AN ANALYSIS OF THE FIRST MOVEMENT OF BEETHOVEN'S WALDSTEIN SONATA USING SCHOENBERG'S THEORY OF REGIONS

by

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INTRODUCTION

There are many ways of analyzing music. Among these is Schoenberg's theory of regions. Curiosity lead to an investigation as to how this theory would work out when applied to a composition of considerable length. The work chosen was the first movement of Beethoven's Waldstein Sonata, Op. 53. The reasons for making this choice are due to the transitory character of the first theme material, the unusual key relations between the first and second theme groups, and the harmonic complexity of the development section.

STATE OF MUSIC IN LATE 19th CENTURY

Tonality is a central principle in music of the late 19th century and there can be little question that it is both a technical and esthetic preoccupation of composers from the mid 17th century to the end of the 19th. It is a fundamental element of unity which is based on harmonic continuity as its chief mechanism of extension and development. Tonality may be regarded as the integration of harmonic units, from single chords to harmonic phrases and larger sections within a scheme of any dimension. The scope of a tonal scheme including the "area" of any given key, or the extent of exploration and exploitation of relationships

within it, may vary widely. Tonality, or a tonal scheme, may in its smallest sense be expressed by no more than three triads so disposed as to produce a complete and coherent form. A tonal scheme at its largest, as for example Beethoven's Waldstein Piano Sonata or in The Prelude Tristan and Isolde, will involve not only a great complexity of relationships within a single key, but a complex of relationships among keys themselves as extended structural units.

The very length of a piece and the speed with which it moves are factors in determining the degree of harmonic elaboration possible or desirable within its bounds. A short piece is not usually found to be elaborate or complex harmonically, but a long piece demands extension of harmonic and tonal relationships. In 18th century music, one is less likely to find harmonic relations extended to remote or subordinate elements or areas of a key, and one never finds them over long periods of time. The 18th century forms are notably briefer than those of the 19th century. The structural elements of a key normally recur with sufficient frequency and at sufficiently brief intervals to give the listener a sense of tonal security and stability. In 19th century music these elements are widely separated by chromatic connections, delayed resolutions, or other devices that produce a strain on the structural outlines.

But even in Tristan the traditional structural

elements are present; they are merely widely dispersed, and their connection requires greater attention and memory on the part of the listener.

The earlier Classical composers remained closer to their starting keys, as a rule, and, especially in sonata expositions, their key areas and key juxtapositions are most often limited in extent. It is in this aspect of harmonic practice that Beethoven was so original and so powerful. In his expositions, and far more so in his developments, the key exploration as such is on a larger scale than that generally found in earlier music; this, on the whole, accounts for the greater length of Beethoven's movements. There are in Beethoven many passages of such rapid and driving harmonic movement that one is hard pressed to follow the relations. The orientation changes as rapidly as one can grasp a point of stability. Occasionally in Beethoven, and often in Wagner, there are passages which belong to no key, or to several possible keys. The extreme practice of this kind of suspended tonality led to the eventual rise of the doctrines of pan-tonality, or atonality, and to the theoretical formulations of Schoenberg.

It is true that it is theoretically possible to analyze any piece of music of the Classical period as being in one key throughout. The attempt, which requires some elaborate interpretation, is no more practical than the

results are musically truthful. But these results are no more untruthful or unmusical than those of the opposite extreme where a modulation is discovered every time an elaboration of an area of the key takes place.

SCHOENBERG'S REGIONS

Schoenberg's principal of regions serves to provide a more profound understanding of the unity in the harmony of a piece. According to this principal, every digression from the tonic is considered to be still within the tonality, whether directly or indirectly, closely, or remotely related.[1]

To state it more succinctly, there is only one tonality, and segments formerly considered as modulations are only regions, or harmonic contrasts, within that one tonality.

Schoenberg has devised a chart which shows the relationships between regions centered around any possible major or minor triad and the central key itself. He uses an elaborate set of symbols to identify such regions instead of the traditional Roman numerals to identify such areas. The first symbol indicates the relation to the tonic. The

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[1]Arnold Schoenberg, Structural Functions of Harmony (New York: W. W. Norton and Company, 1954), p. 19.

