THE ANALYTICAL SYSTEMS OF HINDEMITH AND SCHENKER AS APPLIED TO TWO WORKS OF ARNOLD SCHOENBERG

THESIS

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By

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PREFACE

As a point of departure, this study uses a thesis by Grace E. Knod entitled, "A Comparison of the Hindemith and Schenker Concepts of Tonality."[1] In Knod's thesis, the comparison was made according to historical periods. As could be expected, such an historical survey could not dwell at length upon any particular phase of the history and, as a result, certain doubts as to the validity of these theoretical systems remain. These doubts are due to the necessarily small sampling.

The work which follows is an attempt to fill in one of the gaps resulting from this insufficient sampling. Among other works, the earlier thesis analyzed a short tone-row selection of Schoenberg and stated,

> The three examples cited from music of the twentieth century were analyzed without difficulty by the Schenker method. However, since these examples are only a small sampling of the music of this century and certainly do not represent all of the stylistic features of present-day music, we are not justified in assuming that the Schenker analytical system may be applied to every piece of music of this era.[2]

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[1]Grace E. Knod, " Comparison of the Hindemith and Schenker Concept of Tonality," unpublished master's thesis, School of Music, North Texas State College, 1954, p. 82.

[2]Ibid., p. 83.

Accepting the work of Arnold Schoenberg to be representative of at least a portion of the transitional period of the early twentieth century, two of his works have accordingly been selected for this study. These works, Die Gurre Lieder[3] and the Fourth String Quartet,[4] completed in 1910 and 1936, respectively, represent a high development of two radically different styles of composition by one of the most important and controversial figures of the twentieth century.

The entire concept of Heinrich Schenker is based upon a consideration of tonality. Inasmuch as tonality can also be studied by the Hindemith system and conventional analysis, it is recognized that tonality is virtually the only ground common to all three; thus, this is the field in which the efforts of this study will be confined.

The concept of Paul Hindemith is discussed in minute detail in his Craft of Musical Composition, Vol. I,[5] and it is largely through this one source that the background for

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[3]Arnold Schoenberg, Die Gurre Lieder, piano reduction by Alban Berg, Universal Edition, 1910. Also published in full score for soloists, choruses and orchestra, Universal Edition, 1912, 1920.

[4]Arnold Schoenberg, Fourth String Quartet, G. Schirmer (New York, 1936).

[5]Paul Hindemith, The Craft of Musical Composition, Vol. I (New York, 1942).

this phase of the thesis has been evolved. The concept of Heinrich Schenker, on the other hand, was recorded in a number of his works, having been recorded over a period of years as the concept gradually developed. These works include his Harmonielehre, Volume I of Neue Musikalische Theorien un Phantasien (recently translated into English under the title of Harmony),[6] and other works not as yet available in translation (Der Tonwille, Das Meisterwerk in der Musik and Der Freie Satz). In addition to the writings of Schenker himself, the works of Felix Salzer[7] and Adele Katz[8] have played an important role in the development of the background necessary to understanding the method and concept of Heinrich Schenker.

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[6]Heinrich Schenker, Harmony (Chicago, 1954).

[7]Felix Salzer, Structural Hearing (New York, 1952).

[8]Adele Katz, A Challenge to Musical Tradition (New York, 1945).

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CHAPTER I

THE ANALYTICAL SYSTEMS OF SCHENKER AND HINDEMITH

The analytical system of Heinrich Schenker differs from conventional analysis in the respect that it does not treat music in a chord-by-chord manner. Katz[1] maintains that the system of Schenker is not analysis at all but synthesis being "concerned primarily with the inner life of the composition as a whole." Instead of a point by point labelling of the harmonies, Schenker's system is one of hearing. Certain chords are heard to be goals, toward which the motion of the music is directed. These chords are called "structural" chords; they are considered to be the actual harmonic skeleton of the music. All other chords, called "prolonging" chords, serve merely to prolong the structural chords, creating length and interest. As they constitute action in time (horizontal motion) they are considered to be "contrapuntal" chords.

Katz also writes, "Schenker . . . understands by tonality the life of one tone as it governs the entire

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[1]Adele Katz, "Heinrich Schenker's Method of Analysis," Musical Quarterly, XXI (July, 1935), 311.

work."[2] This is one of the basic premises from which the Schenker system originates. He considers the fundamental harmonic progressions to be I-V-I, I-II-V-I, I-III-V-I, or I-IV-V-I.[3] No other progressions can be harmonic, and these chords are harmonic only when they appear in one of the above named progressions.

Salzer states,

> . . . it will have become clear to the reader that whatever appears as structural in the analysis of a detail removed from its context becomes a prolongation the moment this detail is put back into the larger organism.[4]

Thus, the same chord may have different meanings, the exact interpretation depending upon its situation in the composition.

It may be felt that the I-V-I and the other harmonic progressions are in point of fact only prolongations of the I, and thus a composition whose musical direction is toward one of the basic harmonic progressions can be considered a prolongation of the single horizontalized tonic chord. Schenker insists that <u>all</u> music must fall into this category.

The merit of the Schenker system of analysis lies in the fact that it investigates the musical importance of the

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[2]<u>Ibid</u>., p. 313.

[3]The nomenclature of the chords is identical to that of conventional theory.

[4]Felix Salzer, <u>Structural Hearing</u>, p. 220.

various chords which make up the composition instead of merely numbering them. Opponents of the system regard the procedure as dogmatic and claim the analysis attempts to establish itself as a judge of the musical worth of a composition. For example, Sessions states,

> Unfortunately he [Schenker] asks us to choose between theories which, for all the clarity, sincerity, and verve with which they are advanced, remain purely speculative, and on the other hand, the actual deeds of the greatest masters. For the musician of instinct, there can be only one possible choice, and Schenker's attempt to establish a dogma which shall have the effect of a genuine criterion, demonstrates in this case very clearly the oft proved fact that the essence of great art is something so infinitely delicate that it is likely always to remain an unfathomable mystery.[5]

The chief criticisms of the system are directed toward its treatment of music which lies outside the area of conventional tonality--principally the polyphonic music previous to Bach and much of the music of the twentieth century. In this case, it is claimed, the music is tailored to fit the system. For example, Mann writes of Katz's applications of the Schenker system,

> When trying out the magic of her master's art on music outside the three great B's [her analyses go from Bach to Schoenberg], found herself much disappointed in her search for 'third' and 'fifth-spaces' in Schoenberg's later works--disappointed, however, not in her theories, but in Schoenberg's music.[6]

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[5]Roger Sessions, "Heinrich Schenker's Contribution," Modern Music, XII (May-June, 1935), 170.

[6]Michael Mann, "Schenker's Contribution to Music Theory," The Music Review, X (February, 1949), 3.

Mann further states, "all methods of musical analysis which attempt to find simplicity and unity, where actually there is complexity and diversity run the risk of negation."[7]

In other words, the system stands accused of forcing the music to fit the analytical system, the same charge levelled at conventional analysis which attempted to analyze music containing frequent modulation and chromaticism with a system designed to accept these but infrequently.

Other questions arise in connection with Schenker's method of analysis. Some of these might be: (1) are the chords heard as structural actually so or is the ear forced to prolong other harmonies until it reaches such chords already familiar as cadences from previous experience with conventional theory? (2) Is the conclusion accepted before the analysis is begun that the music will be a prolongation of a single tone? (3) Are all other considerations ignored in the attempt to coerce the existing music into this preconceived mold? (4) When the ear hears a section of a composition modulate to a different key, is anything actually gained by denying the existence of modulation and renaming it "prolongation"? What is to be gained by insisting that all music be tonal when some clearly is

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[7] Ibid., X, 26.

not? Answers to these questions will be discussed during the course of the present study.

Hindemith's method of analysis attempts to embrace all styles of composition but he uses a much different approach. The overtone series is a starting point and through it Hindemith evolves his Series 1 which is a grouping of the twelve tones of the chromatic scale, in order of their diminishing degree of relationship to the progenitor tone. Series 2 is a grouping of the various intervals arranged according to the "harmonic tension" (corresponding to the degree of consonance and dissonance) they exhibit, and is derived from a consideration of combination tones. Hindemith also establishes the roots of all intervals. By the use of Series 2 the least dissonant (the "strongest" or "best") interval in the chord is ascertained. The root of this interval is chosen to be the root of the chord.

If the roots of each chord are written successively, the resulting line (very similar to the fundamental bass line of conventional theory) is known as the "Degree-Progression."

Using Hindemith's system every possible simultaneous combination of tones can be explained. Heiden writes,

> The conception of 'key' has experienced a radical change. Gone is the idea that there is a definite number of chords in a key or borrowed from another key, with which the composer has to work. Instead, all tone-combinations are possible as long

> as their use is justified by Degree-Progression or other determining factors. Tonality is not a starting point but a goal, and must be achieved by means of cadences, organized according to Series 1.[8]

In a consideration of tonality the Degree-Progression is Hindemith's most important contribution, for the Degree-Progression is an outgrowth of the tonality of the composition. Carner states,

> The line that is formed by this succession of roots shows a variety of different intervals out of which you select, with the aid of row No. 2 /Series 2/, the 'best' interval. Its root is the tonic note of the whole progression.[9]

It is obvious that under this system any music can be analyzed, regardless of its dissonance, and some tonality can be found for every possible Degree-Progression since the "best" interval in the Degree-Progression could even conceivably be a second or seventh.

Among the merits of Hindemith's system are, first of all, the complete objectivity with which the results should be obtained; and secondly, the extension of analysis into areas in which it was formerly impossible to obtain results.

On the other hand, Cazden disagrees with Hindemith on fundamental points. He argues that Hindemith's treatment of the laws of physics upon which both Series 1 and Series 2

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[8]Bernard Heiden, "Hindemith's System--A New Approach," Modern Music, XIX (January-February, 1942), 102.

[9]Mosco Carner, A Study of Twentieth-Century Harmony, Vol. II, 2nd ed. (London, 1944), p. 77.

are based are arbitrary and unscientific, and thus all technics utilizing either of these series are worthless. He declares,

> In their current forms, the Nature theories represent a retreat to mediaeval, pre-scientific modes of speculation and not a proper philosophy and method of science.
>
> Among such doctrines, Hindemith's dealing with Nature appears less informed than some, less cautious and also less modest than many, about as inaccurate and as contradictory as most, and more dogmatic and fallacious than we have any reason to tolerate.[10]

If the results obtained from Hindemith's analysis of tonal music agree closely with those obtained from conventional analysis, it may be explained by the fact that Series 1 and Series 2 have, in effect, long been felt instinctively by musicians and theorists; if Hindemith's derivation is unscientific, nonetheless the results agree with traditional teachings of harmony. The various intervals are no less nor more dissonant because of an unscientific derivation which gives them approximately the same rank which they have always been assigned.

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[10]Norman Cazden, "Hindemith and Nature," The Music Review, XV (November, 1954), 289.

CHAPTER II

THE ANALYSES OF SCHOENBERG'S, GURRE LIEDER

Schenker's Analyses

Although Schoenberg was a young man when he composed his Gurre Lieder, the works show a complete technical mastery, and many germs of his boldest innovations are present in this work. Leibowitz states,

> Harmonically, some of the progressions, chordal structures, and tonal relationships used by Schoenberg in Gurre Lieder constitute an important step in the direction of what was to become the emancipation of the dissonance, as well as the suspension of the tonal functions. . . . If one bears in mind that the recrudescence of counterpoint was to become one of the most important acquisitions of twentieth century music, it becomes obvious that in this respect as well as in all others Schoenberg's first important work constitutes the beginning of a new musical era.[1]

According to Schenker's basic premise, the entire work should be found to be a prolongation of Eb. If Schenker was correct, it will be found that the tonal functions are not suspended at all.

Appendix A is a representation of the overall structure of the entire composition, according to the Schenker system of analysis. Appendix B_1 is a simplification of Appendix A wherein only the structural harmonies found in the former

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[1]René Leibowitz, program notes to the recording of Gurre Lieder (Boston, 1953), p. 10.

are copied onto the staff. Only the roots of the structural chords are found in Appendix B_1.

Before the scheme of the graphs becomes clear, a word must be said about the form of Gurre Lieder. Wellesz says, "The Gurre Lieder consist of three parts, of which the second part forms merely a transition to the third."[2] This study will confine itself to a consideration of Part I, the longest of the three.

Part I is a set of lieder sung alternately by a tenor and soprano, with the exception of the final lied which is sung by a mezzo-soprano or alto. Between the final tenor lied and the alto lied is an orchestral interlude of developmental character in which many of the important themes of the previous lieder are woven together.

Since the Gurre Lieder can be considered as a collection of shorter works, the separate lieder have been treated as entities; in Appendix B_2 the tonalities of the separate lieder, as determined from the progressions in Appendix B_1, are shown. Finally, in Appendix B_3, an attempt is made to relate all of the separate tonalities listed in Appendix B_2 to the single Eb tonality which Schenker insists must form the background of the entire work.

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[2]Egon Wellesz, Arnold Schoenberg (New York, 1925), p. 74.

Schenker's analysis of the Introduction to Gurre Lieder shows the chords whose roots are seen in Appendix B_1 to be structural. The final chord, sustained for over five measures (88-93), is spelled G, Bb, Db, F and is interpreted here as a Bb minor triad with the added sixth G in the bass--this is in the interest of consistency with the Eb tonality.

Measures 40-44 appear to be a prolongation of a Db major tonality with the added sixth Bb; the melodic line indicates a Db tonality and not Bb minor seventh chord. This Db tonality occurs at the beginning of a section whose developmental character permits few structural chords to exist and is the only structural chord in the entire introduction whose function in the tonality is not clear.

The B major section (measures 68-76), occurring as it does between two sections in Bb major (see Appendix B_1), is therefore regarded as a prolongation of the neighbor-note chord to Bb, and thus its presence is explained by the Schenker system of analysis. The Bb may be argued to be no more structural than the B, but it probably owes some eminence to the long line of contrary chromaticism which has Bb for its goal.

The first lied, "Nun Dämpft die Dämmrung," uses themes from the introduction. Despite much involved chromaticism (two examples of this are shown in Figure 1) Appendix B_1

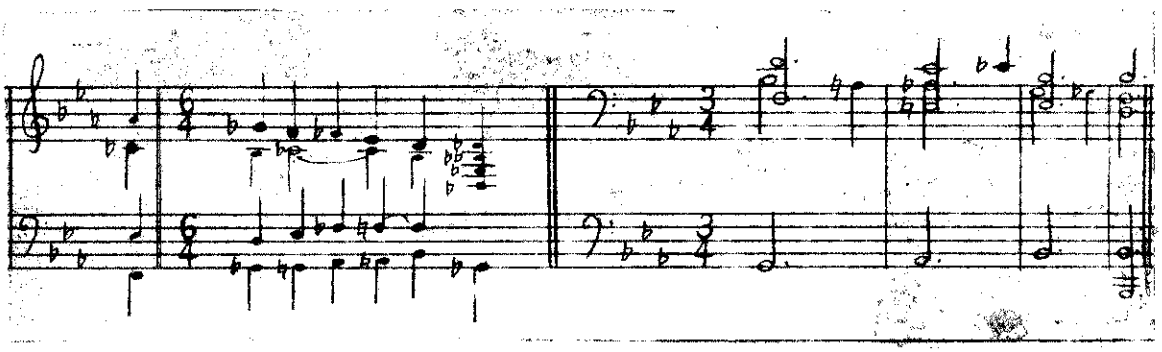

Fig. 1--Examples of chromaticism in Gurre Lieder, a) measures 37-38, b) measures 93-96.

shows the entire lied to be based on structural chords which are in agreement with the fundamental assertions of Schenker. The lied closes with ambiguous harmonies of diminished seventh chords but with a dominant Bb pedal which suggests a structural function.

The second lied, "O, Wenn des Mondes Strahlen Leise Gleiten," is seen to have a structure of Gb, prolonged by involved canonic devices. The measures from 218-221 reflect a II_7-VI_7-(V)-I progression, with the second of these chords being an augmented sixth chord. However, this VI_7 slides over the missing V and progresses directly to the tonic. If this interpretation be valid, it would explain the G# minor seventh chord in measure 218 (G# being enharmonically Ab, the II of Gb); however, it is seemingly against Schenker's notions that elisions exist because they imply harmonies which do not occur.

The entire lied is otherwise a rather straightforward prolongation of Gb, as shown in Appendix B_2. Appendix B_3

then shows the entire lied to be a prolongation of the III of the original Eb. However, this interpretation, it is seen, makes the structural chords shown in Appendix B_1 III, III, III, VII, III instead of the much more tangible progression of I, I, I, V, I.

Beginning with the third lied, "Ross! Mein Ross!" Appendix B, line 3, begins to show results which are unintelligible; however, Appendix B_2 interprets the lied to be a prolongation of E major. Similarly, the fourth lied, "Sterne Jubeln," is marked by increasing use of chromatic prolongation which would, in conventional theory be called "modulations." The complex harmonic elements resolve to a convincing tonality of B, according to Appendix B_2.

It must be clearly understood by this, however, that the tonalities of the two preceding lieder are by no means always clearly heard to be E major and B major, respectively; the predominance of these two tonalities in the analytical results is due to the fact that the strongest structural points of the music happen to occur in places where the tonality is predominantly E major or B major. Often, these tonalities occur in places which are important less because of harmony and more because of the text, rhythm or form, or other musical factors.

The structural chords of "So Tanzen die Engel," the fifth lied, are considerably more well defined than in the two previous lieder; however, here too an "elision" of structural chords occurs in measures 488-489. Appendix B_3 shows this lied to be in the tonality of D major. This lied is the shortest of the set and one of the least chromatic.

The sixth lied, "Nun Sag Ich Dir," though one of the shortest of the Gurre Lieder, is nonetheless the most important thematically. The opening motif dominates the rest of the composition, being heard both as important theme and as counterpoint, often in fragmentary form. In this lied the results in Appendix B_1 are by no means as convincing as before; it would seem that the two tonalities were present, one containing the structural chords of A and D and the other containing the structural chords of Ab and Eb. However, the latter two are of such short duration, lasting for a total of only two measures (525-526), that musical considerations cannot condone the choice of Ab as the predominating tonality. Moreover, the Ab has the effect of being an "applied subdominant," a term probably not used by Schenker, used here in the same sense as the term "applied dominant." The Eb is then easily accountable as a neighbor of the D.

The seventh lied, "Es ist Mitternachtszeit," contains a number of structural chords whose interpretation taxes the

limits of Schenker's analytical system. The chief nebulousness is concerned with the third chord of Appendix B which occurs as a prolongation of the two V_7 chords of measures 581-600; in a superficial examination of Appendix B_2 the first three chords (I-VI-V) appear to be an acceptable progression. However, an examination of the score shows that some twenty measures of intervening material between the VI and the V do not lend themselves to an interpretation as prolongations of the VI. Thus, the VI does not, in reality (structurally or otherwise), resolve to the V. Moreover, the V, which should resolve to the structural I, does not apparently resolve at all; the next structural chord to appear is the II_7 in measure 628 which is unmistakably cadential and has little relation to the preceding V. Notwithstanding these variations, the total effect of this lied still seems to be a prolongation of D.

The final structural chord in the lied is a seventh chord on D (the previous D chord was also a seventh chord).

The eighth lied is "Du Sendest Mir Ein Liebesblick"; the tonality is shown in Appendix B_2 to be E despite the fact that the only appearance of the I chord in the results of the analysis is in an augmented quality of sound (measure 664). However, in measure 691 begins a section which is a prolongation of G major; the III chord it represents does not fit into the harmonic progression which

began II-V (in measures 674-675, chords 4 and 5 of Appendix B_1).

One of the criticisms levelled at the Schenker system of analysis has been the fact that the selection of those chords to be considered structural is a highly subjective choice which is capable of varying according to the analyst. Salzer, in effect, admits the possibility that there might be separate interpretations but blames these on the inexperience of the analyst:

> Now he [the student] must gain detailed knowledge which will convince him that structural hearing means more than arbitrarily selecting certain tones and chords as structural, while another person might as easily select others. From now on it is vital for him to acquire exact knowledge in order to fortify his intuitive understanding.[3]

It was felt, therefore, that an excellent check upon the validity of the analyses in this thesis would be a comparison with an independent source of the same work. Fortunately, such an analysis is available, and by a pupil of Schenker. The analysis is that of a part of the next lied, "Du Wunderliche Tove," the ninth and the last before the long orchestral interlude. This analysis appears in Katz's A Challenge to Musical Tradition.[4] It is of interest to

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[3]Salzer, Structural Hearing, p. 48.

[4]Katz, A Challenge to Musical Tradition, p. 372.

notice that Katz also admits the possibility of separate interpretations when she writes,

> Although this reading is fairly well borne out by motion described by melody, voice leadings are sufficiently vague to give rise to different interpretations. Therefore the reading must be regarded primarily as a possible rather than a clearly defined explanation of the technic.[5]

Not so fortunately, however, the lied selected by Katz for the analysis is one of the least chromatic of the entire set and is thus one whose tonality is the least doubtful. The analysis of this part of the lied shows all nineteen measures, beginning at measure 722, to be a prolongation of Bb; the analysis in Appendix A shows virtually the same result. If these analyses were found to be in agreement, it is hardly surprising since, as mentioned before, the lied selected for this analysis is one of the least chromatic and most straightforward in the set.

The only chord in this lied which does not lend itself to immediate explanation by Schenker's system of analysis is the dominant seventh on D in measure 781. Otherwise, this lied proves to be a prolongation of Bb and Eb, the former undoubtedly exhibiting a dominant function to the Eb tonic.

The orchestral interlude which follows is considerably longer than any of the lieder which preceded it. It is also probably more chromatic. After about five measures in which

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[5] Ibid., p. 373.

motivic material from the sixth lied prolongs a harmony of Eb, the music becomes improvisatory with no clearly defined structural chords for over ninety measures, after which the structural chords of E and A are heard (measures 917-919). Appendix B_1 shows the interlude to begin as a prolongation of Eb and to end as a prolongation of A. By far the bulk of the interlude is of indeterminate tonality. The section from approximately measures 838 to 918 is developmental with no real structural chords of high order; those of lower order are so numerous and diverse as to receive only the most pedantic of interpretations.

The final lied, "Lied der Waldtaube," is the longest and possibly the most interesting harmonically of the lieder in Part I. The result of this analysis is somewhat surprising. There are a number of structural chords which would suggest a prolongation of Eb; but more careful examination of Appendix A will show that the entire length of the music covered by those prolongations could hardly exceed much more than a dozen measures. By far the major portion of this lied is seen to be a prolongation of an augmented sixth chord of A, C# (Db), D# (Eb), G; with the exception of the final five measures which abruptly change to Bb minor, the only other chords not taken into account are the chords built on Bb and Gb.

Hindemith's Analyses

In analyzing the Gurre Lieder according to the Hindemith system of analysis the first step was a detailed selection of the roots of each harmony in a measure by measure analysis. These roots were recorded in Appendix C_1 which, of course, constitutes the Degree-Progression. Next the Degree-Progression was examined as if it were a melodic line in itself, the best intervals being selected according to Series 1 and the tonal spheres were thus found. These correspond roughly to the tonalities, or "key centers," of conventional theory and are shown in Appendix C_2. The analysis according to Hindemith was not compared with the analysis according to Schenker because Hindemith nowhere implies the tonality of the entire lied will inevitably be the same throughout, as does Schenker.

Appendix D is a conventional analysis of the Gurre Lieder as compared with the Hindemith analysis; it might well be pointed out at this point that the conventional analysis was entirely an aural analysis whereas the Hindemith analysis was done aurally only to the extent of attempting to decide which were the actual chords and which were the non-harmonic tones. Passages with which conventional analysis was unable to cope were frankly labelled as being of indeterminate tonality.

