a Roman numeral, it signifies that the root of the chord has been raised a minor second.

\(+4\) signifies the tritone interval.

\(P4\) means perfect fourth.

\(d4\) means diminished fourth.

\(P5\) means perfect fifth.

Arrows \((-\rightarrow\) ) are used on the score in the Appendix to indicate chromatic movement.
Abbreviations—

Aug. means augmented.
Ant. means anticipation.
App. means appoggiatura.
Aux. means auxiliary.
C.T. means common tone.
Dim. means diminished.
Inv. means inverted or inversion.
P.T. means passing tone.
Ret. means retardation.
Retr. means retrograde.
S. means suspension.
Figure 1 --- Basic Thematic Material
Figure 1 (continued)
Figure 2 -- Basic Motivic Derivations
Figure 2 (continued)
Figure 3 (continued)
Figure 4 — Intervals between Melodic Notes and Harmonic Roots
Figure 4 (continued)
EXPOSITION

Measures 0-55

A
Measures 0-28
I
Measures 0-10
Key E\text{m}
F\#

II
Measures 11-16
Key G
D

B
Measures 29-46
III
Measures 17-28
Key E\text{m}
B\text{m}

II
Measures 29-37
Key D
Em
G\#m

C
Measures 47-55
Key ?

Fig. 5--Diagram of form.
DEVELOPMENT

Measures 56-110

I
Measures 56-69
Key ?

II
Measures 70-99
Key ?

III
Measures 100-110
Key A
G

Fig. 5--(Continued)
<table>
<thead>
<tr>
<th>Measure</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>$\text{V}$ $\text{I}_b$ $\text{III}$</td>
<td>$\text{II}_b$ $\text{II}_b$ $\text{V}$</td>
<td>$\text{II}_b$ $\text{III}_2$ $\text{V}$</td>
<td>$\text{II}_b$ $\text{II}_b$ $\text{V}$</td>
<td>$\text{II}_b$ $\text{II}_b$ $\text{V}$ $\text{III}_2$</td>
</tr>
<tr>
<td>Root</td>
<td>$F^<em>$ $G$ $G^</em>$</td>
<td>$A$ $F$ $B^b$</td>
<td>$E$ $A$ $E$</td>
<td>$G$ $G^b$ $F$</td>
<td>$C$ $A$ $F$</td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
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<table>
<thead>
<tr>
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<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
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</thead>
<tbody>
<tr>
<td>Class</td>
<td>$\text{III}_3$ $\text{II}_3$ $\text{IV}_2$</td>
<td>$\text{III}_1$ $\text{IV}_1$ $\text{IV}_2$</td>
<td>$\text{IV}_1$ $\text{III}_b$</td>
<td>$\text{III}_2$ $\text{III}_3$</td>
<td>$\text{III}_1$ $\text{V}$ $\text{V}$</td>
</tr>
<tr>
<td>Root</td>
<td>$A^b$ $E^b$ $A^b$</td>
<td>$D$ $D^b$ $G^b$</td>
<td>$B$ $-F^*$</td>
<td>$C^*$ $-D$</td>
<td>$B$ $D$ $G^*$</td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
</tbody>
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<table>
<thead>
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<th>26</th>
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<th>28</th>
<th>29</th>
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<tbody>
<tr>
<td>Class</td>
<td>$\text{IV}_2$ $\text{V}$ $\text{IV}_3$</td>
<td>$\text{I}_2$ $\text{III}_2$ $\text{V}$</td>
<td>$\text{V}$</td>
<td>$\text{III}_2$</td>
<td>$\text{II}_a$ $\text{II}_a$ $\text{IV}_1$</td>
</tr>
<tr>
<td>Root</td>
<td>$C$ $F^*$ $F$</td>
<td>$B^b$ $E$ $F$</td>
<td>$F$</td>
<td>$C$</td>
<td>$A^b$ $G$ $G^b$</td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>42</th>
<th>43</th>
<th>44</th>
<th>45</th>
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</thead>
<tbody>
<tr>
<td>Class</td>
<td>$\text{IV}_1$ $-\text{III}_2$</td>
<td>$\text{II}_b$ $-\text{I}_2$</td>
<td>$\text{V}$ $\text{V}$ $\text{III}_b$</td>
<td>$\text{II}_b$ $\text{IV}_2$ $\text{V}$</td>
<td>$\text{III}_2$ $-\text{II}_a$</td>
</tr>
<tr>
<td>Root</td>
<td>$F$ $-E^b$</td>
<td>$E$ $-G$</td>
<td>$E^b$ $A$ $b^6$</td>
<td>$E$ $b^6$ $C^*$</td>
<td>$F$ $-F^*$</td>
</tr>
<tr>
<td>Beat</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>

<table>
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<th>60</th>
<th>61</th>
<th>62</th>
<th>63</th>
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<tbody>
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<td>$\text{II}_b$ $-\text{IV}_1$</td>
<td>$\text{IV}_1$ $\text{I}_2$ $\text{III}_1$</td>
<td>$\text{II}_b$ $-\text{II}_b$</td>
<td>$\text{II}_b$ $-\text{II}_b$</td>
</tr>
<tr>
<td>Root</td>
<td>$D$</td>
<td>$C^*-C$</td>
<td>$F$ $G$</td>
<td>$D$ $-E^b$</td>
<td>$E$</td>
</tr>
<tr>
<td>Beat</td>
<td>3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>

*Figure 6 -- Hindemith Classifications*
<table>
<thead>
<tr>
<th>Measure</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td></td>
<td>III, II&lt;sub&gt;b&lt;/sub&gt;−IV&lt;sub&gt;3&lt;/sub&gt;</td>
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Figure 6 (continued)
SONATE.


A\textsubscript{Ia} Mäßig bewegt. 

A\textsubscript{Ib} 

A\textsubscript{Ic} 

A\textsubscript{Id} a tempo

Copyright 1926 by Schlesinger'sche Buch- u. Musikdigg. Berlin-Lichterfelde
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Langsameres Tempo (aber doch bewegter als zum Schluß des Ritardandos)
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