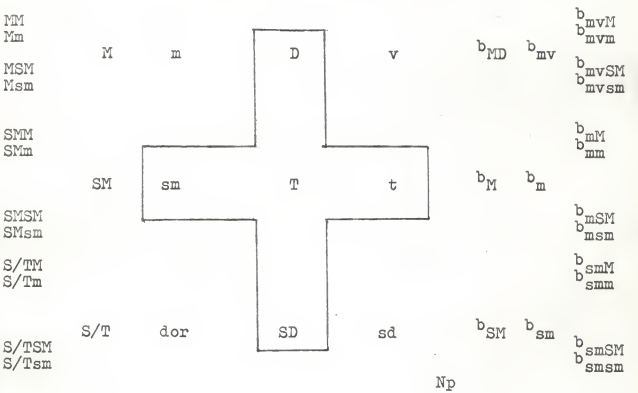
second symbol shows the relation to the region indicated by the first symbol. For example, S/TSM reads super tonic Major's submediant Major; (in C, a major region on B major); ^{b}smSM reads flat submediants minor's submediant Major; (in C a major region on F^{b} Major). The chart of regions is presented in Plate I.

The tonic of the regions of C major are presented in Plate 2 corresponding to the relations shown in Plate I. The Waldstein Sonata is written in the key of C; hence the reason for the chart of regions being presented in the key of C.

The regions closest related to tonic are those in the center of the chart: D, SD, sm and t. The remaining regions are classed in this manner: II. Indirect but Close; III. Indirect; IV. Indirect and Remote; V. Distant.

PLATE NO. 1

CHART OF THE REGIONS[2]



ABBREVIATIONS

T	means	tonic	Np	means	Neapolitan
D	"	Dominant	dor	"	Dorian
SD	"	subdominant	S/T	"	supertonic
t	"	tonic minor	b_M	"	flat mediant major
sd	"	subdominant minor	b_{SM}	"	flat submediant major
v	"	five minor	b_{MD}	"	flat mediant majors dominant
sm	"	submediant minor	b_m	"	flat mediant minor
m	"	mediant minor	b_{sm}	"	flat submediant minor
SM	"	submediant major	b_{mv}	"	flat mediant minor's five
M	"	mediant major			

All symbols in capitals refer to major keys; those in small letters to minor keys.

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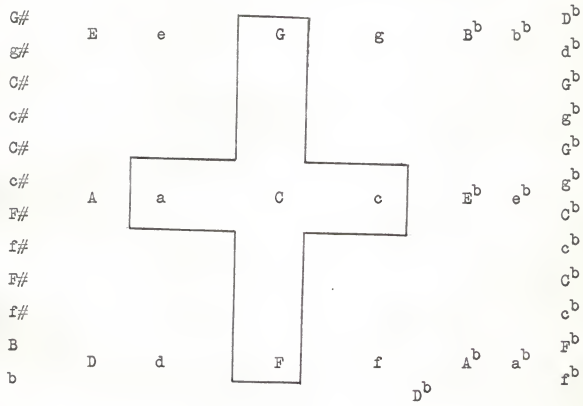
[2]Schoenberg, op. cit., p. 20.

PLATE NO. 2

CHART OF THE REGIONS
PRESENTED IN THE AREA OF C^3



[3] Schoenberg, op. cit., p. 20.

CLASSES

Regions are classified according to their relation to the key center in this way and for these reasons:

Class I is called direct and close because all these regions have five or six tones in common with T. The regions include the SD, D, sm and m.

Class II which contains the t, sd, v, SM, M, ^{b}M, and ^{b}SM, is so called because all these regions are closely related to the regions of Class I or to tonic minor and have three or four tones in common with T.

Class III which contains the ^{b}m, ^{b}sm, MM, Mm, $^{b}smSM$, and $^{b}smsm$ is called Indirect because all of these regions are more distant than Class II upon which their relationships are based. The number of tones in common with T is negligible.

Class IV is called Indirect and Remote because these five regions are connected in the following manner: S/T is SDSM, Dorian is SDsm, Np is sdSM, ^{b}MD is SDSD, and ^{b}mv is sdsd.[4]

Class V is called Distant because these extremely remote regions customarily appeared in the development or

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[4]Schoenberg identifies the minor region centered on the second scale degree as the Dorian. This is an idiosyncracy which hardly seems consistant, since no other factors are called by their modal names.

elaborations. Regions within this class are the MSM, Msm, SMM, SMm, SMSM, SMsm, S/Tm, S/TM, S/TSM, S/Tsm, ^{b}mvM, ^{b}mvm, ^{b}svSM, ^{b}mvsm, ^{b}mM, ^{b}mm, ^{b}mSM, ^{b}msm, ^{b}smM, ^{b}smm, ^{b}smSM and ^{b}smsm.[5]

One of the basic factors upon which the chart of regions is built is the interchangeability of major and minor on the same keytone. Schoenberg sums it up as follows: "A dominant can introduce a major or a minor triad, and can be the dominant of a major or minor region. This power makes the following regions close relations of a major tonality: t, sd, and v."[6]

DEFINITION OF TERMS

Some of the terminology in this report may need clarification.