The tonalities which agree with results found by the Hindemith method are marked. It is to be expected that the tonalities will show slight displacements from one system to another, for often the ear hears a tonality before it is completely established; since the conventional analysis is a compilation of tonalities which have been heard, these may not necessarily agree with the exact location of tonalities as found by the system of Hindemith, which system is primarily a visual process. Moreover, Hindemith's analysis shows only those tonal spheres which have been actively established by a tonic harmony, whereas in conventional analysis a dominant seventh chord, a supertonic seventh chord or other chords often has such characteristic sound as to establish a key even though they are never resolved--this is done by association with the scale step upon which these chords ordinarily appear. Such a situation occurs many times in Gurre Lieder, the first being in the Introduction in measures 56-59. As the passage never resolves to Eb, Hindemith's analysis can only assign it a tonality of Bb, the dominant, since the Degree-Progression at this point is the strongest. Other consistent disagreements between the systems occur with the use of the so-called "half-diminished" seventh chord which ordinarily occurs as a supertonic seventh chord in a minor key; occasionally it also appears on other scale steps, notably as a submediant

seventh in a melodic minor key. Hindemith analyzes this chord as a minor triad with an added sixth; however, its key establishing properties are so potent that almost invariably the appearance of this chord is considered sufficient justification for the establishment of its attendant tonality by conventional theory.

Once the decision was made as to what was harmonic and what was nonharmonic, the selection of roots was a simple and straightforward process. The roots found by Hindemith's analysis agree with those found by conventional analysis the majority of the time but less often in the case of diminished or augmented chords (Groups V and VI of Hindemith's classification), and particularly in the case of the diminished triad in first inversion the roots of the chords as found by the different systems disagree consistently. Accordingly, many of the discrepancies between the two systems will be found in situations which contain these chords.

The results of the analyses of the Introduction by both systems agree rather closely, with the exception of three places. It will be seen by examination of Appendix C_1 that in the first of these, measures 47-49, the root is A; however, this A is obscured in the Degree-Progression by adjacent tonalities which imply it to be a satellite of an F# (minor) tonality. Similar situations occur numerous

times in the analysis of the Gurre Lieder and must be conceded to be one of the weaknesses of the Hindemith system.

The second of the previously mentioned places occurs from measures 56 to 59 and has been explained before. The last of the disagreements is from measures 88 to 92 and is a half-diminished chord sustained for over five measures.

The first lied contains a few more conflicts; in most cases these take place in highly chromatic situations, for example it is possible for the ear to select a transient tonality of F minor in measures 93 and 103; the Hindemith analyses, however, show both of these measures, as well as the indeterminate material, to lie well within the compass of an Eb tonality which extends from measures 93 to 117.

For an example of how the Degree-Progression can be misleading, refer to Appendix C_1, measures 145-153. Conventional analysis includes this portion within the domain of the previous Eb tonality. If the roots are examined at this point (Eb, C, Ab, Cb, F, F and Eb), it will be seen that they comprise a I, VI, IV, VI, II, II, (V), I progression which is a legitimate one for the most part despite the elisions and retrogressions. However, the Degree-Progression in Appendix C_2, measures 139-179, clearly outlines a tonality of Ab which, in reality, appears only for a few measures, as seen in Appendix C_1.

In the next lied, Appendix C_2 shows a tonal sphere of D occurring through measures 233-234. However, Appendix C_1 shows that these two measures have a tonal sphere of A which agrees essentially with the conventional analysis. These two measures are sandwiched between chromatic material of a tonality which is indeterminate according to conventional methods. Although Hindemith does find a tonality for this section, his overall tonal sphere of D has obscured the individual measures of A. Aside from these uncertain measures, the rest of the lied shows the systems to be in agreement.

In the third lied such chromaticism prevails that often one measure contains two or more modulations (e.g. measure 297). Despite this, there is remarkable agreement in the results of the two systems. Such measures as 297-298, which seem not to agree when examined in Appendix D, often show momentary agreement when compared in Appendix C_1.

Similarly, the fourth lied shows complete agreement if such places as measures 367-370 and 431-433 are referred back to the original Degree-Progression in line 1.

In the fifth lied both systems are again in agreement throughout. An interesting phenomenon takes place in measure 489; according to conventional analysis, the first chord is unquestionably a second inversion of D major despite the fact that the root is missing. Thus,

Hindemith's analysis in Appendix C_1, line 1, can only show the root of the chord to be F#. However, the obscuration of individual tonality mentioned before can also work toward the opposite direction and result in eventual agreement of the tonality. In this case, the F# tonality is interpreted in Appendix C_2 as a part of a larger tonality of D major.

In contrast to the preceding lieder in the sixth lied there is almost complete disagreement between Appendix C_2 and conventional analysis. Therefore, it is somewhat surprising that there should be such close agreement, according to Appendix C_1. This can only serve to show that the method of extracting the tonal spheres from the Degree-Progression is subject to serious error of interpretation. One of the most consistent offenders in this respect is the appearance of the plagal cadence; a IV-I-IV progression almost invariably appears, from examination of the Degree-Progression, to be a I-V-I cadence in the key of the subdominant.

The passage in the seventh lied extending from measure 581 to 591, as well as its repetition in measures 600-603, is heard by conventional analysis to lie in D, established by a strong dominant seventh chord which does not actually resolve until measure 587. Chromaticism within these seven measures results in a Degree-Progression strongly indicating F# to be the tonal center. But when the chromaticism in

measures 586 and 590 is ignored, the remainder is seen to be a straightforward V-I harmony.

The next lied opens with three measures of pivotal chords which appear at first to be respectively in B minor, E major and finally in A major. The progression is actually VI, II, V, I, in A, with each expected resolution deceptively changed into a dominant seventh chord; this is seen in Appendix C_1, as well as in Appendix C_2.

An important modulation occurs in the vicinity of measure 689; to the conventional theorist there can be no question that approximately the next twenty measures are in G major. It is difficult to account for this by means of Hindemith's analysis which, at most, might allow two or three short tonal spheres of G during this passage.

The final lied before the Interlude contains only two sections in which there is disagreement between the two systems. The first is found between measures 768 and 780; Hindemith's analysis never shows the tonality of D in the latter part because the tonic never appears. The tonality is established by use of the dominant seventh chord and by the melodic line (which strangely enough, in one place contains all of the notes of an F# minor melodic minor scale). The second area of doubt lies near the end of the lied and is in disagreement because of the presence of the

subdominant and tonic chords which have been shown previously to be consistent offenders in this respect.

A large portion of the Interlude is of indeterminate tonality, according to conventional theory, and much of the remainder modulates very frequently, a characteristic which it shares with the rest of the Gurre Lieder. However, the Interlude, being so much more developmental in character, contains many more sequential passages than the rest of the lieder in Part I. The tonalities of the parts of the Interlude which are heard to be in a definite tonality match the tonalities as ascertained by the Hindemith system.

The concluding lied appears to have many conflicting results. It is seen, however, that most of these may be more convincingly correlated by means of Appendix C_1 than of Appendix C_2. Of the remainder of the doubtful places, the majority outline the augmented sixth chord resolving to an unresolved half-diminished seventh. Hindemith interprets the root of the chord (A, Db, Eb, G, resolving to Gb) as Gb, whereas conventional analysis translates the resolution as a II_7 in the key of Db.

CHAPTER III

THE ANALYSES OF SCHOENBERG'S FOURTH STRING QUARTET

It is customary when referring to music written in the technic of the tone-row to speak of the music as "atonal," meaning "without tonality." While it is certainly true that such a work as the Fourth String Quartet could hardly be imagined as tonal in the classical (diatonic) sense nor even in the chromatic sense, such as the Gurre Lieder, nevertheless there are numerous fragmentary tonalities of transient nature throughout the work. Schoenberg objected to the term "atonality" and insisted the music be considered instead "pantonal," meaning "of many tonalities."[1]

The musician who has analyzed, or even heard, a work as chromatic as the Gurre Lieder is prepared to accept the fact that music is no longer restricted to clearly defined tonal boundaries. When modulations occur as frequently as they do in measures 288-289, 316-318 and many other places, the reign of the diatonic system must be admitted to be nearing a point of collapse. To the musician intimately familiar with music where modulations are frequent, particularly to

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[1]Merle Armitage, Schoenberg (New York, 1937), p. 299.

distantly related keys, pantonality is a natural, logical stage of development. Hindemith states, "The ear always seeks triad formations in melodies, and usually succeeds in finding them in some form or another, by accounting for complicating factors as non-chord tones wherever possible."[2]

Keeping this in mind, the listener may feel the Fourth String Quartet, and other tone-row and "atonal" compositions, as a succession of very short tonalities and very frequent modulations. To the musician accustomed to hearing frequent modulations, involved counterpoint and lavish use of alteration and other dissonance, such a work is then much more comprehensible and the loyalty of Schoenberg to the term "pantonality" is at once understood and appreciated; moreover, the music begins to seem less like constructivism. Neighbour agrees with this stand, asserting:

> As one gets to know it, all Schoenberg's music is found to have this "tonal" quality, because the moment at which its musical statements become intelligible is the moment at which its traditional basis becomes apparent. It may be that Schoenberg was right to reject the term "atonal" and suggest "pantonal"; at all events the more one hears his work the more one realizes that it is not based upon a rejection, but upon the acceptance, extension and renovation of the German tradition. As such one may perhaps regard it as tonal in a sense.[3]

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[2]Paul Hindemith, Musical Composition, p. 183.

[3]O. W. Neighbour, "In Defense of Schoenberg," Music and Letters, XXXIII (January, 1952), 12.

It is beyond the scope of this study to attempt an evaluation of the merit or lack of merit of the tone-row style of composition of which the Fourth String Quartet is a classic example. There are strong factions of loyal advocates both for and against it and these factions are in constant disagreement. This may be seen in many writings.[4] It is only necessary to contrast two reviews of the same musical program to be convinced of this fact. One critic writes,

> Schoenberg was a master of counterpoint and the [Fourth] Quartet and Suite [op. 29] are--on paper--triumphs of twelve-tone logic and precisely calculated mathematical organisation. Mathematics, however, are not music, and to non-dodecaphonists the effect of such works on the ear (which is what matters, music being primarily concerned with sound) is one of unintelligible ugliness and a laboured, self-conscious straining after effect that is inexpressibly tedious when it is not thoroughly repugnant in its pathological morbidity.[5]

On the other hand, another reviewer says of the same concert,

> Schoenberg's fourth string quartet (1936), . . . is a work to make converts . . . and breathes the air of this planet, the earth. The continuously beautiful sounds, the clear form, the pose and elegance of the work make it irresistible to Schoenberg's admirers, and

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[4]For example, letters by twenty-four eminent musicians, entitled "Arnold Schoenberg, 1874-1951," Music and Letters, XXXII (October, 1951), 305-323.

[5]C. G.-F., Musical Opinion, LXXV (July, 1952), 584.

> of compelling interest and fascination to all musicians.[6]

As stated in Chapter II, the elements of Schoenberg's later style were already present in latent form as early as the Gurre Lieder. The most important of these were the frequency of modulation, the increasing use of alteration, dissonance and non-harmonic devices, the use of richer and more unusual harmonic progressions, the dominating importance of counterpoint and the use of unusual instrumentation. Even in the largest orchestral work, the Gurre Lieder, the style shows the highly developed influence of chamber music.

It is apparent at once that conventional analysis is totally worthless in music which is not built upon triads or other diatonic features. For this reason, no conventional analysis was attempted. Moreover, since the music of the tone-row is so overwhelmingly melodic that harmony is almost meaningless, the analyses of Schenker and Hindemith were both done on a melodic basis. In defense of this action, reference is made to a statement of Sharp:

> It was in fact his contrapuntal character which drove Schoenberg towards solo instrumentation and which, later, came to be responsible, amongst other factors, for the development of serial technic. All serial methods, twelve-tonal or tonal, are basically polyphonic; their harmonic aspects, however obtrusive in certain special instances (e.g., the opening of Schoenberg's own Fourth String Quartet), are secondary

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[6] A. P., The Musical Times, XCIII (July, 1952), 325.

> phenomena, and every essentially harmonic mind known to me that has dabbled in serial technics has come to musical grief.[7]

The analyses have largely followed markings in the score which indicate the most important melodic lines, but upon occasions where other melodic lines were heard to be more prominent, the latter were selected. Being a predominantly linear work, the analyses were done melodically.

A "conventional" type of tone-row analysis--that of the themes according to movements--has been done by Mangeot.[8] Another analysis has been done by Gradenwitz, who states,

> All of Schoenberg's compositions demand a horizontal and concentrated way of listening. Following the melodic lines horizontally, the hearer finds little leisure to ponder over the chords resulting from their simultaneous flow.[9]

In analyzing the Fourth Quartet by Schenker's analysis, one fact must be borne in mind constantly. Whereas a short tone-row selection was analyzed without difficulty by Knod,[10] this work was of scarcely a page in length and it is entirely possible that the structural chords over such a

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[7]Geoffrey Sharp, "First Performance," The Music Review, XV (November, 1954), 310.

[8]Andre Mangeot, "Schoenberg's Fourth String Quartet," The Music Review, III (November, 1942), 33.

[9]Peter Gradenwitz, "The Idiom in Schoenberg's Quartets," Music and Letters, XXVI (July, 1945), 123.

[10]Knod, "A Comparison of the Hindemith and Schenker Concept of Tonality," master's thesis, p. 82.

short period could accidentally form a coherent tonality. However, over a long work of 285 measures, such as the first movement of the Fourth Quartet, it is likely that such a result, if it happens, must be intended by the composer. Schoenberg has repeatedly asserted that the entire concept of the tone-row developed as a result of the attempt to avoid just such a situation. If the work proves to have a tonal cohesiveness, in the traditional interpretation, it could only mean that Schoenberg failed in his attempt to circumvent the reign of a single (or few) tonalities. It is assumed, for the purposes of this study, that Schoenberg was successful. If it be granted that Schoenberg was successful in this attempt, it must also be admitted that if the Schenker analysis shows a single tonality, the analysis itself must be at fault--every note in the entire work was planned with the express purpose of avoiding diatonic relationships. It hardly seems possible that Schoenberg and Schenker are both correct.

This would, of course, in no way be a reflection upon previous results of the Schenker analysis since it would merely refute any claim toward universality of application.

While it was found that the overall tonality of the Gurre Lieder was not a single Eb but that the individual lieder were all organized according to a single tonality, the same latitude of interpretation should be allowed in

reference to the Fourth Quartet. Unfortunately, the movement which is analyzed here does not show a clear delineation of boundary as does Gurre Lieder. As seen from Appendix F, the results of the Schenker analysis of this work are completely incomprehensible if large-scale tonalities are being sought.

The chief difficulty seems to be in deciding just where the structural points occur. Experience with this composition has shown that the points which have any tendency to be felt as structural are of two types: those which occur at ends of phrases (corresponding in tonal music to cadences) and those which clearly outline a momentary tonality. In both cases, there is much room for argument as to whether the choices have been the wisest.

A Hindemith analysis (Appendix E) of the various melodic lines shows many short tonalities; every step of the chromatic scale is employed as a temporary tonic at least sixteen separate times and as many as twenty-six. All twelve tones have made their appearance at least once by the end of the forty-fourth measure. The tonalities are used with a frequency which can be seen from Table I:

TABLE I

FREQUENCY OF TONALITIES IN THE FOURTH STRING QUARTET, FIRST MOVEMENT

Tonality	Number of Occurrences
A	16
Bb	21
B	22
C	18
C#	17
D	18
Eb	24
E	27
F	16
Gb	26
G	19
Ab	25

Although there is considerable variation from the lowest to the highest number of occurrences, there is no tonality used so often that it could be construed as establishing a tonality through the predominance of certain tonics.

While the Hindemith system claims objectivity, very often the results were obtained by compromise with subjectivity. Hindemith states, "All intervals and chords are perceived, independently of their notation, as the ear first hears them, without reference to what has gone before or what comes after." This, in effect, claims the nonexistence of nonharmonic tones. The very fact that Hindemith must allow for nonharmonic tones is evidence of this subjectivity.

For example, in measure 56, the interval from D to A is as strong as it is possible for it to be. Yet the A must be regarded as an appoggiatura to G. Other similar situations can be cited. In measure 63, the thirty-second note triplet D, Eb, G followed by the dotted eighth note F# contains the interval of a perfect fourth; thus the root of this melodic fragment should be G. However, this G is of too short a duration to be heard as the root so the root of the next strongest interval, Eb to G, is selected in its place. However, one measure later a similar situation occurs but is not treated in a consistent fashion, for this time the final note of the triplet seems to be more exposed and, accordingly, is selected as the root. The difference lies in the fact that the figures can not be treated objectively, as claimed, but in a manner which is subjective because of its heavy dependence upon the traditional theoretical ideas. Numerous other melodic figures, the interpretation of which depends upon a consideration of nonharmonic tones, appear in measures 99, 148, 157, 159 and 258, as well as many other less obvious situations which have not been singled out for demonstrative purposes.

CHAPTER IV

SUMMARY AND CONCLUSIONS

After the analyses of Part I of Schoenberg's Gurre Lieder, and the first movement of his Fourth String Quartet have been completed according to the systems of Schenker and Hindemith, the following results may be summarized:

1. The analysis according to Schenker's system shows each of the individual lieder comprising Part I of the Gurre Lieder to have a single tonality over most of its length.

2. The tonal scheme of the entire group of lieder, as shown in Appendix B_3, does not show results which could be interpreted in sympathy with the basic premise of Schenker which decrees the entire length of the composition to be a prolongation of a single tonality.

3. For the most part, the results of the Hindemith analysis of the Gurre Lieder agree with the results of conventional analysis.

4. The results of the Schenker analysis of the Fourth Quartet were incompatible with Schenker's basic premise that the entire length of the movement is governed by a single tonality.

The chief merits of the system of Schenker appear to be:

1. The discipline inherent in the execution of the method itself trains the listener to hear formal elements not otherwise apparent.

2. Schenker's analysis attempts to find the actual meaning of the chord and not merely to assign each chord a name or number.

3. The concept deals with a consideration of the overall structure of the composition and the direction of the musical force or motion.

4. Schenker's analytical system is the only one which can explain how a piece of music can be in the tonality of the opening and closing signatures and still be in another key at the same time. The answer, Schenker insists, is that there is only <u>one</u> tonality, that of the opening signature; all so-called "modulations" are merely prolongations of tones which have a place in the basic harmonic progressions of the original tonality.

Among the chief criticisms of the system, apparent after the two analyses performed for this study, are the following:

1. The perception of the structural member is not immediate and therefore liable to inaccuracy. Often a structural chord is not heard as such until there has been enough material between it and the next structural chord to distinguish its function.

2. Many of the chords which are considered structural gain their importance through considerations which are not by nature harmonic considerations; some of these are: (a) position (with reference to cadences), (b) duration and (c) conventional ideas of harmony which prejudice the investigation.

3. Throughout the analyses, the feeling was inescapable that there was a certain dependence upon conventional theory--that points of structure were selected or rejected with regard to how they would fit into the final analytical scheme. Almost invariably structural chords were found at cadences.

4. The idea of separate lieder, each unified within itself, is much easier to accept than the idea of a single tonic embellished for hundreds of measures with unbelievable progressions; this is particularly true in the case of music which is as tonal as most of the analyzed part of the Gurre Lieder.

5. Also inescapable was the impression that the protagonists of the Schenker system of analysis must merely skip over the harmonies they cannot explain and call them "prolongations" or "contrapuntal chords."

6. It is possible that the ear attempts to anticipate the harmony of certain chords which are harmonically strong

(in the conventional sense) until such a chord appears in a cadence, whereupon the chord is labelled as structural.

7. When the system claims that a modulation shown by conventional analysis to have taken place has not actually taken place but is instead a prolongation of a tone still in a close relationship with the original tonality, nothing is gained by refusing to admit that the modulation exists. Merely changing the name from "modulation" to "prolongation" does not alter the fact that the phenomenon is still there and still unexplained.

8. As coherent as the tonalities of the separate lieder appear to be, there are numerous examples of places which require the imagination to be stretched in order to achieve those results.

9. With the preconceived plan that <u>all</u> music must be understood to be construed according to basic harmonic progressions, it may be maintained that this is an attempt of the analytical system to force the music into a preconceived mold rather than to explain the phenomena which actually take place in the music.

10. Since the preceding analyses suggest that there are certain fields in which the Schenker analysis does not apply, universality can no longer be claimed for the system. Had the opposite result taken place, it would equally have been a condemnation of the system for a different reason:

if a convincing analysis can be made which shows tonality in a work which has been carefully composed so as to avoid tonality, surely the results of this analysis must be questioned. It is, of course, conceivable that the idea of a single tone governing the entire work might be valid for shorter works; this was found to be the case in the separate lieder of the Gurre Lieder and also in the short tone-row selection of Schoenberg as analyzed by Knod.[1]

11. Despite assertion to the contrary,[2] there is a possibility of disagreement between various analysts as to which chords are to be considered structural.

The merits of the Hindemith system of analysis may be summarized as follows:

1. Being based upon irrefutable laws of physics, there can be little doubt as to the validity of his findings, provided the correctness of his interpretation of these laws is granted. However, his interpretation has been seriously contested by Cazden.[3]

2. Much may be learned about other items not included in the previous analyses, such as harmonic tension and the roots of very complex chords.

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[1]Knod, op. cit., p. 82.

[2]Salzer, Structural Hearing, p. 48.

[3]Cazden, "Hindemith and Nature," The Music Review, XV (November, 1954), 289.

3. The finding of chord or interval roots is an objective process inasmuch as this finding of roots proceeds by formula.

4. Some tonality can be found for any passage no matter how dissonant or "atonal."

The weaknesses of the system as shown by the two analyses performed for this study are as follows:

1. Before the roots of the various chords can be found, it must be decided which are the harmonic tones and which are nonharmonic. As this is done by relating the vertical tones to triadic forms, Hindemith has made little improvement over conventional analysis in this respect. Moreover, the identification of a tone as harmonic or nonharmonic should be the result, and not the prerequisite, of the analysis.

2. Hindemith states, "Our thesis must be that all intervals and chords are perceived, independently of their notation, as the ear first hears them, without reference to what has gone before or what comes after.[4]

Yet, Hindemith devotes an entire chapter in this same book describing and defining the various nonharmonic tones which he has in effect implied do not exist (since the preparation and resolution of these are to be ignored).

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[4]Hindemith, Musical Composition, p. 93.

The very inclusion of nonharmonic tones in his theory and his arbitrary use of these in his own analyses is a distinct contradiction to his above statement, in addition to comprising a back-tracking into conventional theory.

3. Unexplained are such ideas as why chords in a single group often vary as to function, and even as to harmonic tension. All major and minor chords appear in a single group; yet, the tonic and dominant chords, to name but two examples, certainly have distinctly different tensions. Other chords, such as the Neapolitan sixth chord, often have an extremely high harmonic tension. Yet they are shown to have the same tension as the tonic chord. His classification of the chords assumes static sonority and ignores the motion of the chords.

4. After the Degree-Progression has been obtained, there is often the possibility of interpretation in more than one manner, depending upon which notes are included in the particular segment whose tonal sphere is being found. The grouping of the tones of the Degree-Progression is often done phrasewise and is almost always an arbitrary or semi-arbitrary procedure. This often results in an obscuration of the actual tonality by adjacent members of the Degree-Progression.

5. There is also a strong dependence upon conventional theory in the analysis of the Degree-Progression;

by knowing what the tonality should be (according to conventional analysis) the Degree-Progression can often be manipulated to agree.

6. As to point 4, in the above consideration of the merits, what is the value of a tonality which is perceived by the eye but not by the ear? Music is not yet a visual art.