Substitute tones. A substitute tone is a borrowed tone or note. They are derived from the old modes. Just as the substitute tones in the minor scale are derived from the Aeolian modes, several other substitutes are derived from the remaining modes.[7]

Regions. Regions are segments of a

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[5]Schoenberg, op. cit., p. 68.

[6]Schoenberg, op. cit., p. 51.

[7]Schoenberg, op. cit., p. 15.

tonality carried out as though they are independent tonalities but yet are related to the original tonality of the piece.[8]

Registered. Registered means that the music is considered as being temporarily in a certain region.[9]

Artificial triad. This refers to altering or using a substitute tone to produce a triad of another color. For example, by substituting (altering) the third in a minor triad, an artificial major triad is produced.[10] The sign Schoenberg uses is a line through the numeral, e. g., ~~II~~ or ~~III~~.

MATERIALS

Supplemental works referred to were Companion to Beethoven's Pianoforte Sonatas, by Donald Tovey and the Structural Functions of Harmony, by Arnold Schoenberg. The score used in this study was Beethoven Sonatas for the Piano, Volume II, Schirmer edition, edited by Hans Bulow. This paper is designed in such a way that constant reference to the score itself is necessary. Actually, the paper supplements the study of the score.

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[8] Schoenberg, op. cit., p. 19.

[9] Schoenberg, op. cit., p. 19.

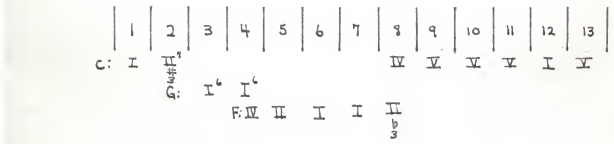
[10] Schoenberg, op. cit., p. 16.

A FORMAL ANALYSIS OF THE FIRST MOVEMENT OF BEETHOVEN'S WALDSTEIN SONATA, OP. 53

First Theme - Exposition

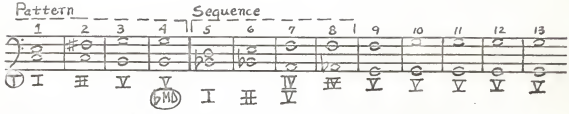
Measures 1 - 13 are constructed over a descending chromatic bass line starting on C and ending on G, where there is a half cadence. Within these thirteen measures, some theorists would have analyzed the composition as having modulation to the keys of G major and F major.

Ex. 1



Using the theory of regions, and remembering that these measures are constructed over a bass line on C, the first thirteen measures will be analyzed as remaining in the Tonic area with mm. 5 being registered in the ^{b}MD.

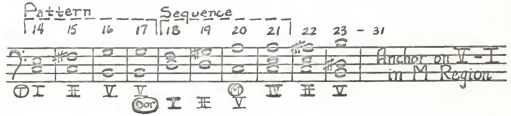
Ex. 2



The F# in the second measure is simply a substitute tone.

The same sequential pattern is used in mm 14 - 23 but this time, it is directed to a half-cadence in the region of the Mediant.

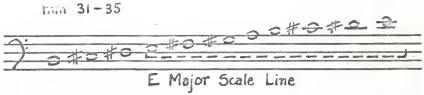
Ex. 3



Measures 23 - 31 form an anchor on the Tonic and Dominant of the Mediant Regions. Starting in measure 31,

an E major scale line is found continuing up to where the second theme group begins on an elision in measure 35. It is because of this E major scale passage that the second theme may be said to be in the region of the Mediant.

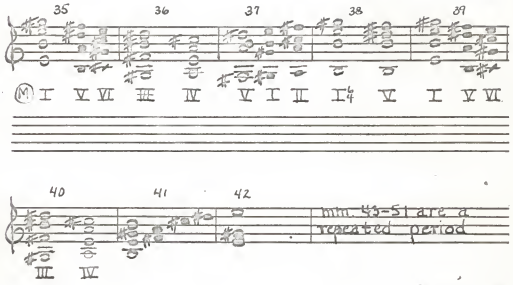
Ex. 4



Second Theme - Exposition

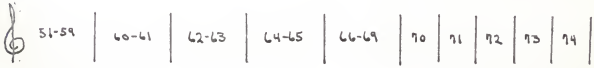
The first unit of the second theme group, mm. 35 - 50, is a repeated period, the repetition being in the nature of a variation.

Ex. 5



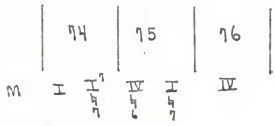
The second unit of the second theme group, mm. 51 - 74 is a static area based upon the principal harmonies of the Median Region; no subsidiary areas are developed.

Ex. 6



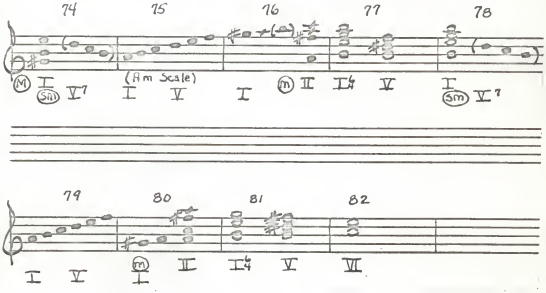
To the trained musical ear, the analysis of music is dependent on the ability to hear a cadence or a scale passage within an area. Measure 74 begins in the area of the mediant; it formerly would have been analyzed as follows:

Ex. 7



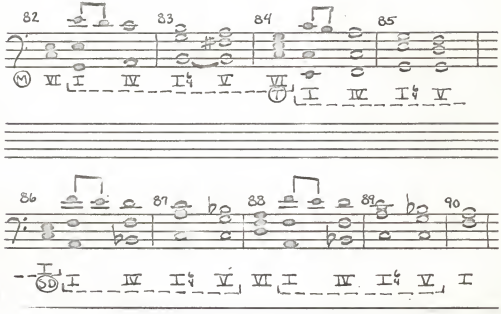
However, by careful listening, an ascending scale line in the area of the sm can be heard in mm. 75 and 76. Also the chord progression seems to temporarily imply the feeling of I, V, I, in the area of the sm. Measures 74 - 82 can therefore be analyzed in the following manner.

Ex. 8



Measures 82 - 90 travel through several areas to reach the Major SD area.

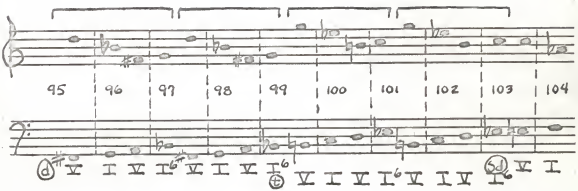
Ex. 9



Development

One of those magnificent examples of construction where simple means achieve impressive ends is found in the development. Measures 90 - 104 begin in the same sequential pattern as the exposition, but they are in the area of the SD instead of the tonic. In mm. 95 - 104 two sequential patterns are present, the first being in the area of the minor dominant and the second being in the area of the minor tonic.

Ex. 10



In mm. 104 this sequential patterns breaks and from mm. 104 - 116 numerous areas exist.

Theorists have analyzed this particular passage in numerous ways, each including modulation.

Tovey's remarks are especially significant. Concerning this passage he says: while the bass slowly descends in steps of the scale, figure C (♪♫♫ ♩) is grouped in a new sequence passing from the key of F minor through B^b minor to A^b minor and again to F minor.[11]

Basically, Tovey and Schoenberg assert the same idea. Tovey points out the extended bass line, and very carefully

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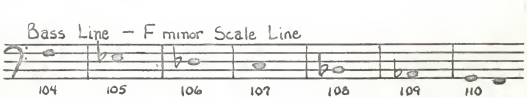
[11]Donald Francis Tovey, Companion to Beethoven's Pianoforte Sonatas, p. 135.

says that the sequences pass through the other keys. He is still insinuating modulation by his use of the term key.

Schoenberg's terminology is more inclusive of a central area. The area of the SD is fully established because of the descending bass line which forms a scale based on the sd natural scale line.

The following example shows the bass line which forms the sd natural scale line.