After analyzing the Gurre Lieder by the system of Hindemith, it is seen that there are certain alterations of technic which must be allowed if the system is to maintain results in agreement with the traditional interpretations. The most important of these alterations is the consistent cross-reference from Appendix C_2 back to Appendix C_1; sections which were seen from a consideration of the Degree-Progression to be in one tonal center often are heard to be in quite different tonality. Summarizing, this occurs most often in the case of certain progressions, notably (1) those involving both subdominant and tonic chords, (2) those which contain unresolved chords of strong tonal functions such as the dominant seventh and the so-called "half-diminished" seventh chords and (3) those which contain ambiguous chords, such as augmented and diminished chords (the diminished seventh in particular). It is chiefly the tonalities bearing strong harmonic relationship to adjacent tonalities which are often obscured in the

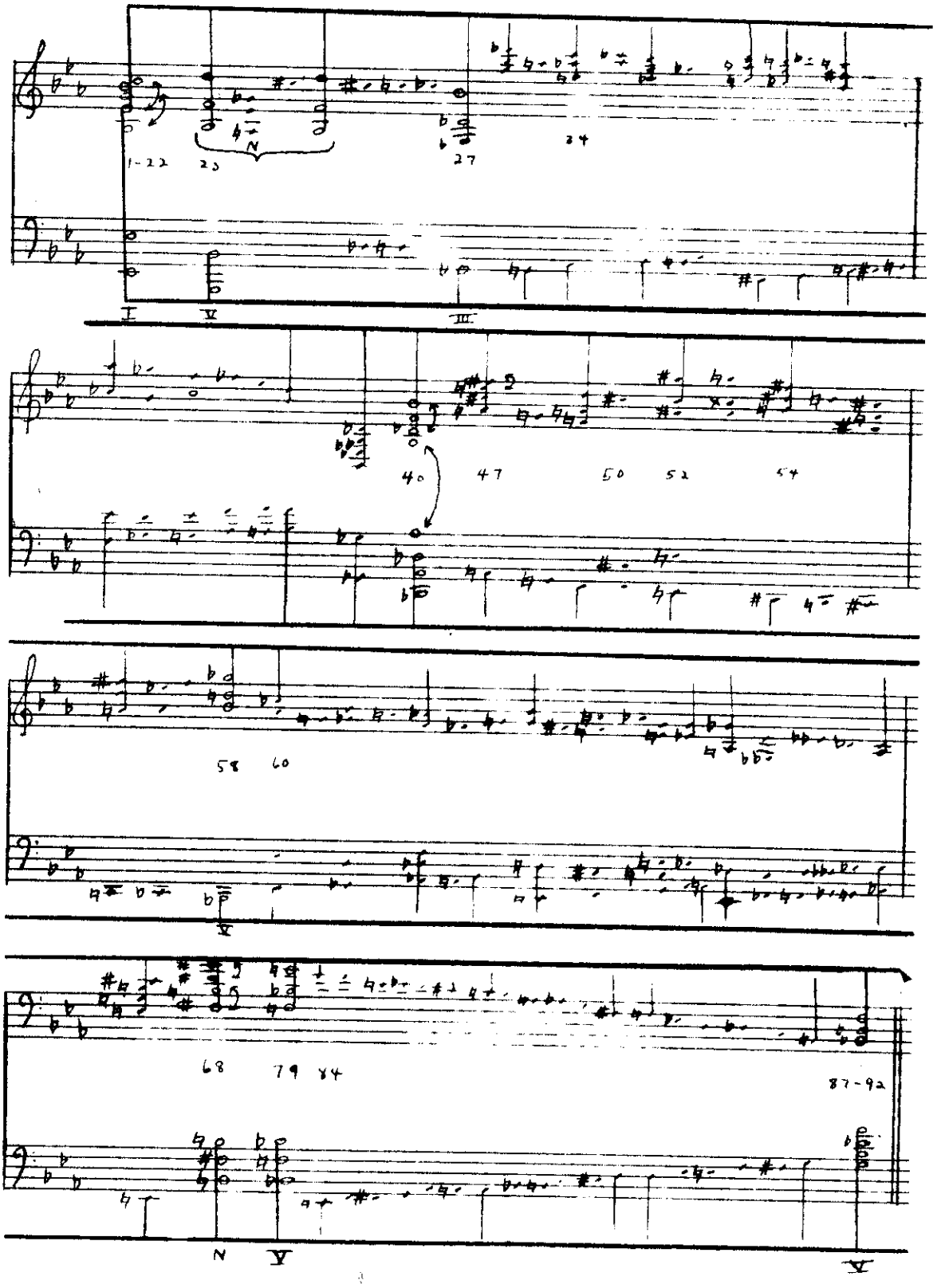
Degree-Progression, although, of course, this also takes place between chords of distant relationship (notably with roots a second apart). In the passages of clear-cut tonality, the Hindemith system is ordinarily in agreement with conventional analysis. However, this agreement is less surprising when it is realized that passages in which there is much doubt as to the tonality by conventional methods is simply marked "indeterminate" in that system. The entire movement of the Fourth Quartet was found to be of indeterminate tonality. It would seem, then, that in these indeterminate tonalities should lie the greatest value of the Hindemith system. It is unfortunate that there can be no comparison with conventional analysis at such places.

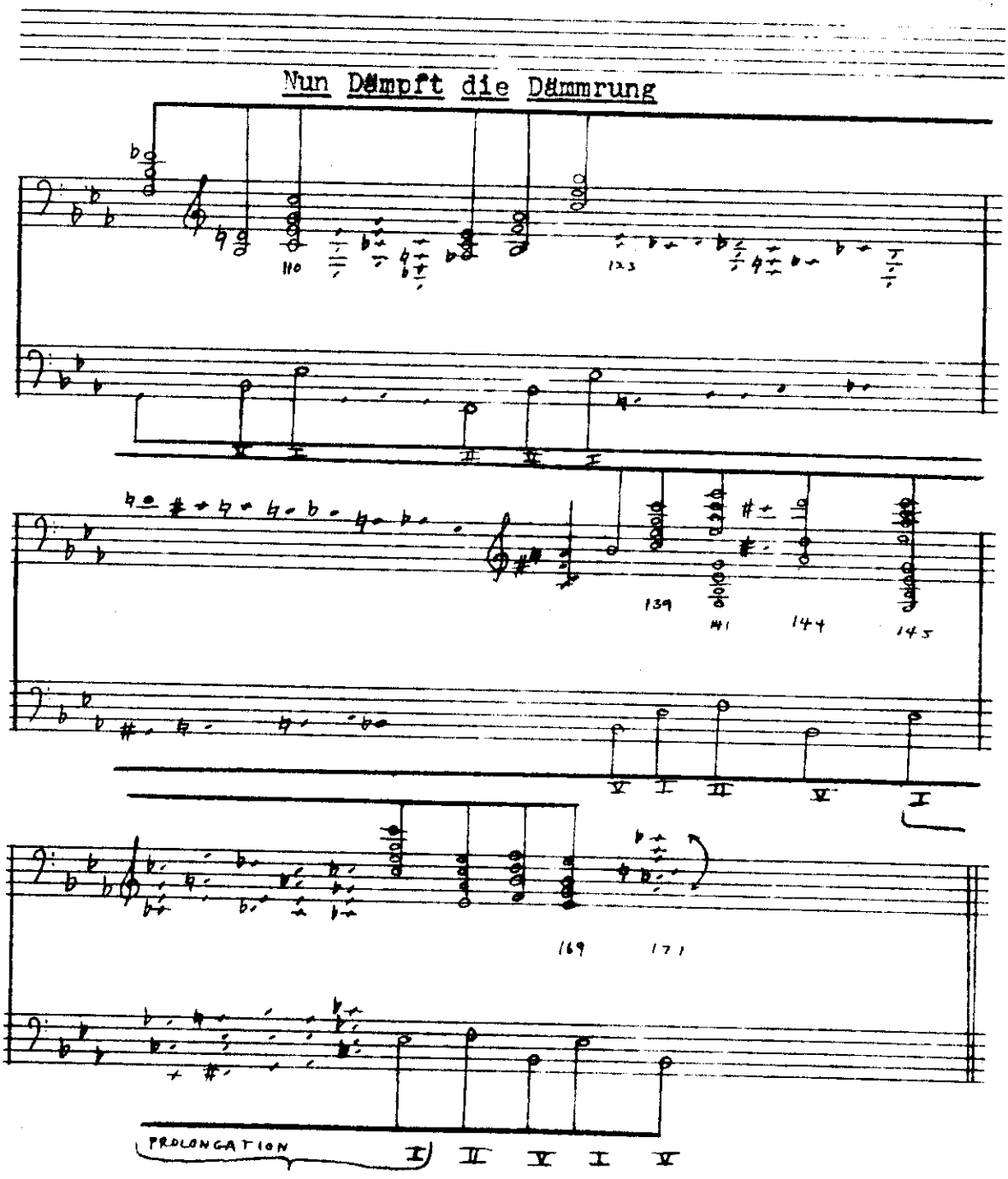
APPENDICES

APPENDIX A

THE ANALYSIS OF SCHOENBERG'S GURRE LIEDER ACCORDING TO THE SCHENKER SYSTEM OF ANALYSIS

Introduction

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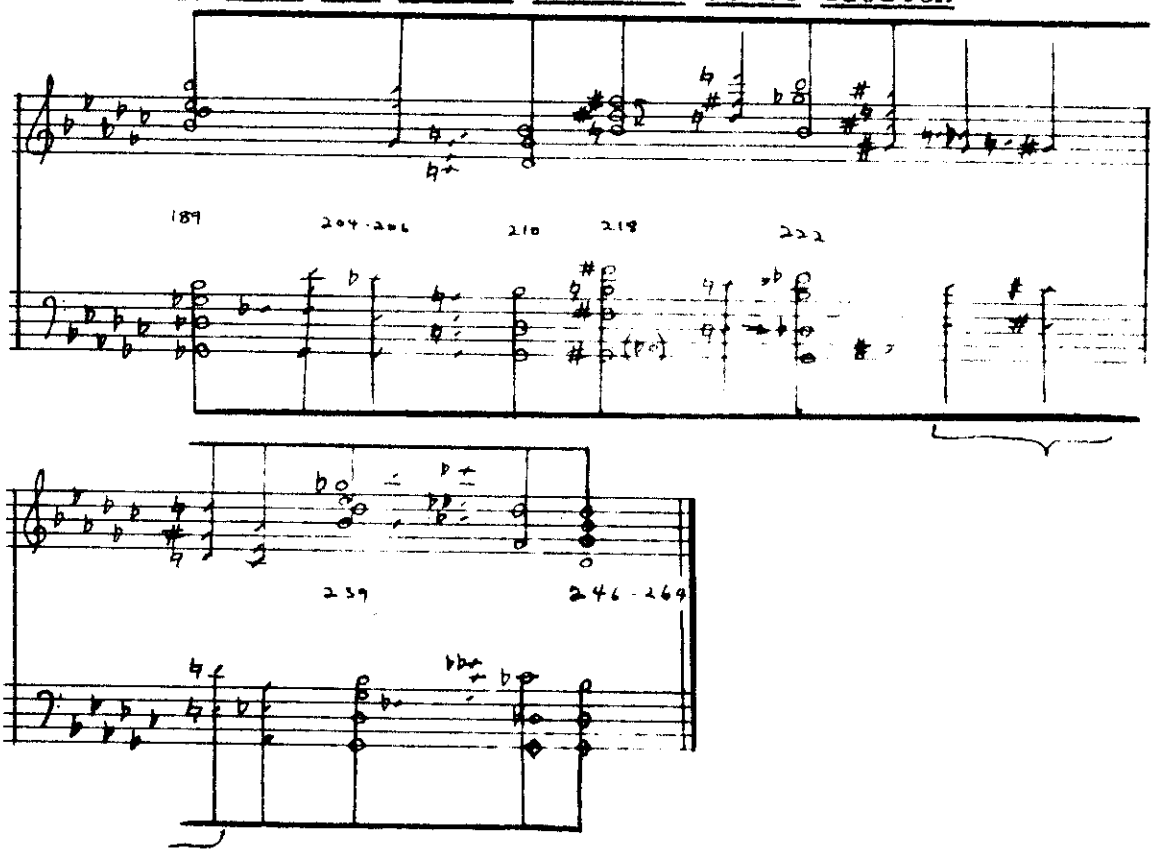

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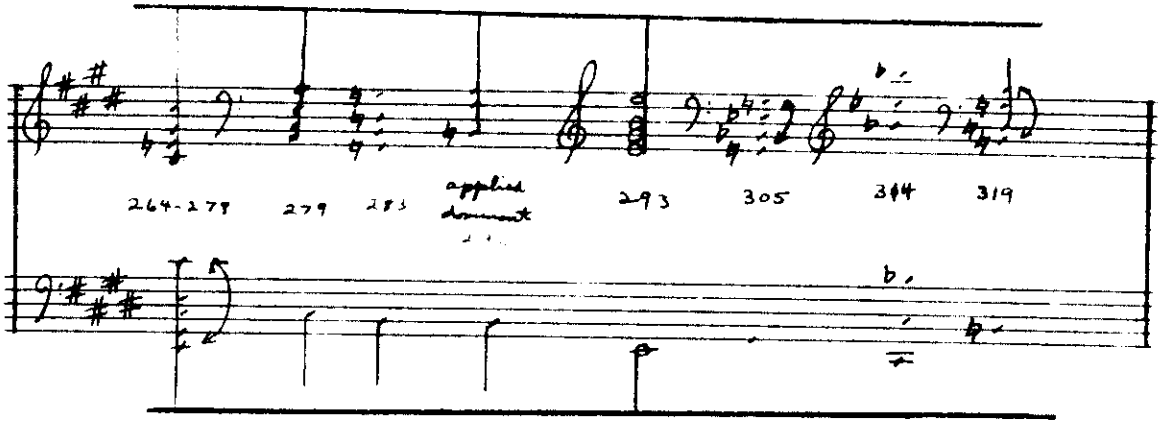

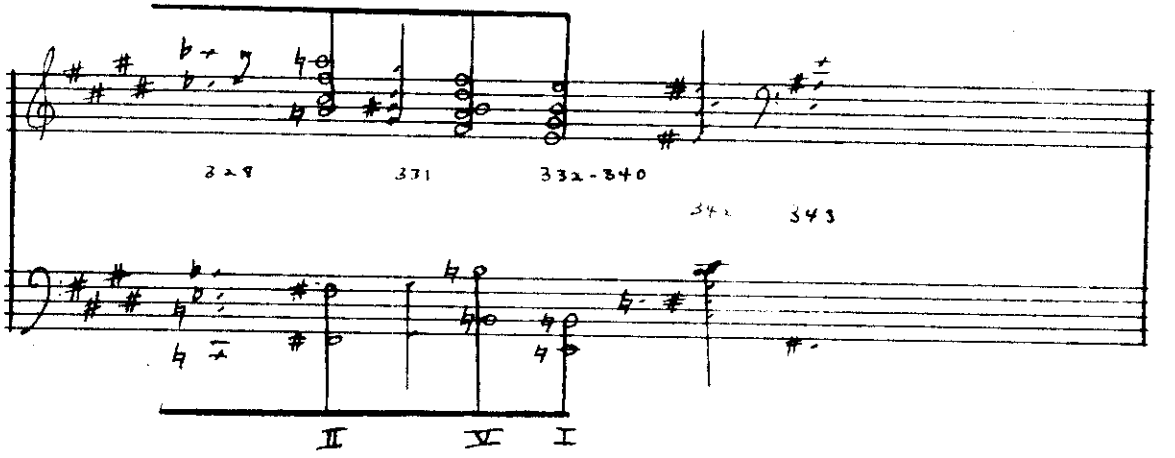

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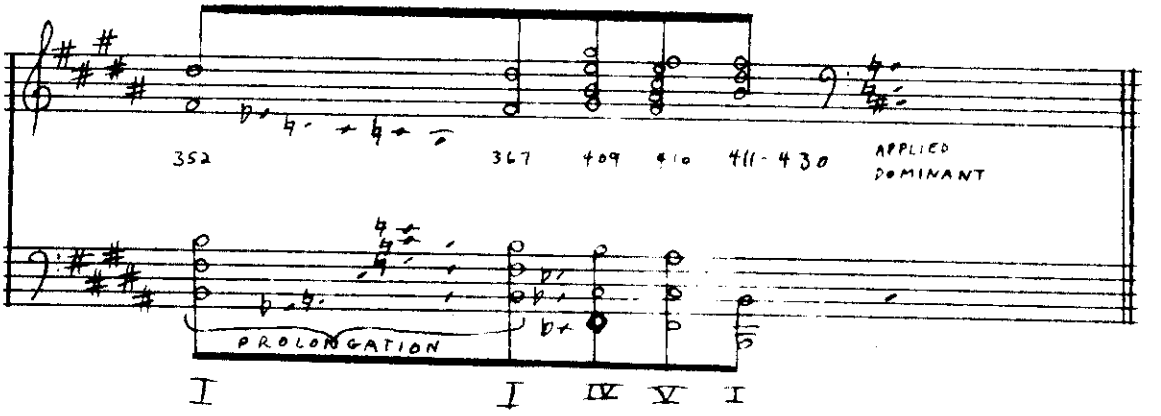

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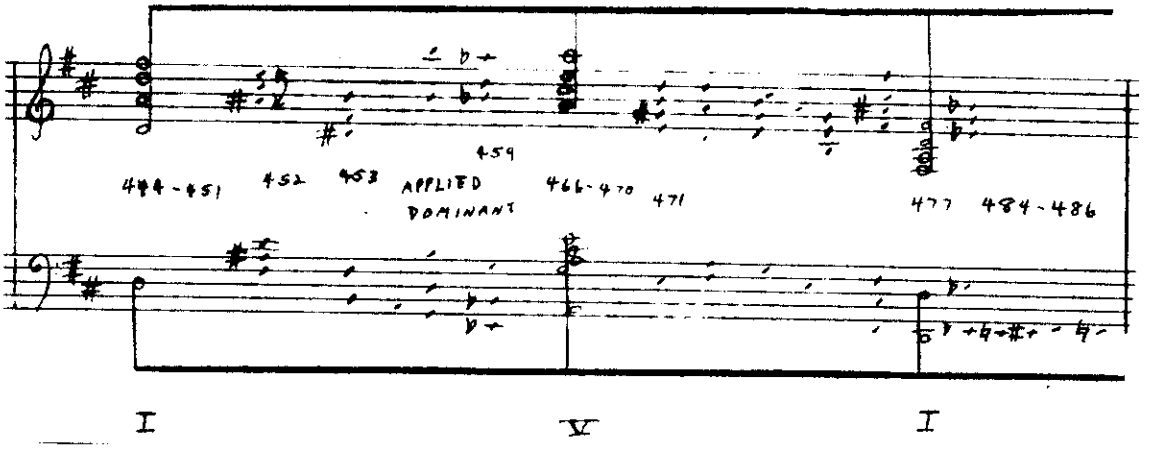

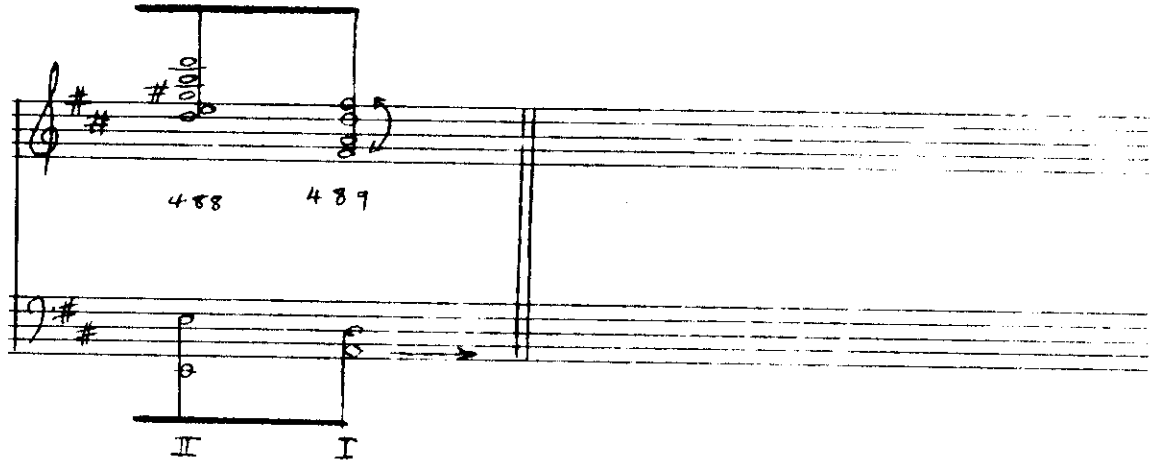

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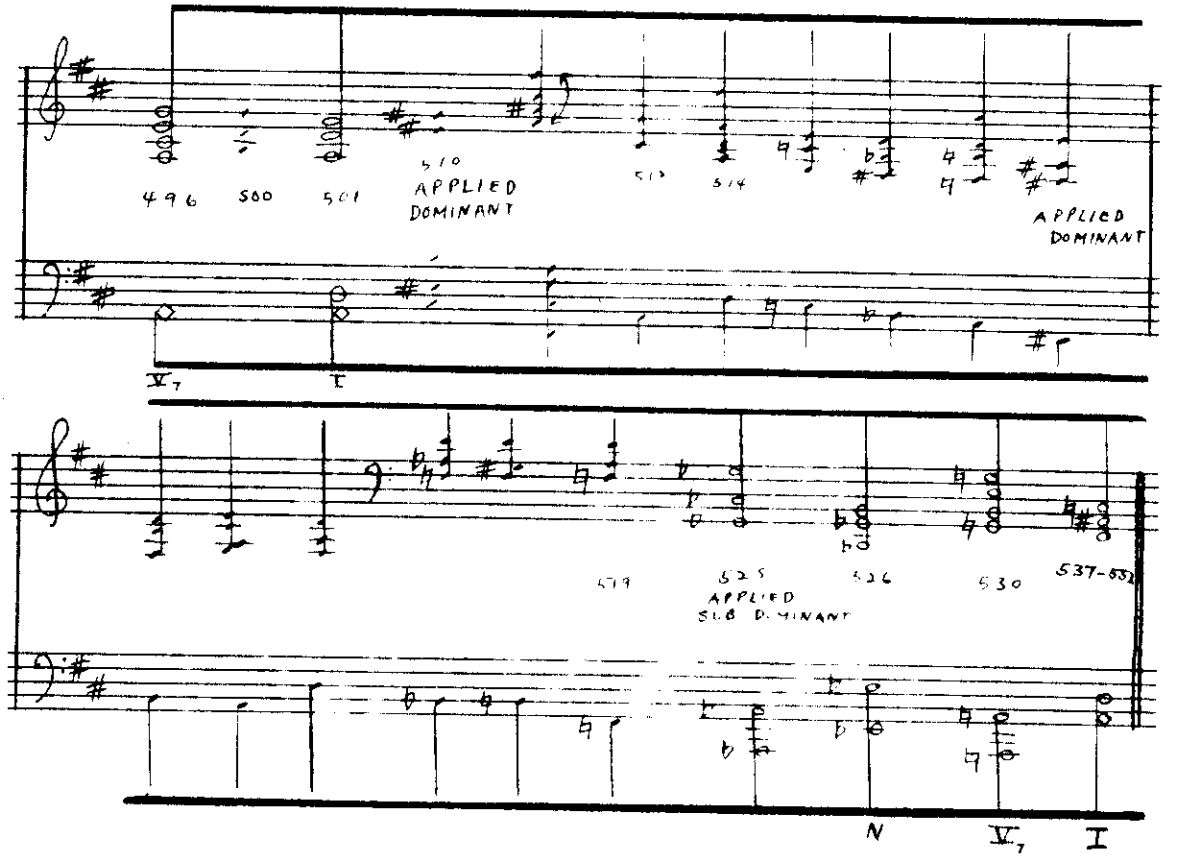

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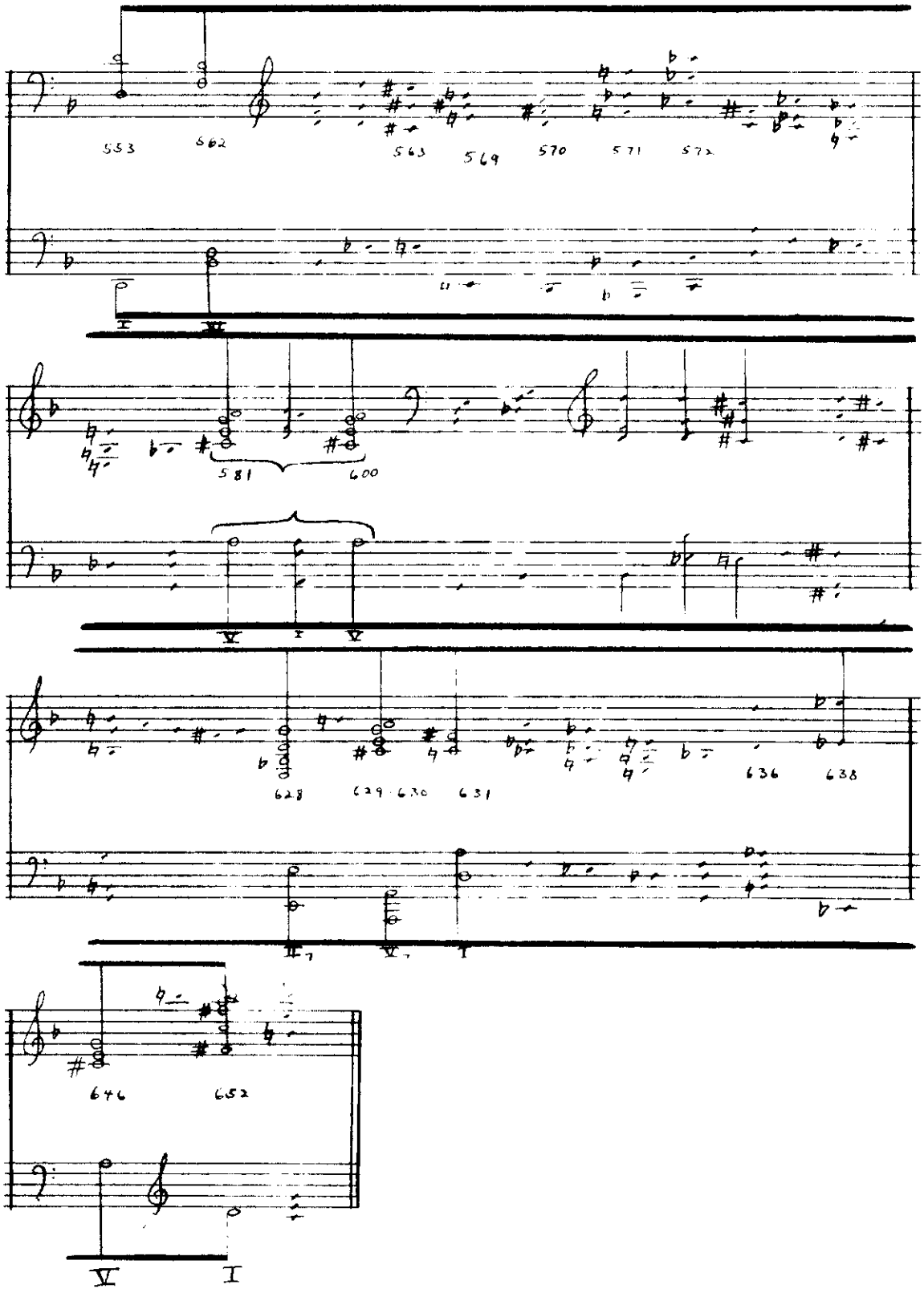

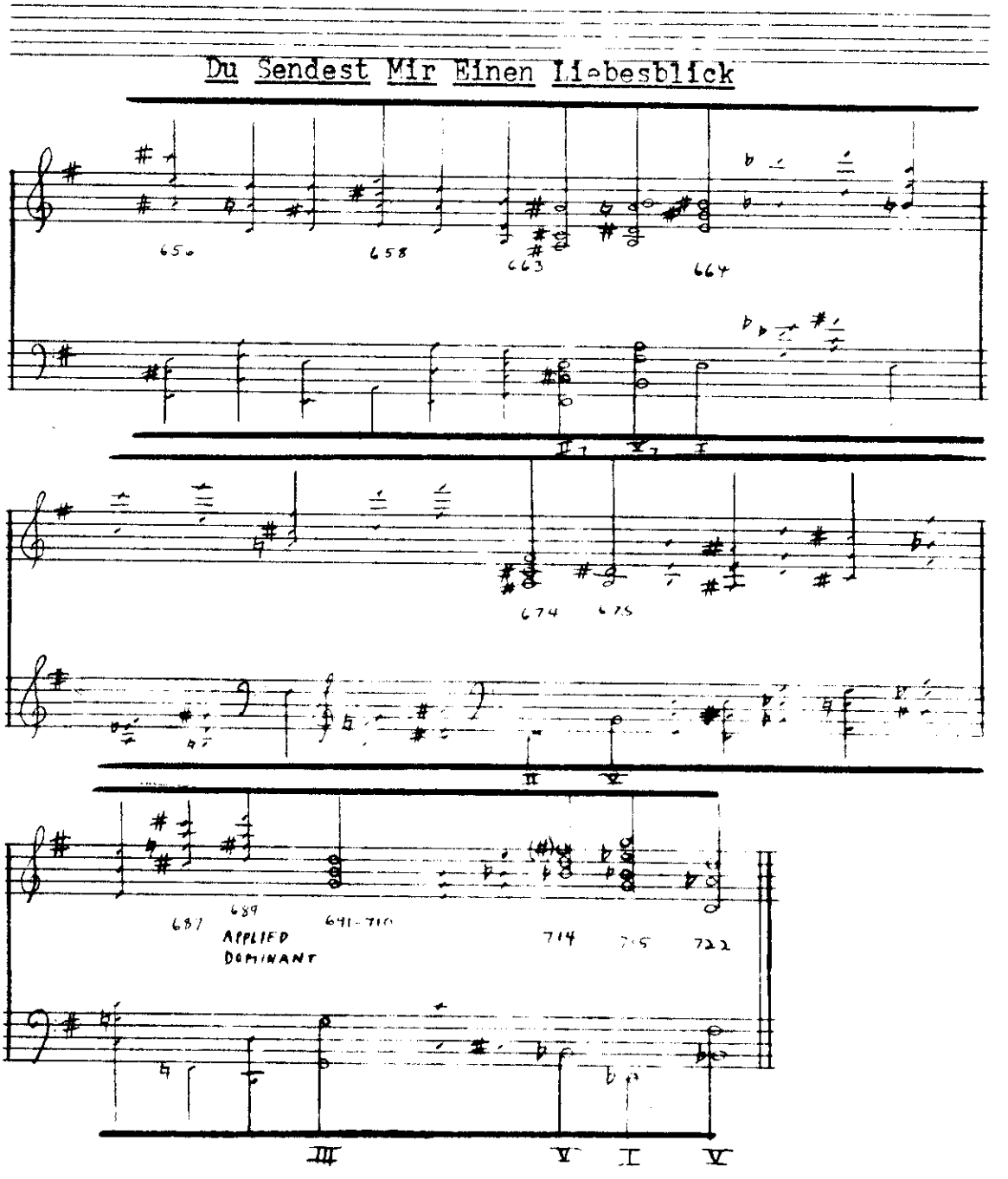
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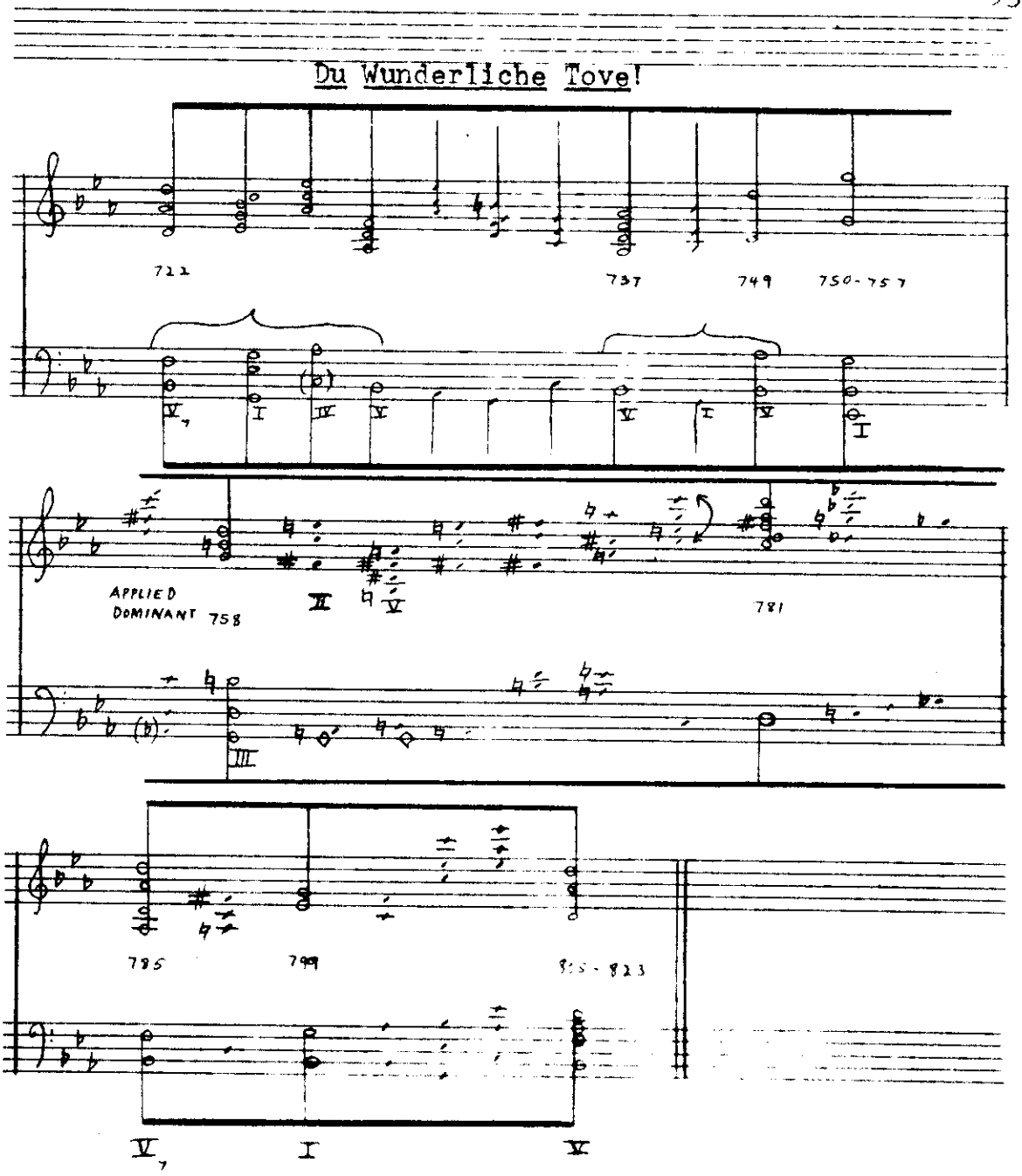
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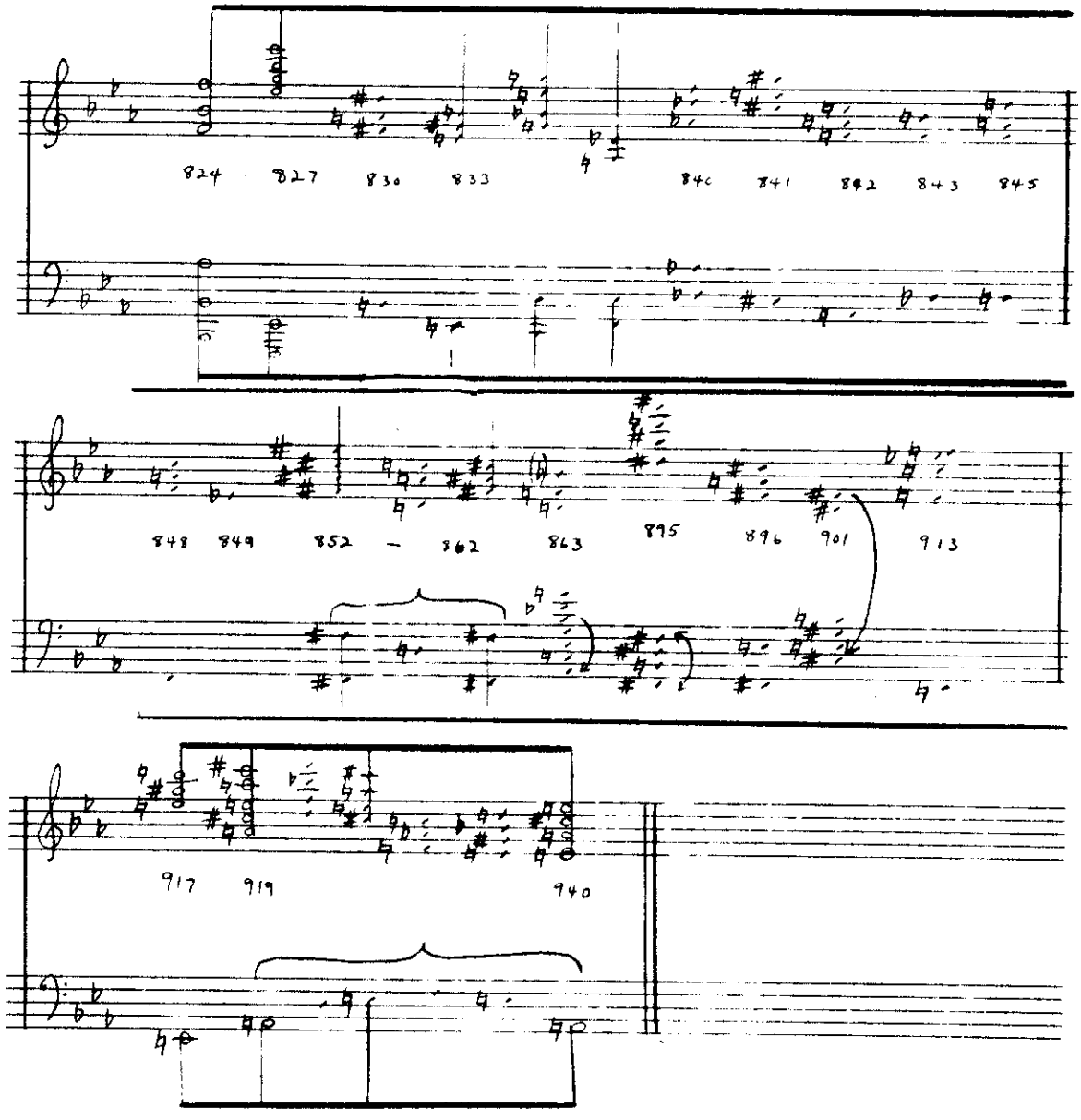
Interlude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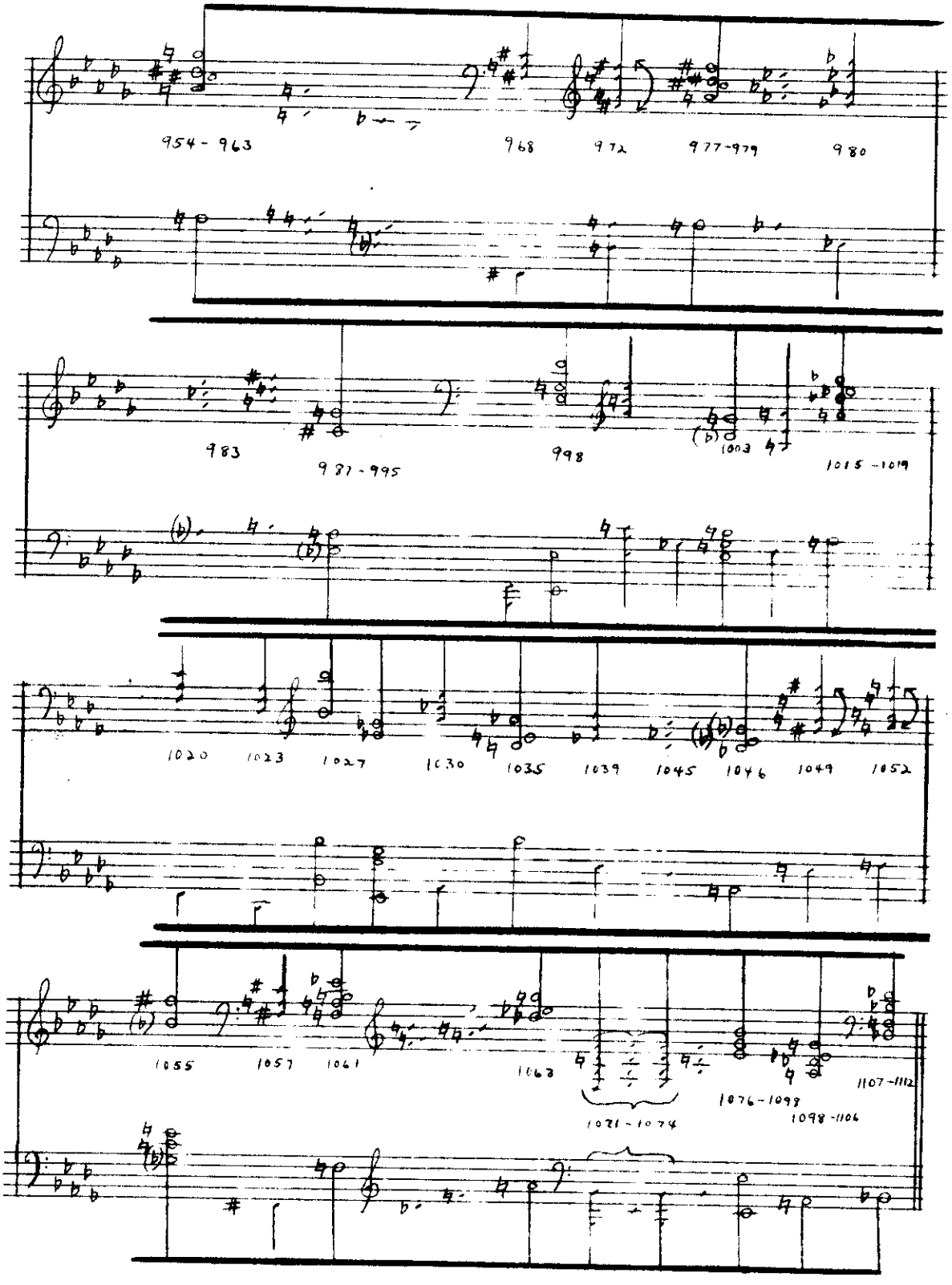


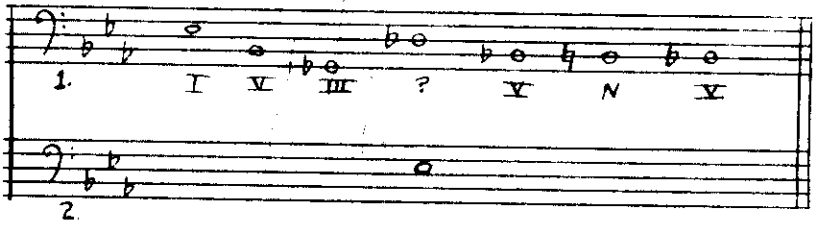
APPENDIX B

1. ROOTS OF STRUCTURAL CHORDS AS FOUND IN APPENDIX A

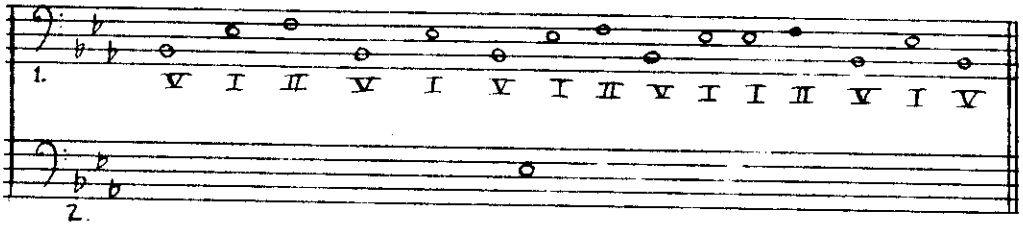
2. TONALITIES OF EACH LIED AS FOUND IN APPENDIX B_1

3. THE TONALITIES OF EACH LIED INTERPRETED AS PROLONGATIONS OF Eb

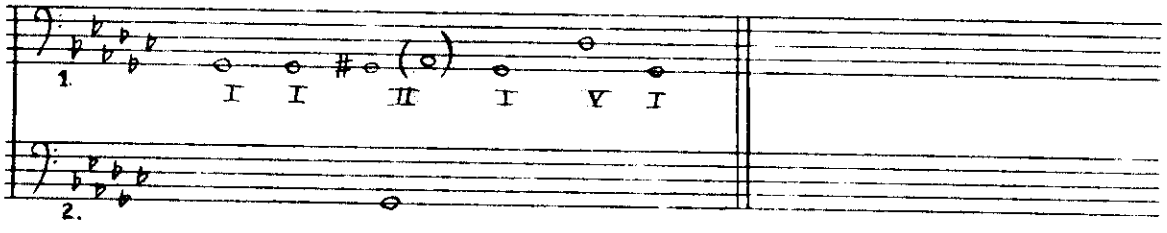
Introduction



Nun Dämpft die Dämmrung

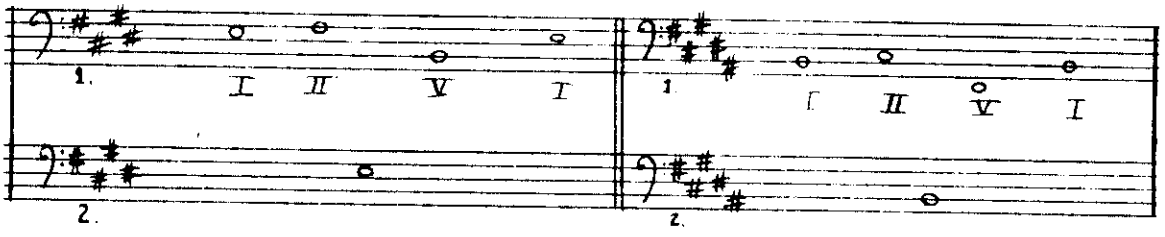


O, Wenn des Mondes

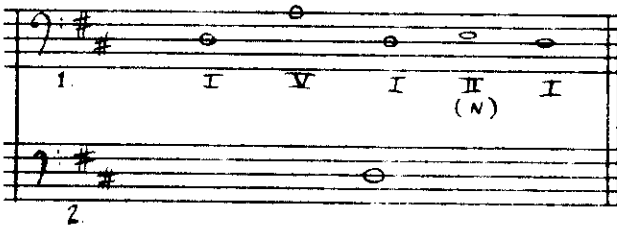


Ross! Mein Ross!

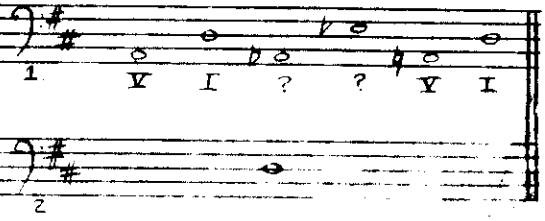
Sterne Jubeln



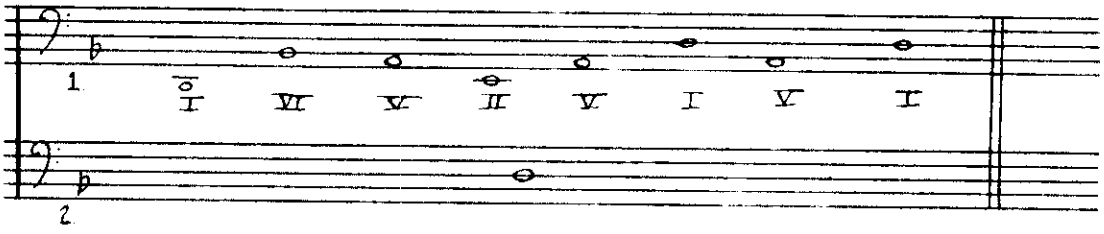
So Tanzen die Engel



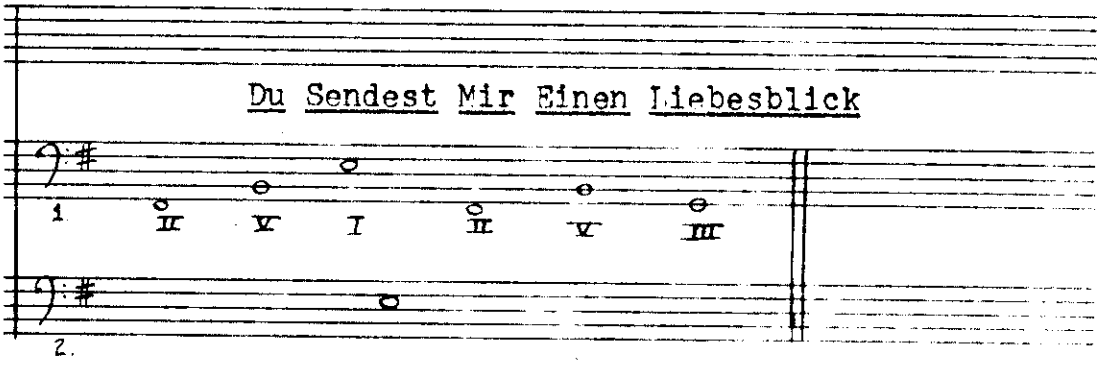
Nun Sag Ich Dir



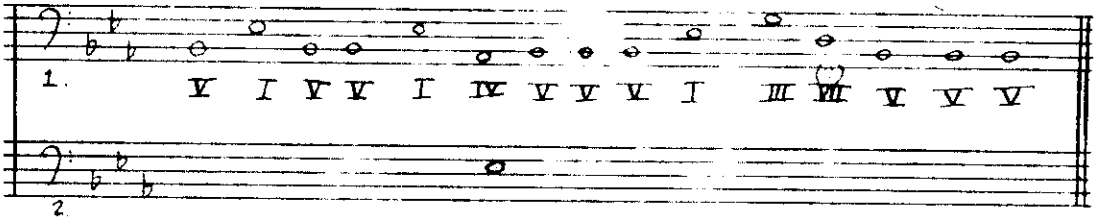
Es ist Mitternachtszeit



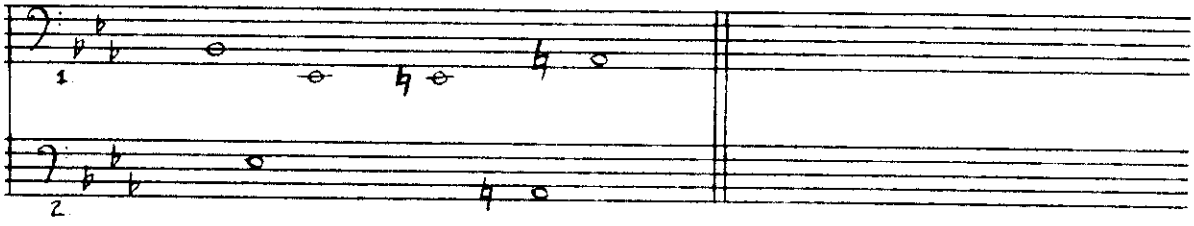
Du Sendest Mir Einen Liebesblick



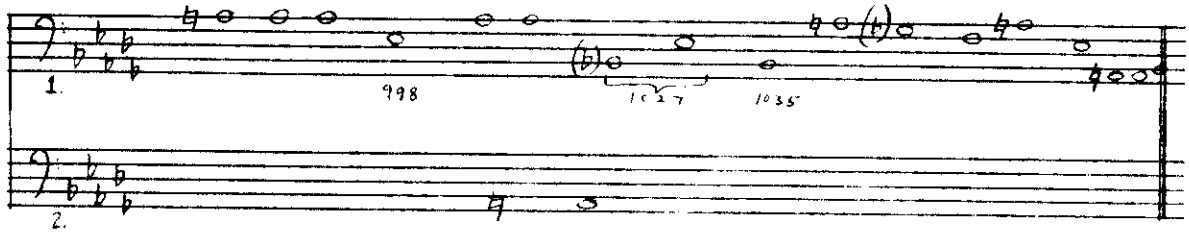
Du Wunderliche Tove!