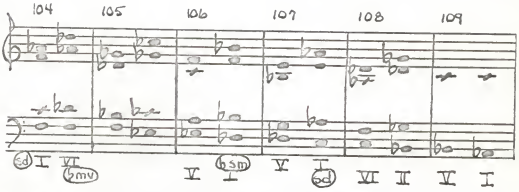
Ex. 11



A significant feature of this passage is that while the descending F minor bass line establishes the sd region it nevertheless supports chords which are not common to that region. Here is an aspect which shows that regions may develop within a region without evading its control.

Refering back to an earlier statement, "analysis is dependent upon the musical ear", sequential patterns, forming regions within the sd area can be heard.

Ex. 12

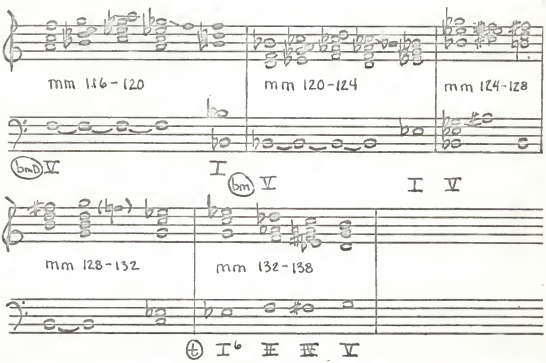


This demonstrates the authenticity of Schoenberg's theory of regions.

Measures 112 - 135 present the material of the second member of the second theme group on the dominant of the SD, partially minor (not T) proceeding in 4 - bar steps through the dominants of ^{b}MD and ^{b}M and then in the following 2 - bar steps with B^{b} as bass, ^{b}m dominant of C^{b} with bass as the leading note; then, with the rise of the bass, ^{b}smm(c^{b}) written as B natural; then again, with the bass as the leading note, rising to t and so in 2 single bars through its ^{b}N and a diminished 7th to its dominant, reached in the next period. There is no moment at which an enharmonic change happens; there is only a convenient change of notation from G^{b} to F♯ in mm. 126, but the sequel will show that

it has moved in an enharmonic circle.

Ex. 13



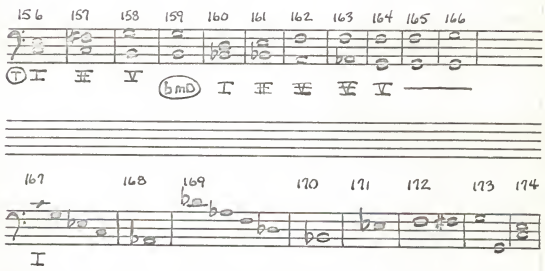
Measures 136 - 155 present twenty bars of dominant preparation which starts off with a repititious figure, followed by two compressed bars. Then it closes into a themeless passage of 14 bars on a thunderous bass at first in question answer with the right hand for four bars. Then it goes into a continuous roll below short rising runs in three 2 bar groups, each with its series of rhythmic

compressions and a fourth group fixed at the highest point and ending in 2 bars that finally run into contrary motion into the main theme.

First Theme - Recapitulation

The main theme enters in the key of the T in m. 156 and for a span of eleven mm. it is stated exactly as in mm. 1 - 11 in the exposition. However, from mm. 167 - 174, an interesting progression takes place in the form of an extension. At this point, the switch occurs.

Ex. 14

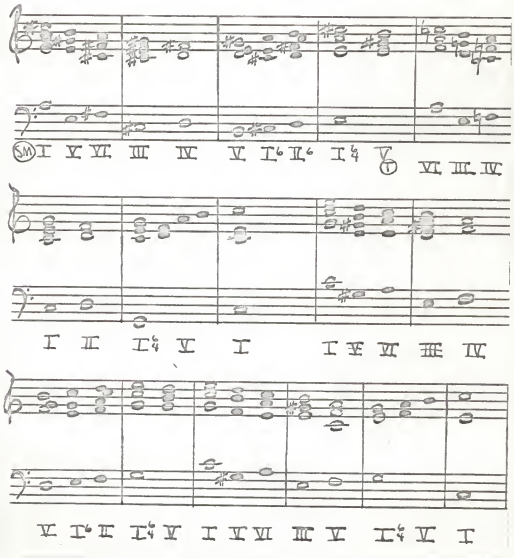


In mm. 174 the main theme is stated exactly as in mm. 1 - 8. At this point (m. 182 the bass shifts to F and leads to a dominant preparation in the area of the SM.

Second Theme - Recapitulation

Measures 196 - 211 comprise a double period. An interesting twist is found here. Instead of remaining in the SM, the theme swerves at once to the T.