Interlude

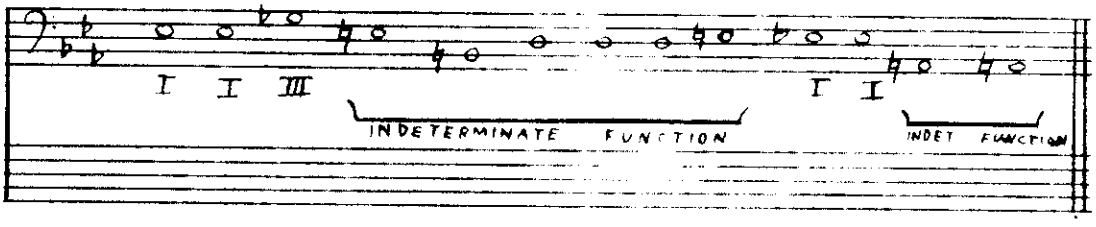


Lied Der Waldtaube



APPENDIX B3

The Tonalities of Each Lied Interpreted as Prolongations of Eb



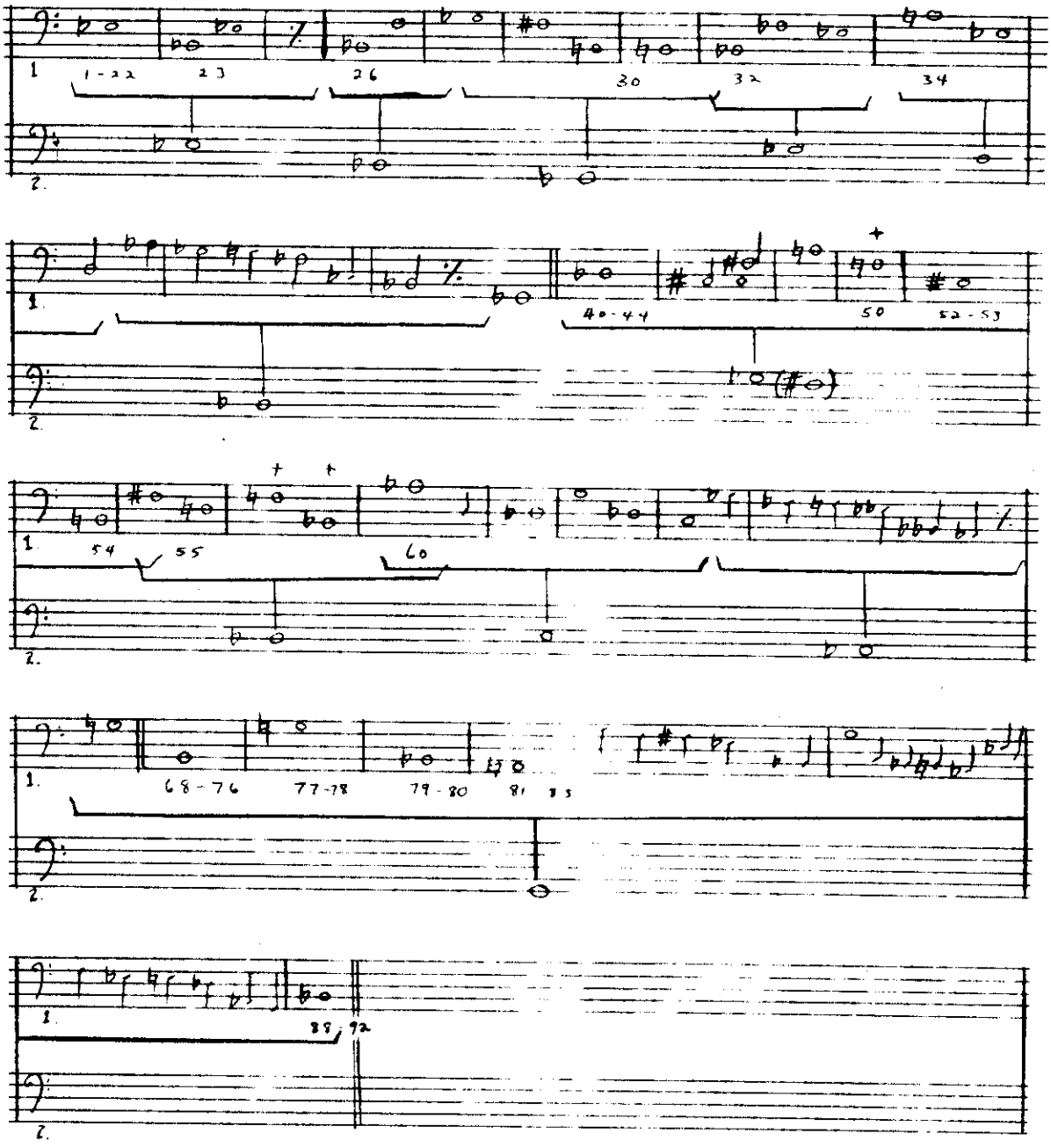
APPENDIX C

THE ANALYSIS OF SCHOENBERG'S GURRE LIEDER, PART I, ACCORDING TO THE HINDEMITH SYSTEM OF ANALYSIS

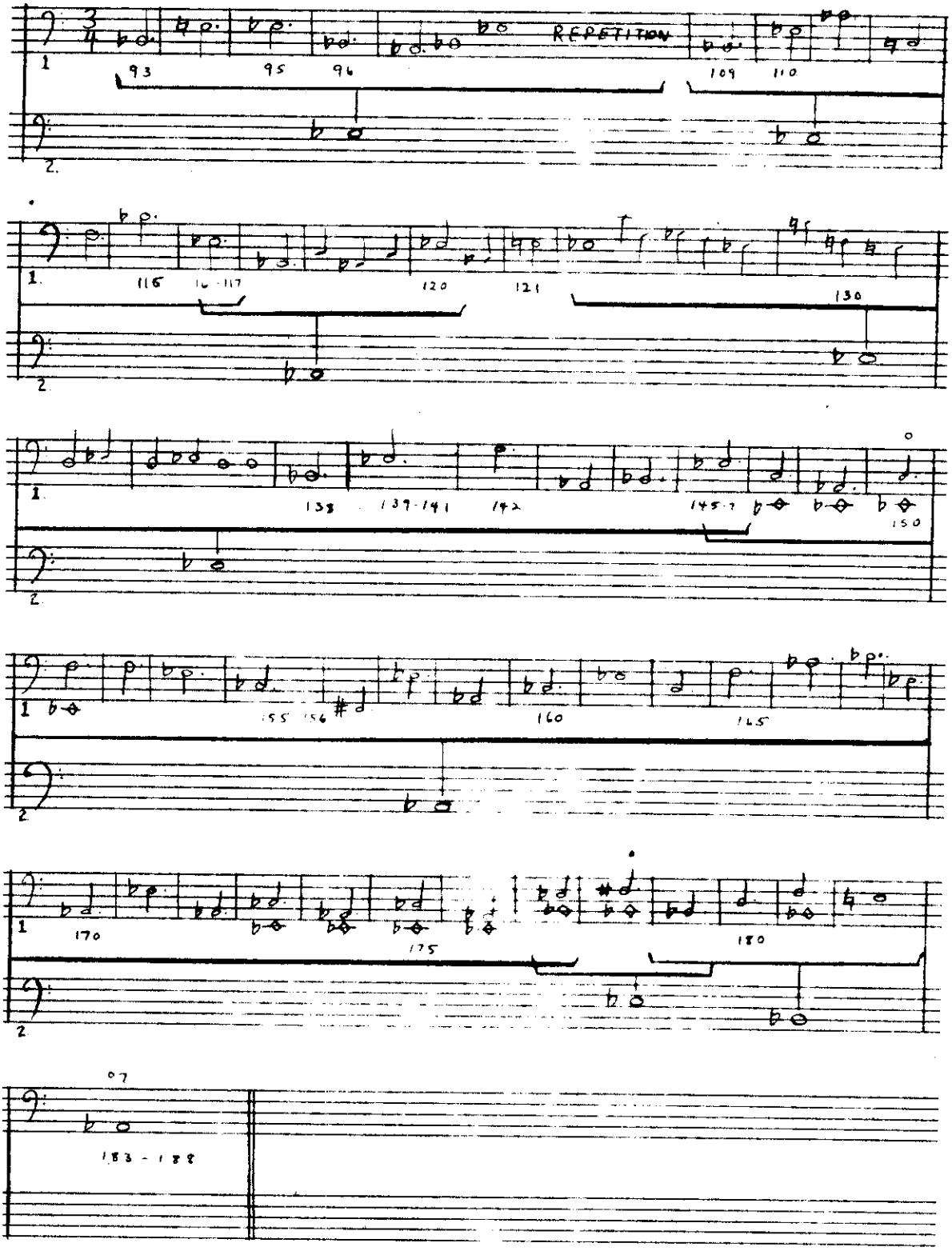
1. THE DEGREE-PROGRESSION

2. THE TONAL SPHERES AS DERIVED FROM APPENDIX C_1

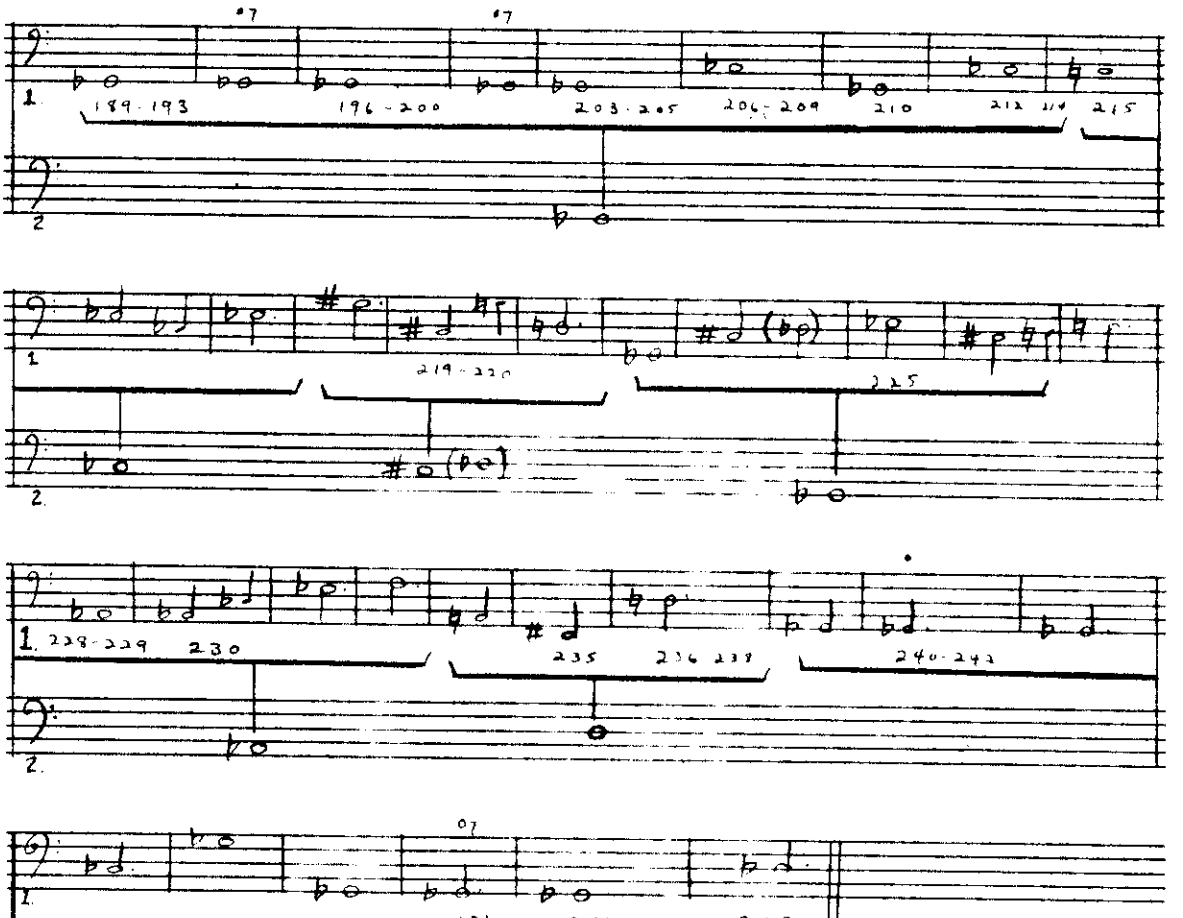
Introduction



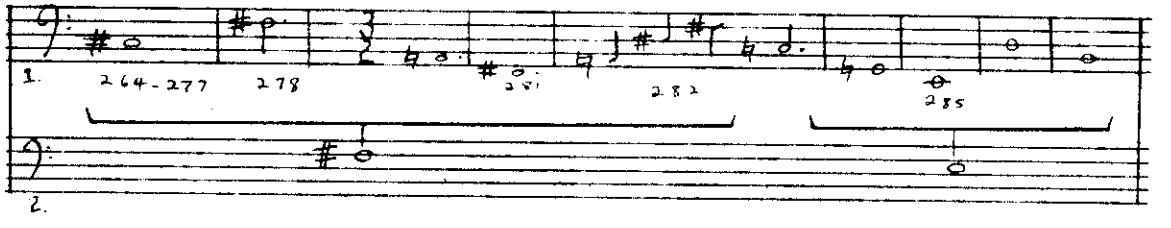
Nun Dämpft die Dämmrung

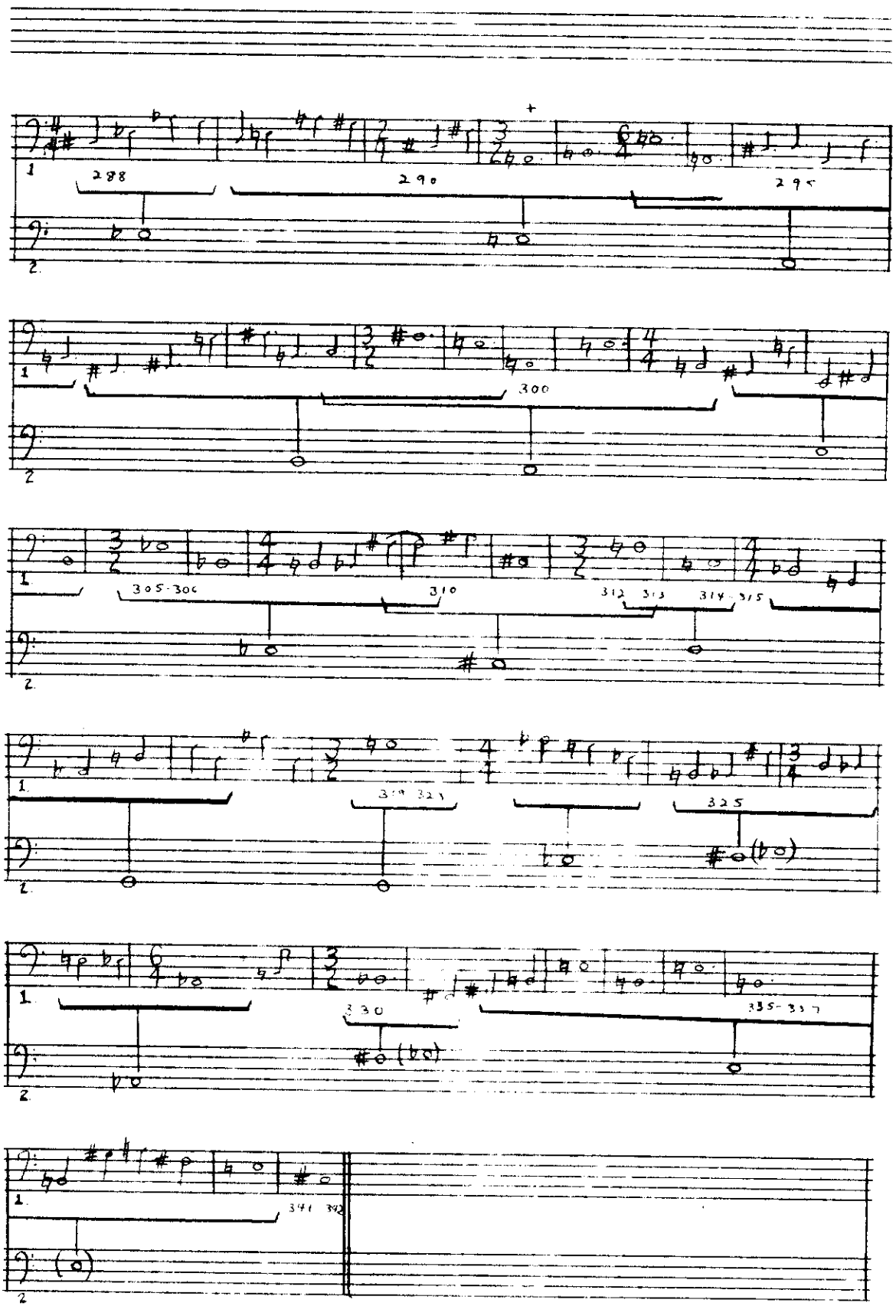


O, Wenn des Mondes



Ross! Mein Ross!




1
2
288
290
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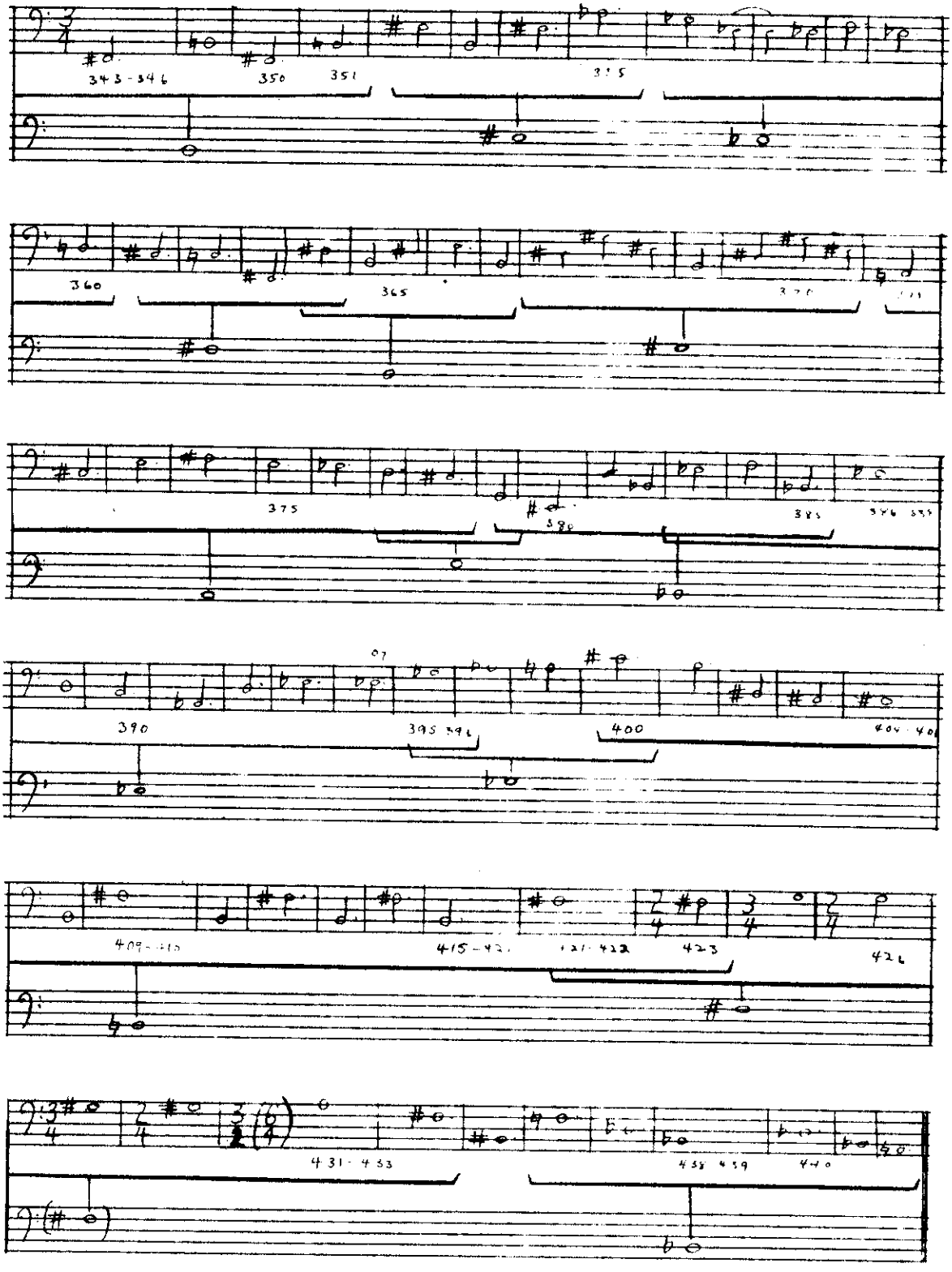
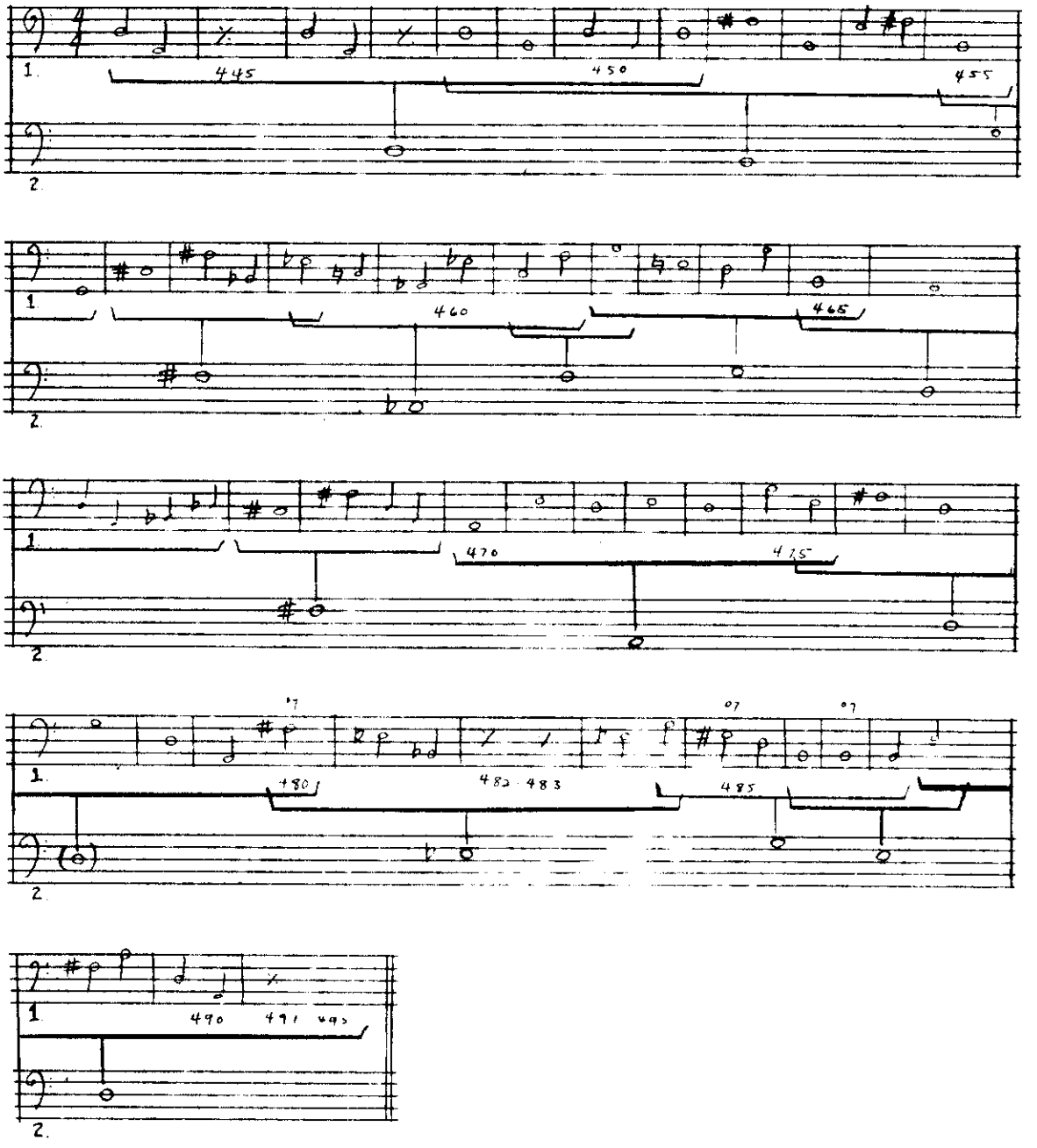
300
305-306
310
312
313
314-315
325
330
335-337
341
342

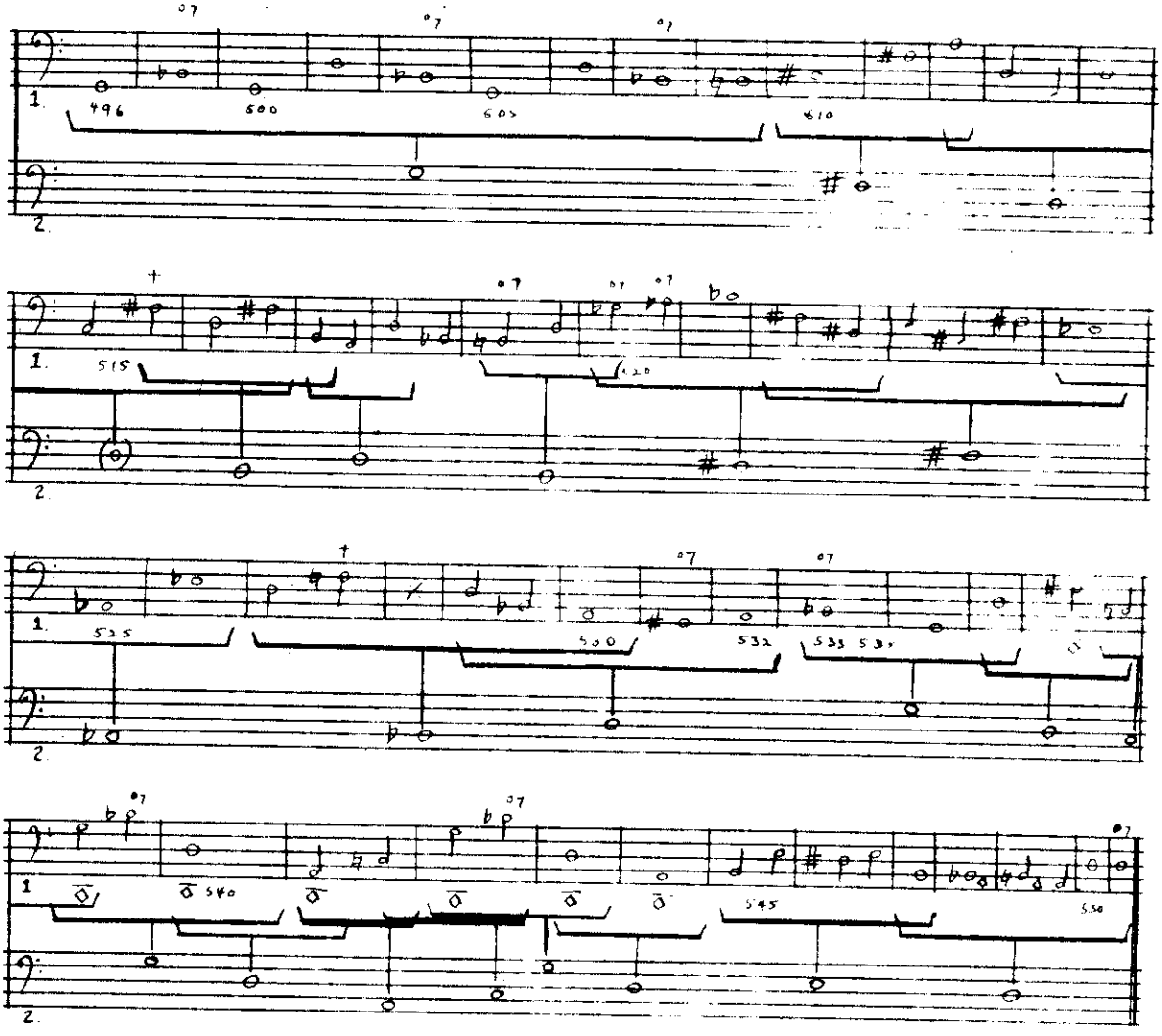
Sterne Jubeln



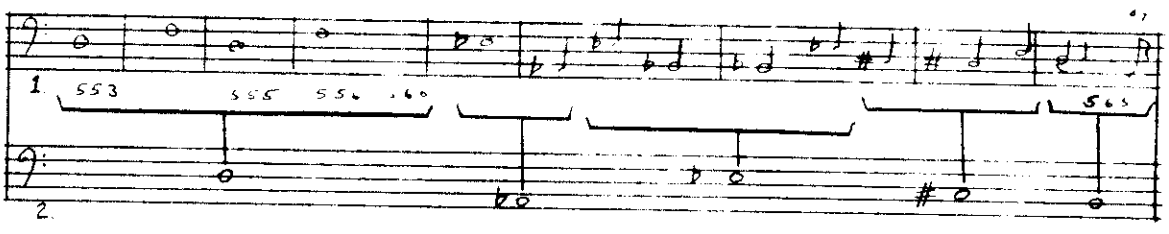
So Tanzen die Engel



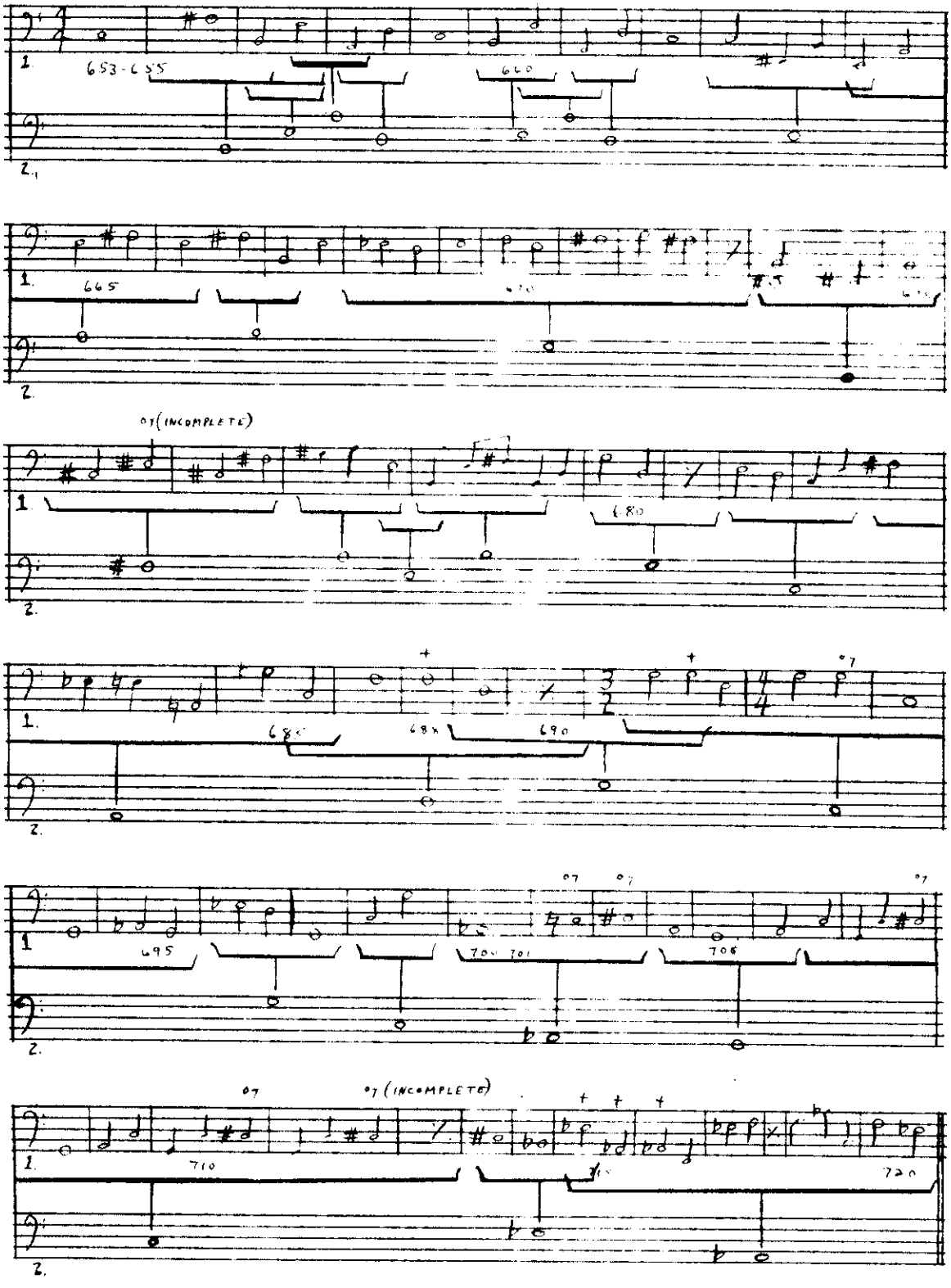
Nun Sag Ich Dir



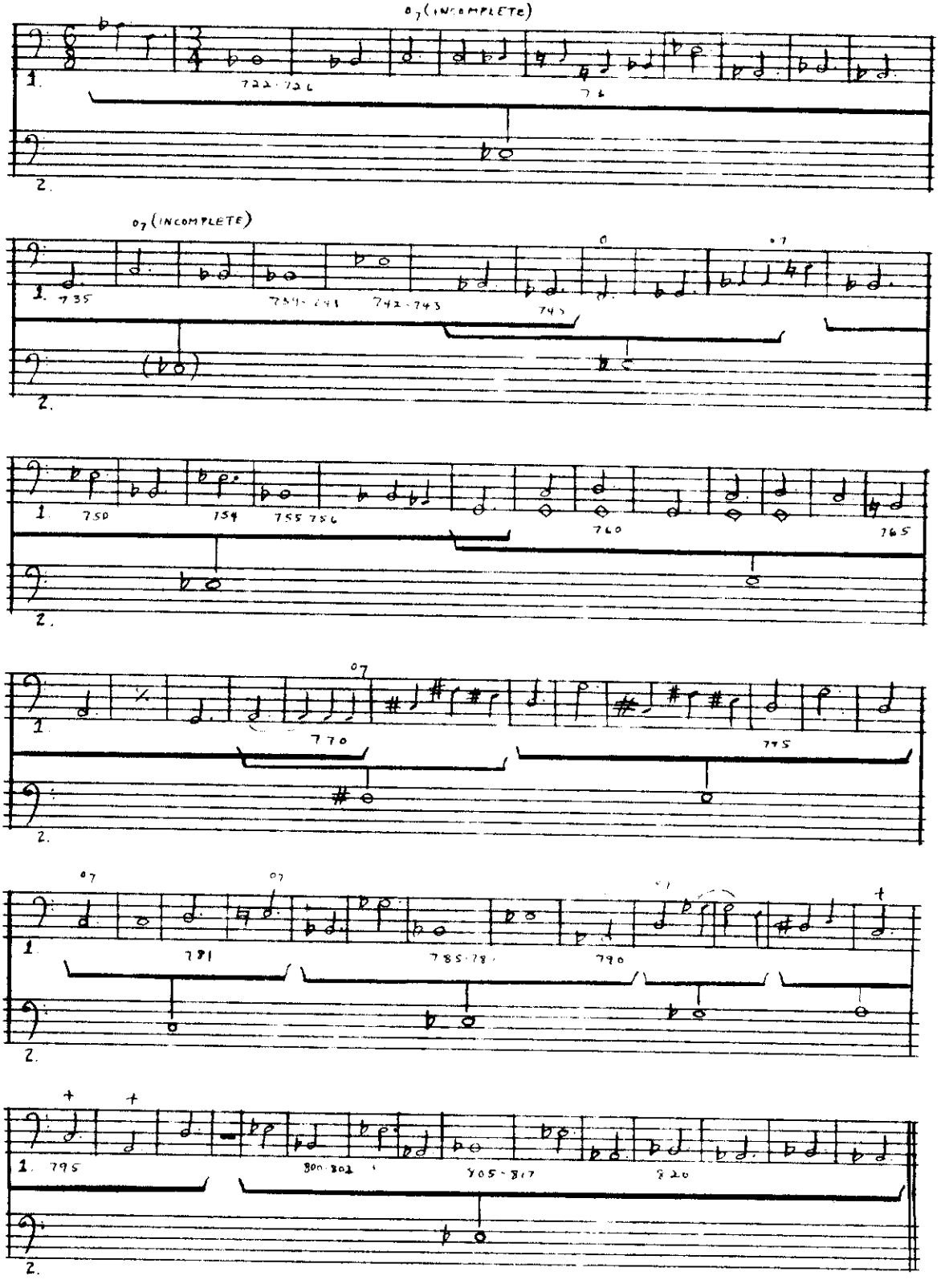
Es ist Mitternachtszeit

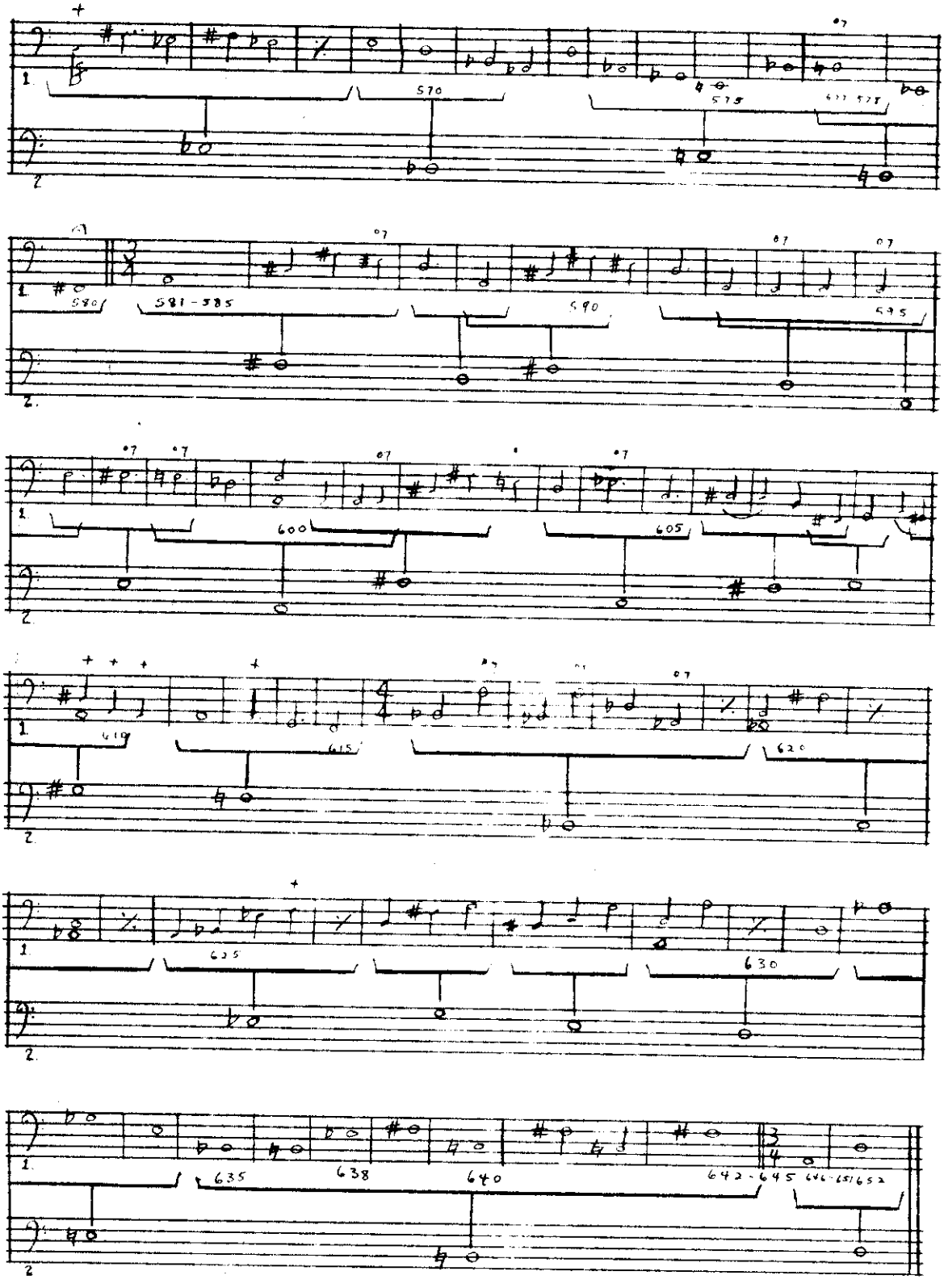


Du Sendest Mir Einen Liebesblick



Du Wunderliche Tove!