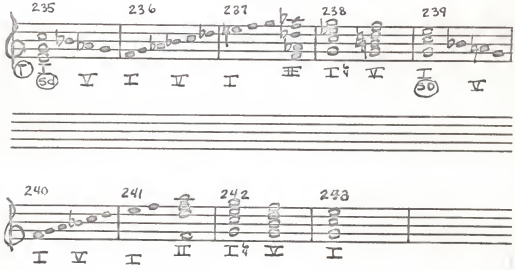
Ex. 15



Measures 211 - 235 ramble through several static regions based upon the harmonies of the T.

Again in mm. 235 - 243 careful listening is required. Although mm. 235 begins in the Tonic key, an ascending scale line in the area of the sd can be heard in mm. 236 - 237. Again as in the exposition, the chord progression seems to temporarily imply the feeling of I, V, I in the area of the sd.

Ex. 16



It is interesting to note the interchangeability of sd and SD.

Measures 243 - 249 travel through several areas to reach the ^{b}N area of the T. This transition passage also leads from the recapitualtion to the Coda.

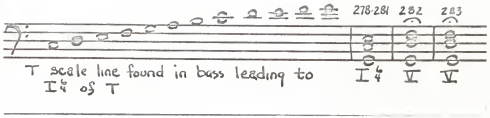
Coda

The main theme enters in the region of the ^{b}II in m. 249. At mm. 252, the bass still on C supplies the leading note of B^{b}, and from this point instead of its habitual fall, proceeds to rise. The entire Coda is in the T area. In mm. 252 - 260 an ascending c minor scale passage is found. There is no question of modulation here from T and t as Schoenberg asserts that major and minor are one in the same.

In m. 261 the main theme enters in the bass. Up to now the main theme has been in real sequence. It now changes to a tonal sequence. It is easy to see that the transformation of a real sequence to a tonal sequence produces an enormous increase of breadth, and is a powerful means of climax in a big coda where the object is to assert the tonic spaciously.

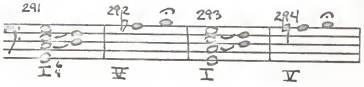
In mm. 268 - 283 a T scale passage is found in the bass leading to the I of the Tonic, and then to the D.

Ex. 17



The second theme reasserts itself for the last time in mm. 284 - 295. In m. 292 the use of the substitute tone A^{b} is used to prolong the coda, going back to the Major T in mm. 293 and 294.

Ex. 18



The main theme enters in the T area in m. 295. The scale line in m. 299 implies the T scale.

SUMMARY

The ear of the contemporary musician is no longer disturbed by far-reaching deviations from diatonic harmonies. So it is that the contemporary theorists are no longer disturbed by Schoenberg's method of analyzation. Regions, as Schoenberg conceives them, are supported by the evolution of harmony.

ACKNOWLEDGMENTS

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Music

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Music Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1966

A change in the structure of tonality occurred in the music of the late 19th century. Alterations in the construction of chords changed the intervals of melodies and resulted in richer and extended harmonies. Music became decisively chromatic; so chromatic that contact with the key center was lost by so many notes, yet no new key centers were strongly established. This change of tonality suggested to Schoenberg that harmonic situations develop regions which never actually lose contact with the key center itself. He maintained that any area formerly considered a modulation, especially a transient modulation, could be incorporated into such a region.

This was not entirely an innovation on Schoenberg's part: the harmonic complications of this chromaticism made reduction to modulations almost impossible. Schoenberg devised his theory of regions whereby any composition can be analyzed as remaining in one key area.

Although this theory will require some elaborate interpretation, the results are no more untruthful or unmusical than the opposite extreme of discovering a modulation every time an elaboration of an area of the key takes place.

To investigate Schoenberg's theory of regions, Beethoven's Waldstein Sonata, Op. 53 was chosen. The reasons for making this choice are due to the transitory

character of the first theme material, the unusual key relations between the first and second theme groups and the harmonic complexity of the development sections.

By using Schoenberg's regions, the overall line of thought can be seen clearly throughout the entire composition. After having used this type of analysis the traditional type of analysis becomes a hinderance to the theorist.

The first step was the formal analysis of marking phrases and identifying sections. Full attention was then given to the harmonic analysis. Analysis was done by the use of regions and not modulation. Although this type of analyzation required broad interpretation, the results were extremely profitable.