570
575
580
581 - 585
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595
600
605
610
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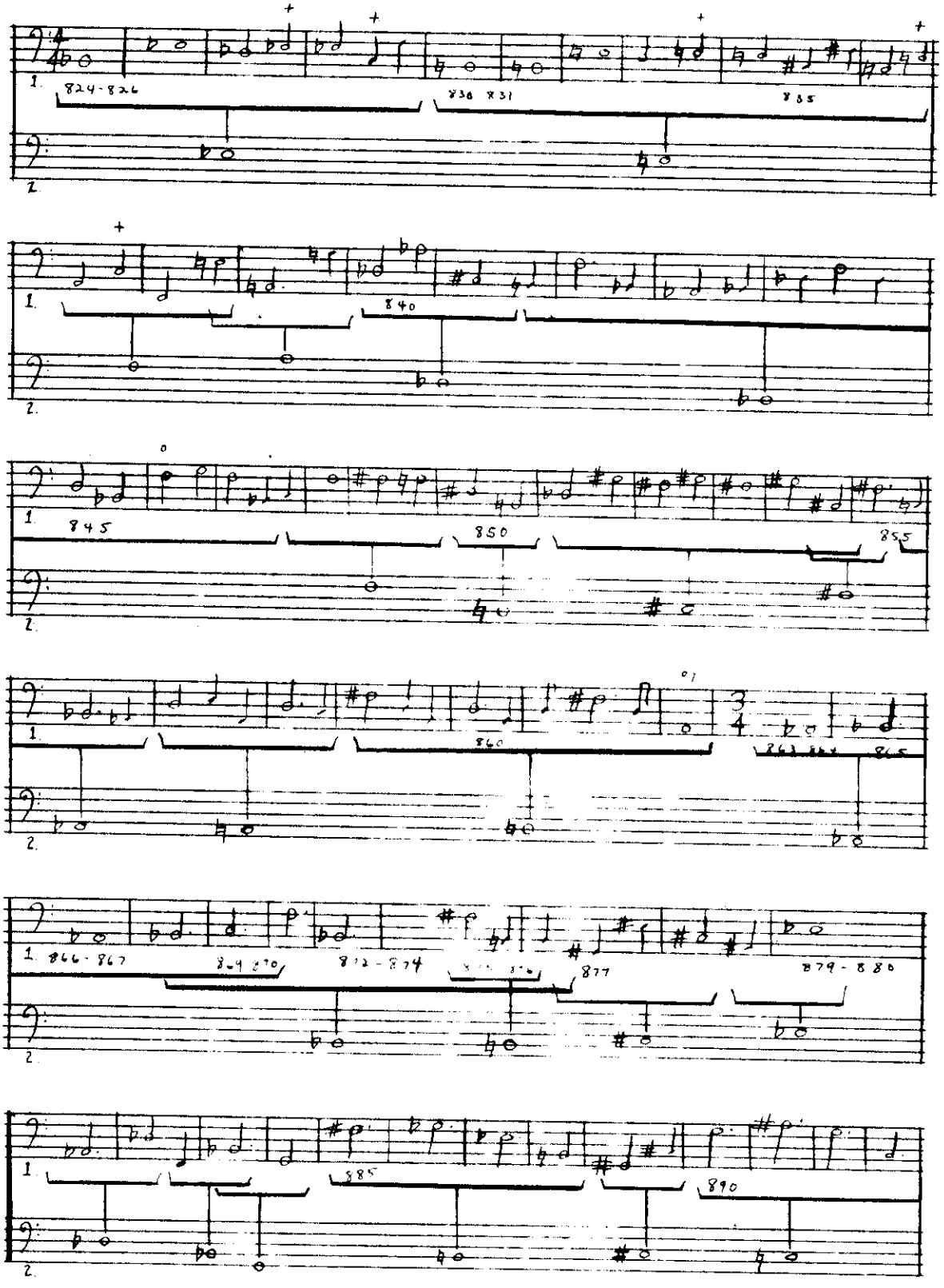
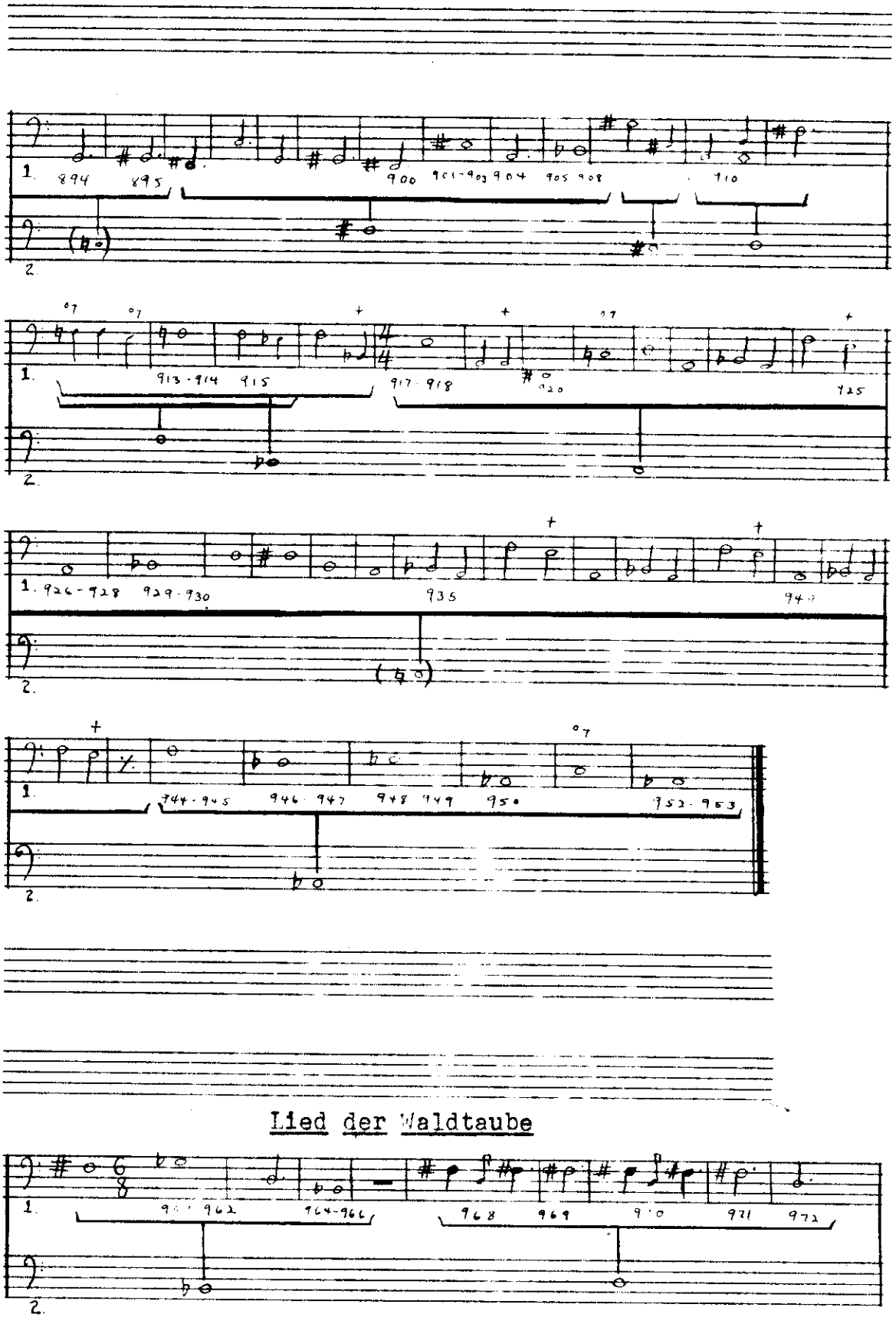
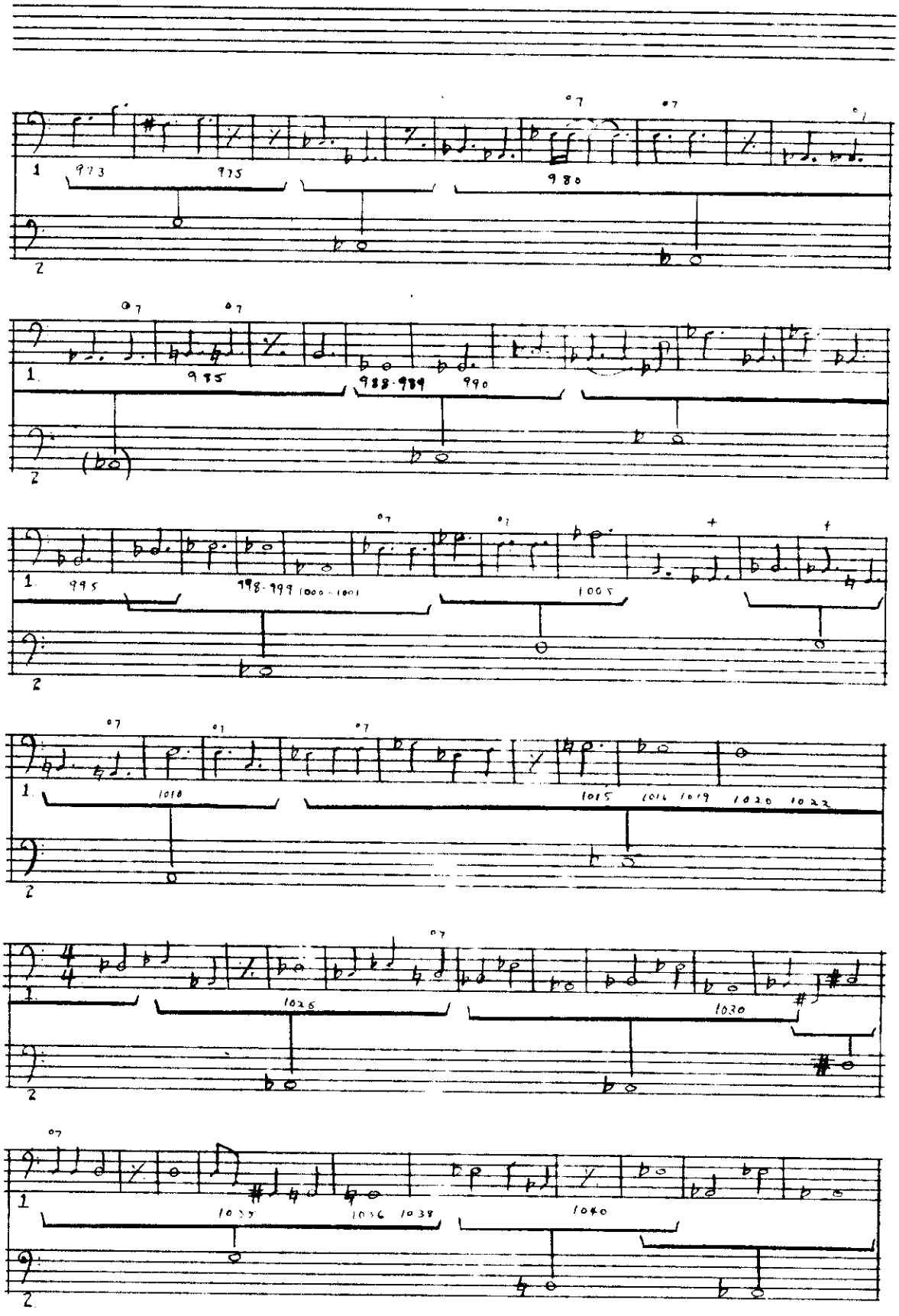
620
625
630
635
638
640
642 - 645
646 - 651
652

Interlude


824-826
838 831
835
840
845
850
855
860
866-867
872-874
877
879-880
885
890



Lied der Waldtaube


973
975
980
985
988-989
990
995
998-999 1000-1001
1005
1010
1015 1016 1019 1020 1022
1025
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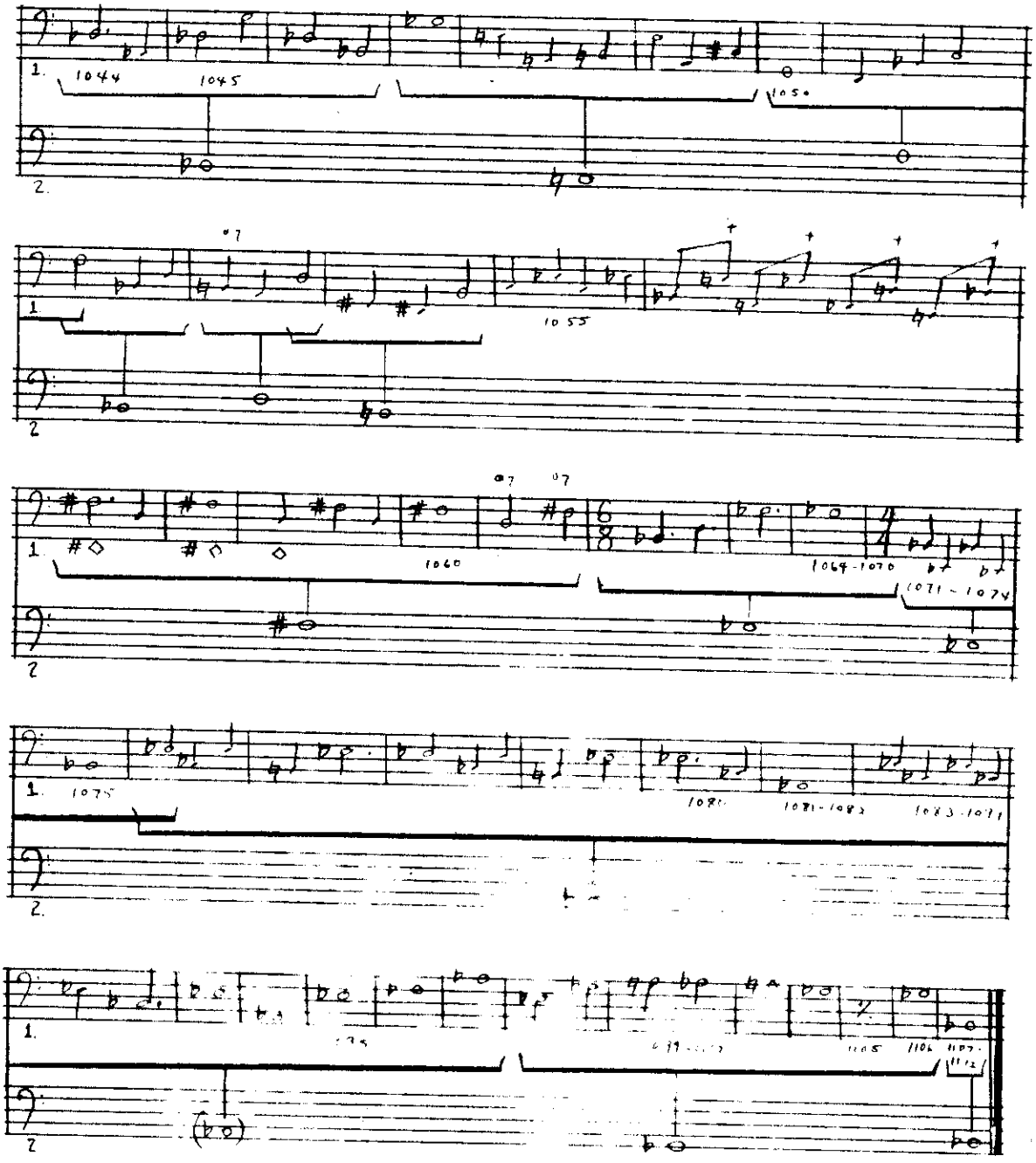
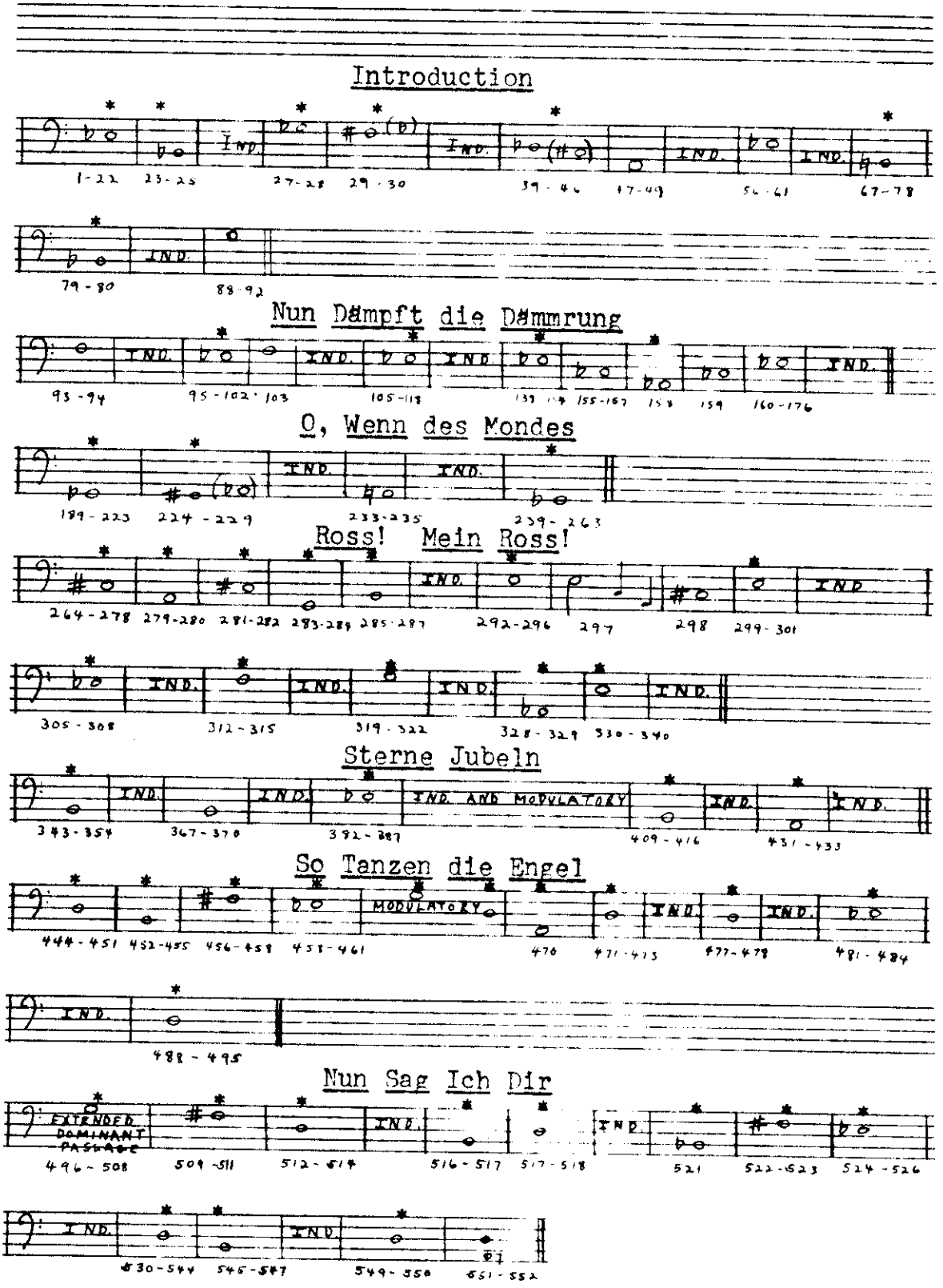
1035 1036 1038
1040

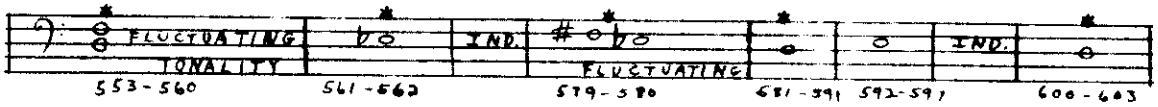

1.
2.
1044
1045
1050
1055
1060
1064-1070
(1071-1074)
1075
1081
1081-1082
1083-1084
1105
1106
1107-1112

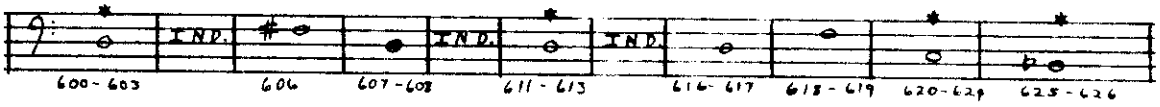
APPENDIX D

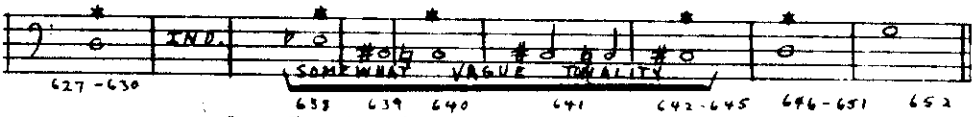
THE CONVENTIONAL ANALYSIS OF GURRE LIEDER AS COMPARED WITH THE ANALYSIS BY THE HINDEMITH SYSTEM


Introduction
IND.
1-22
23-25
27-28
29-30
39-46
47-49
56-61
67-78
79-80
88-92
Nun Dämpft die Dämmrung
93-94
95-102, 103
105-113
139-154
155-167
158
159
160-176
O, Wenn des Mondes
189-223
224-229
233-235
239-263
Ross! Mein Ross!
264-278
279-280
281-282
283-284
285-287
292-296
297
298
299-301
305-308
312-315
319-322
328-329
330-340
Sterne Jubeln
343-359
367-378
392-397
IND. AND MODULATORY
409-416
431-433
So Tanzen die Engel
444-451
452-455
456-459
458-461
MODULATORY
470
471-473
477-479
481-484
488-495
Nun Sag Ich Dir
EXTENDED DOMINANT PASSAGE
496-508
509-511
512-514
516-517
517-518
521
522-523
524-526
530-544
545-547
549-550
551-552

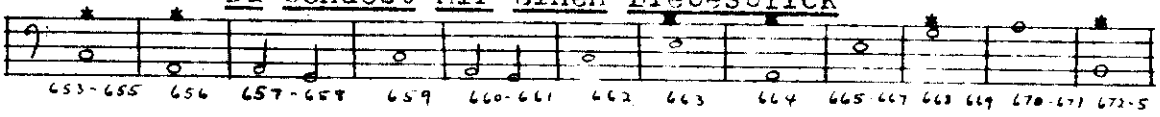
Es ist Mitternachtszeit

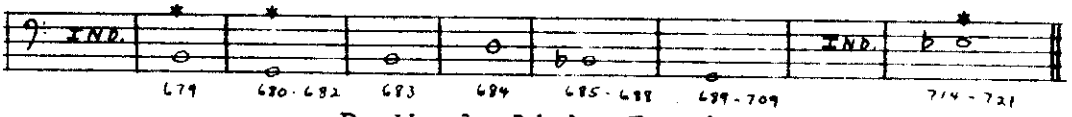




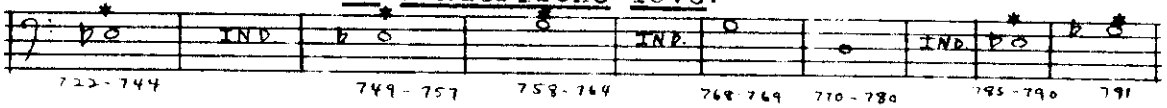


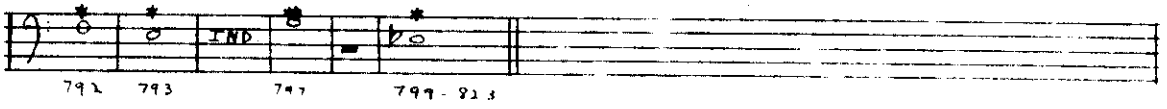
Du Sendest Mir Einen Liebesblick



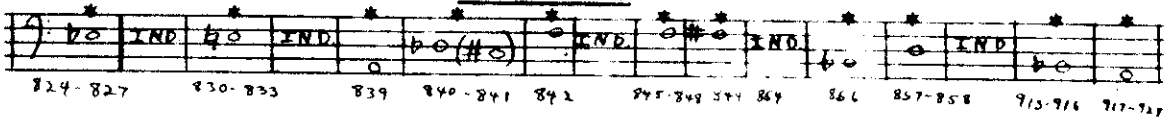


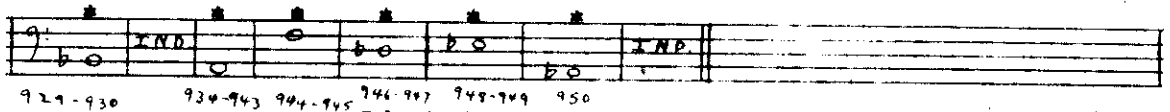
Du Wunderliche Tove!



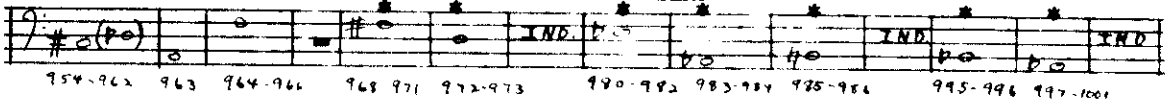


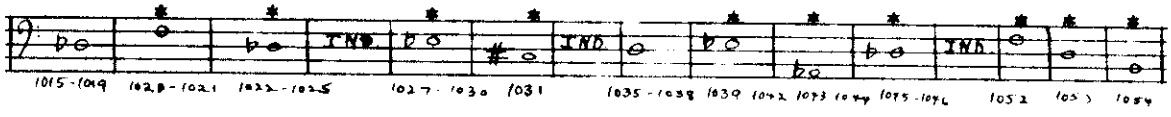
Interlude

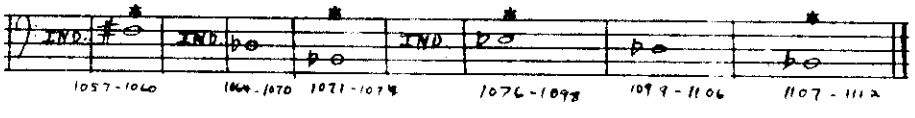




Lied der Waldtaube

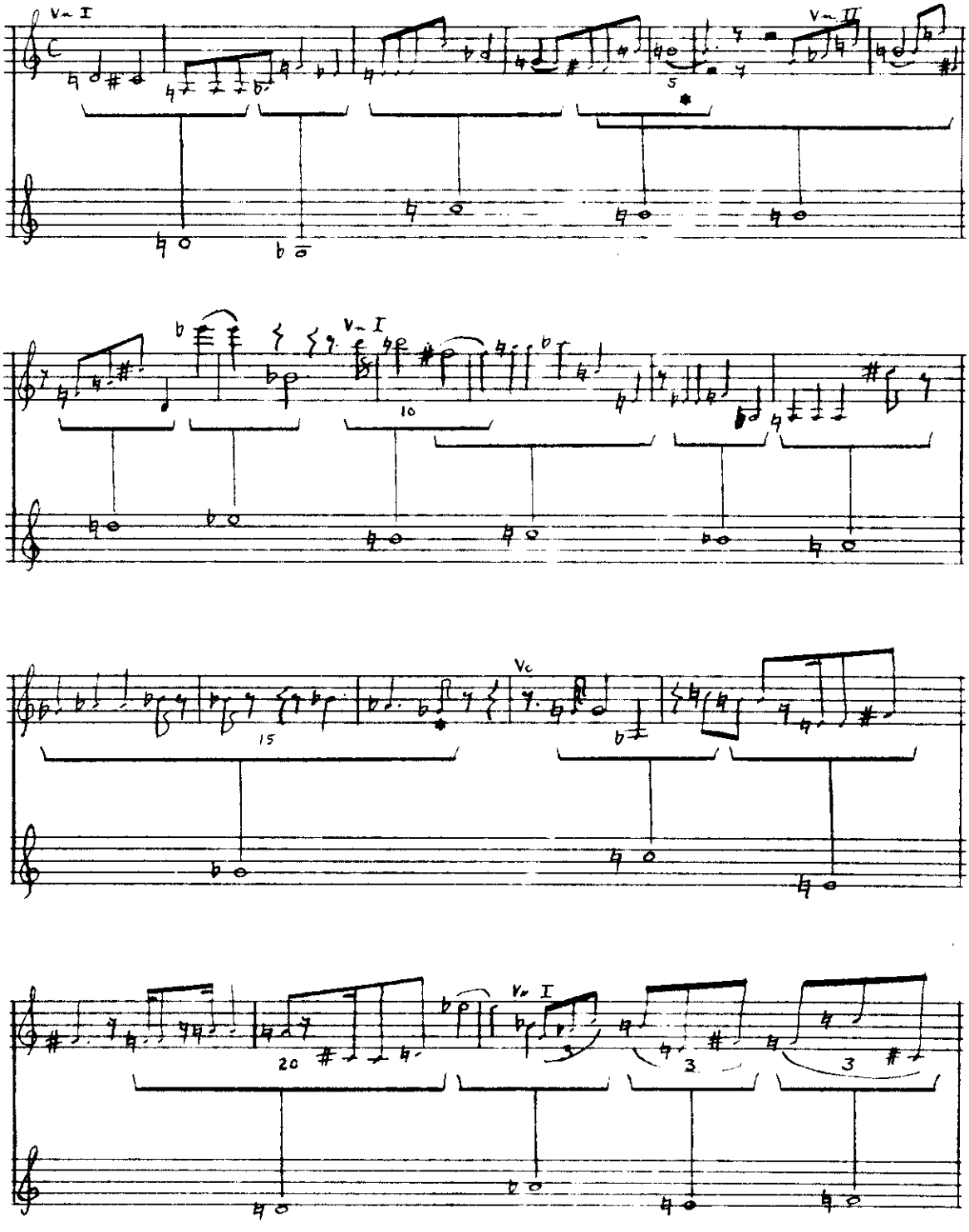


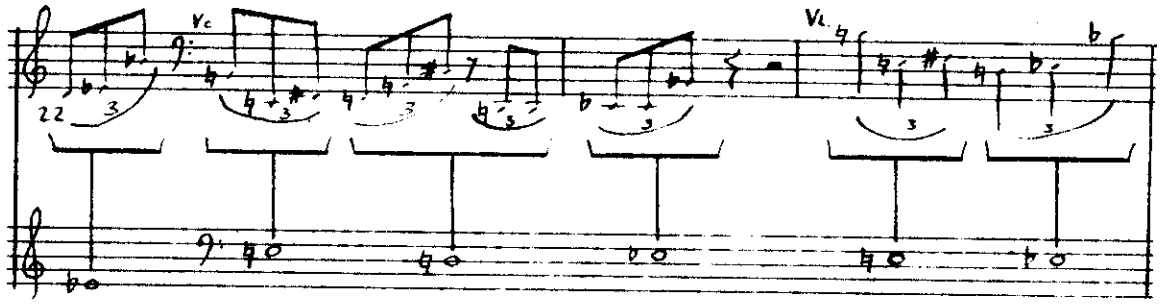


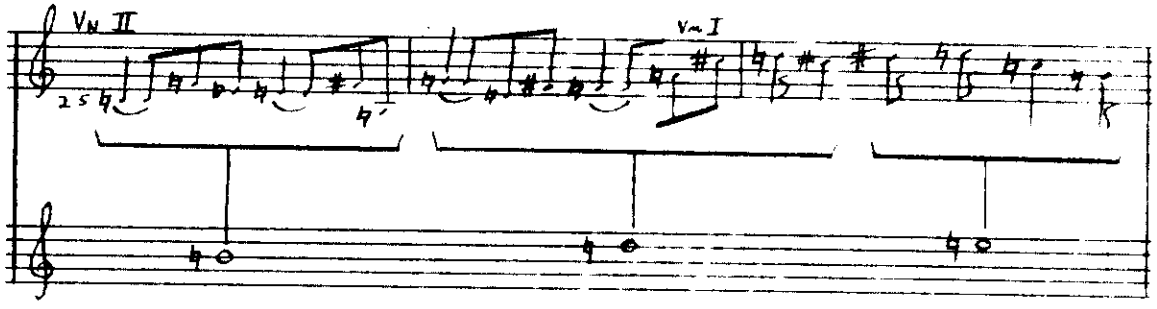


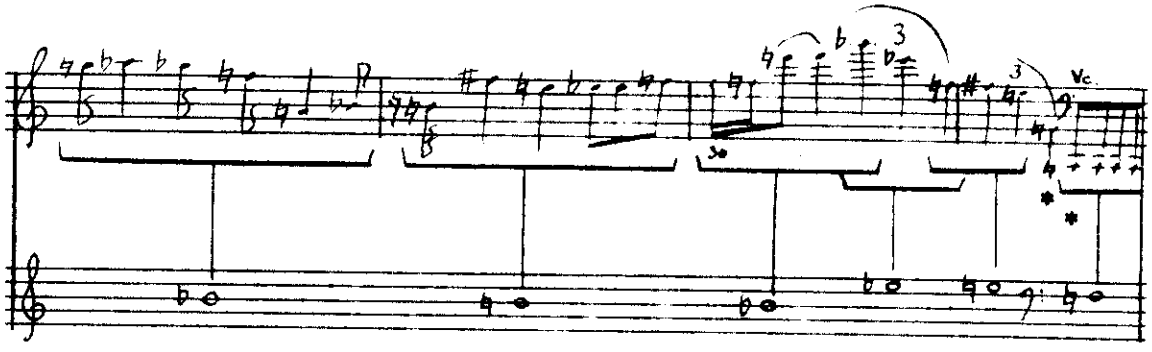
APPENDIX E

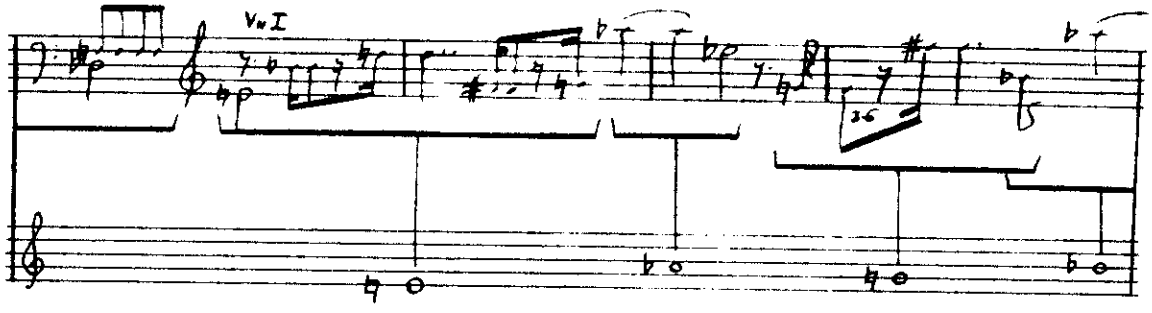
THE ANALYSES OF SCHOENBERG'S FOURTH STRING QUARTET, FIRST MOVEMENT

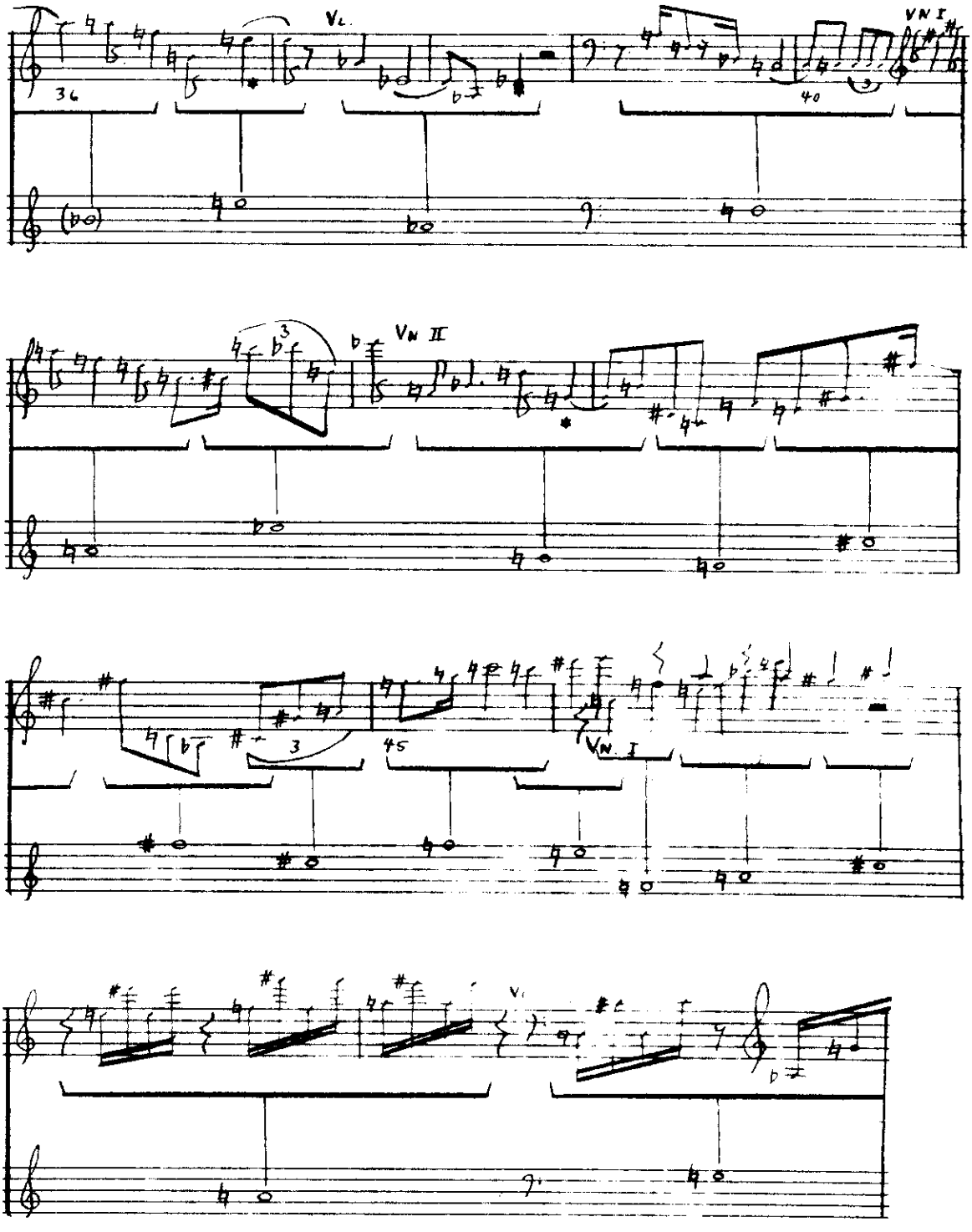

V~I
V~II
V~I
Vc
V~I

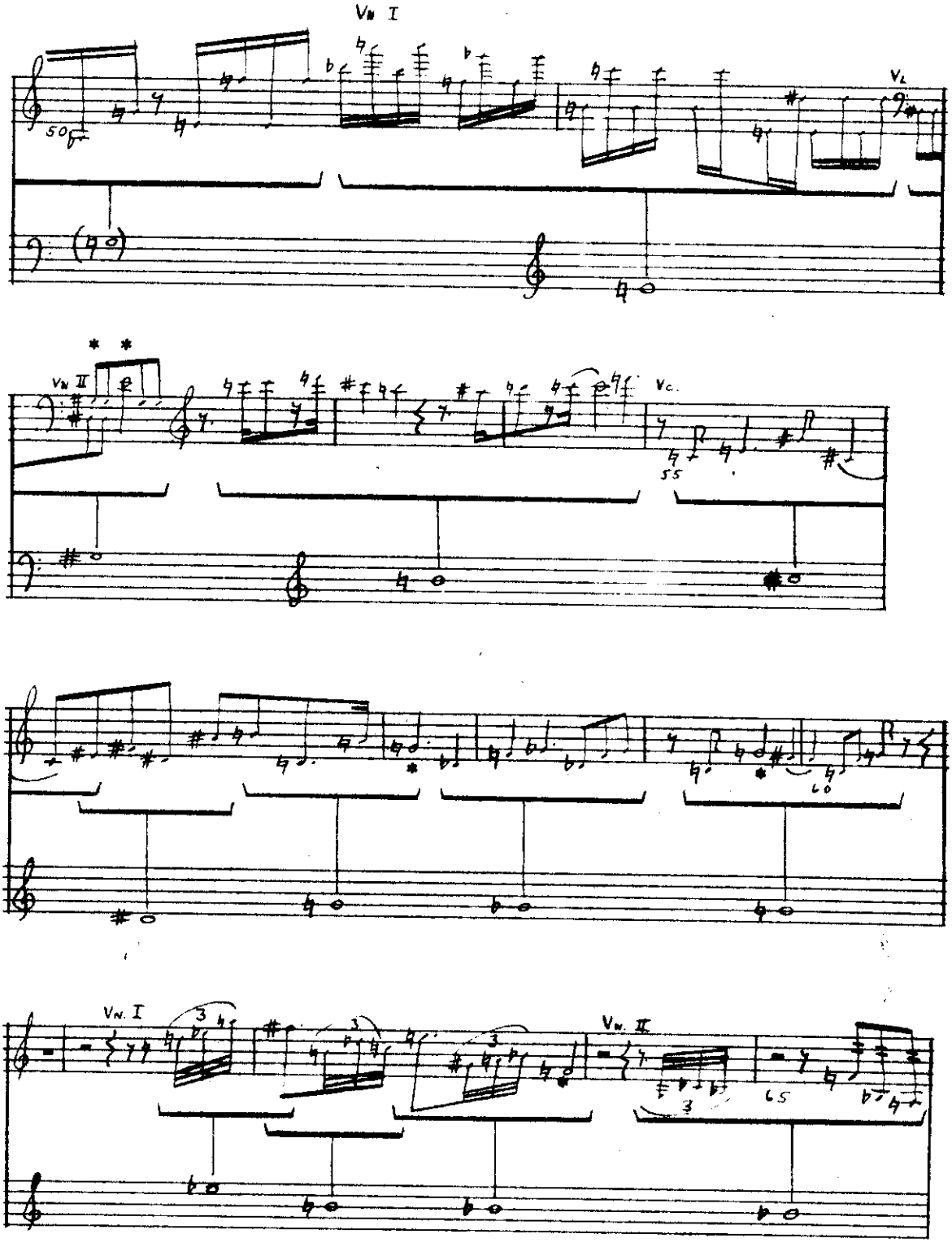

Vc
Vl
22
3

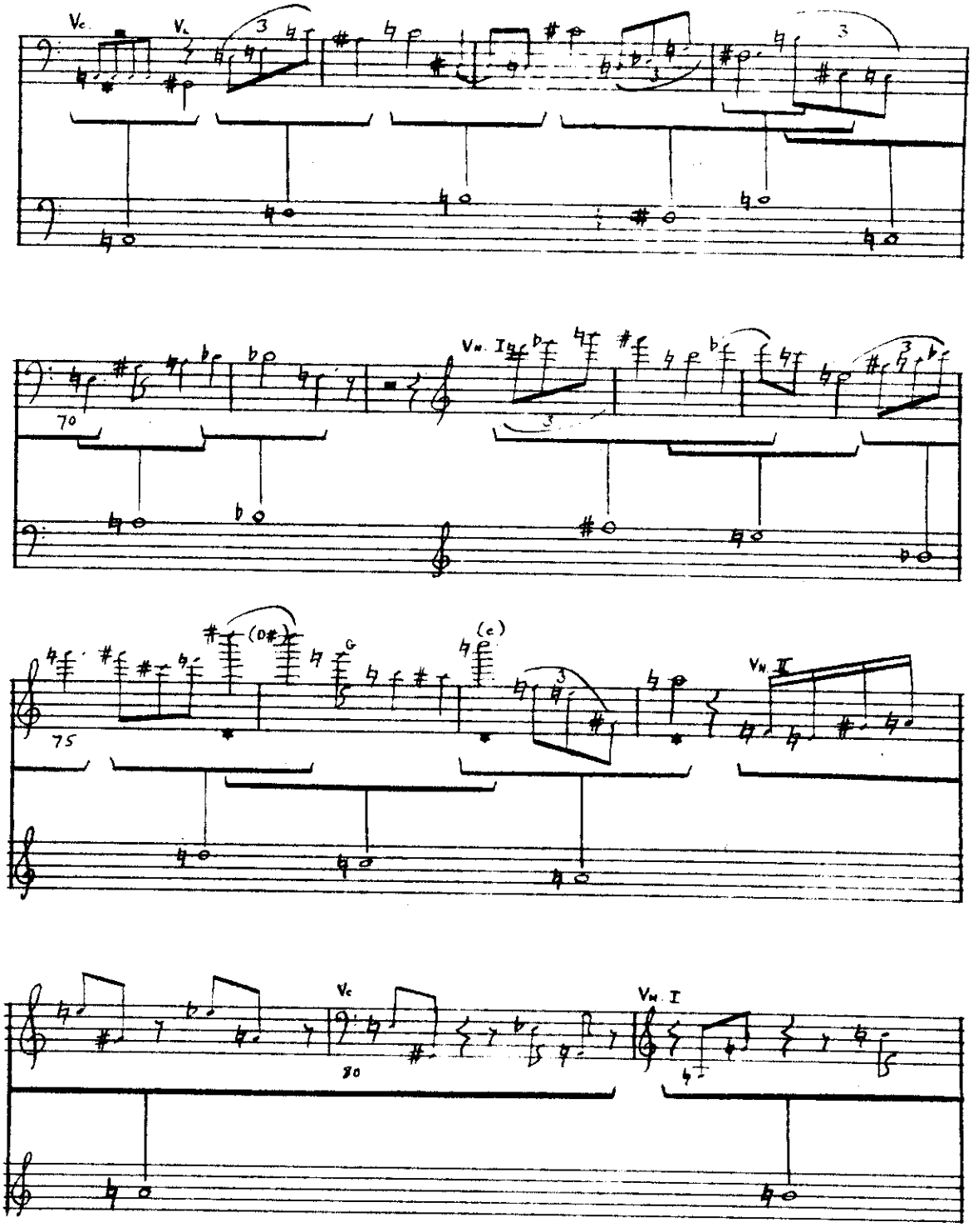

V~ II
25
V~ I

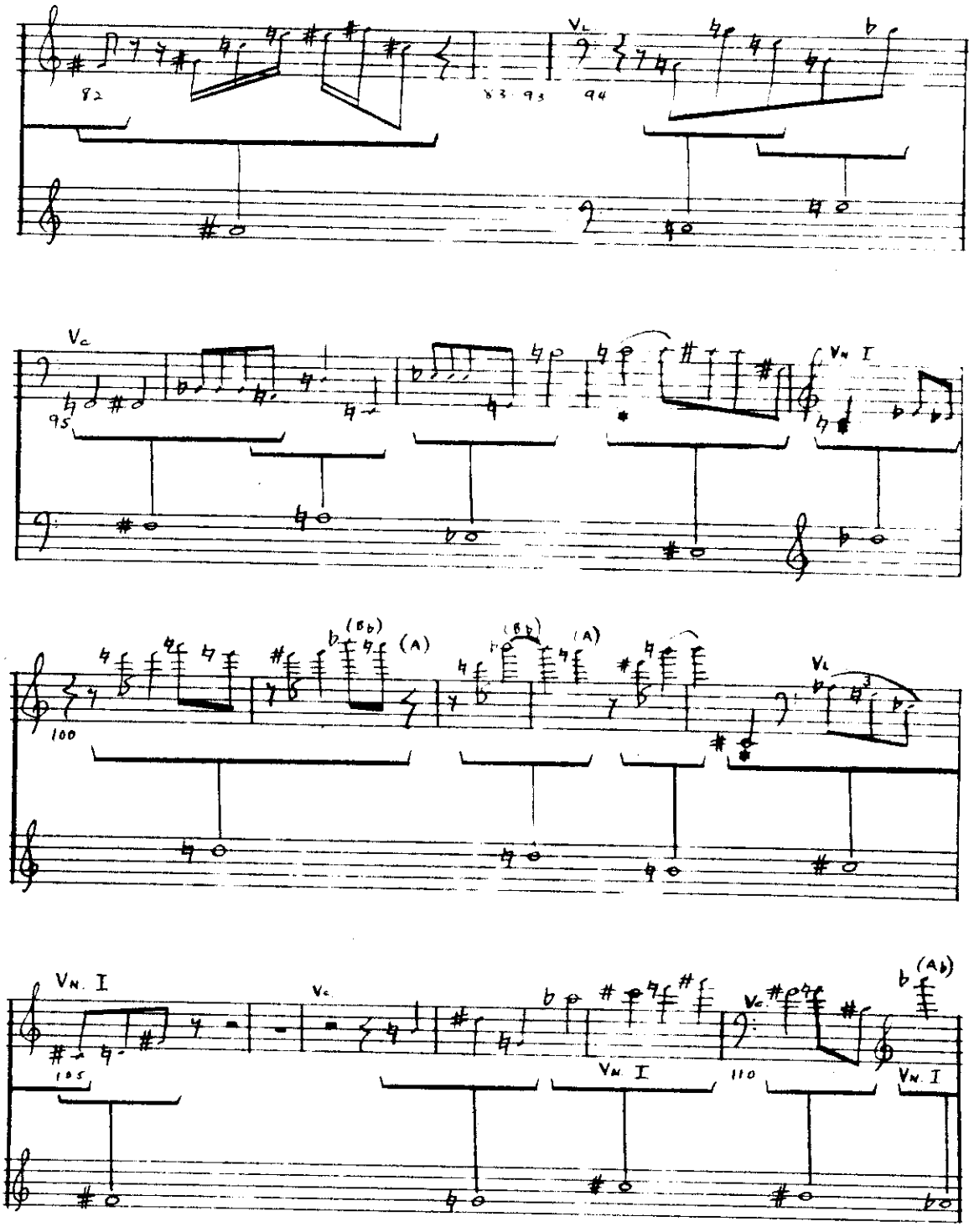

30
Vc

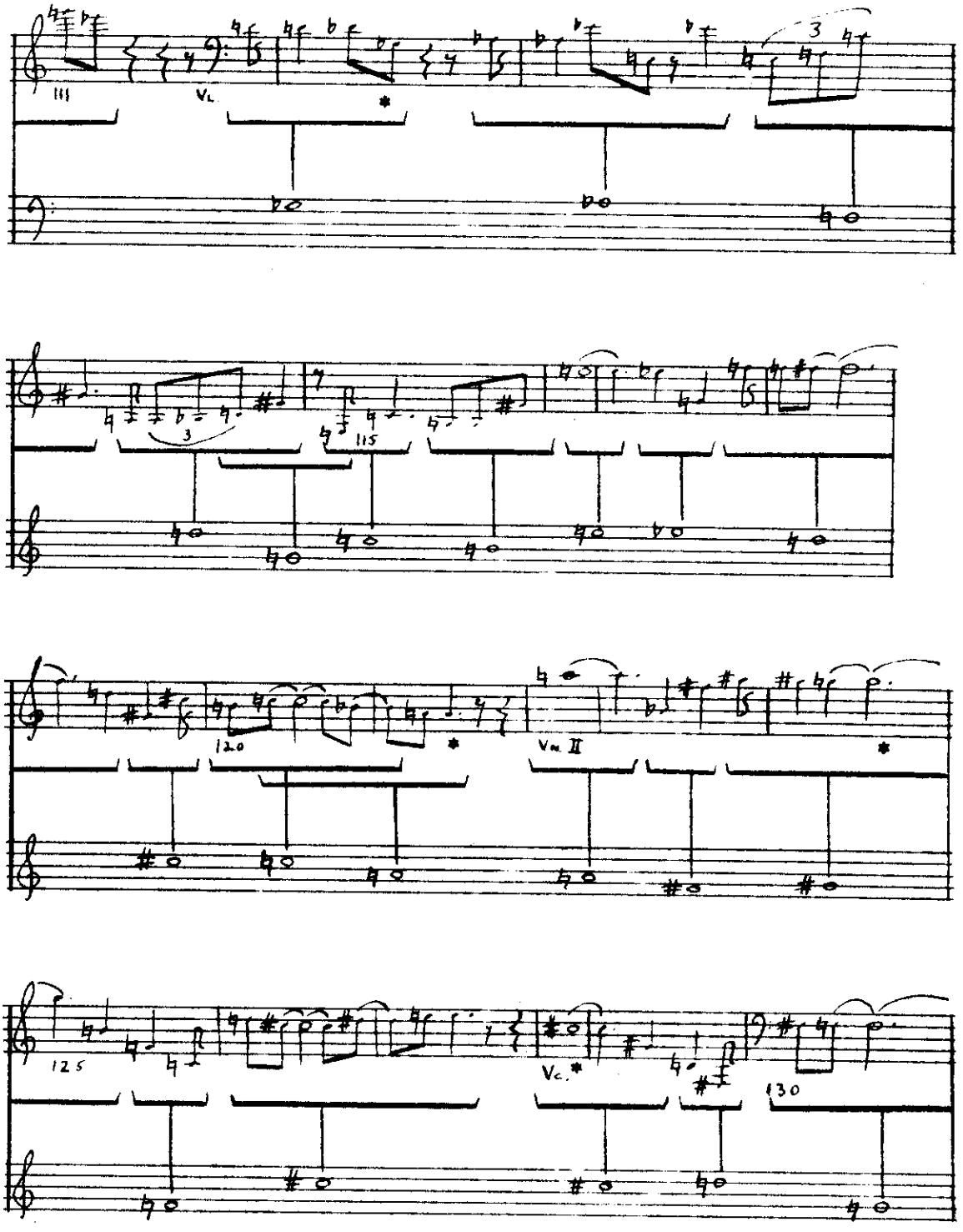

V~ I
36

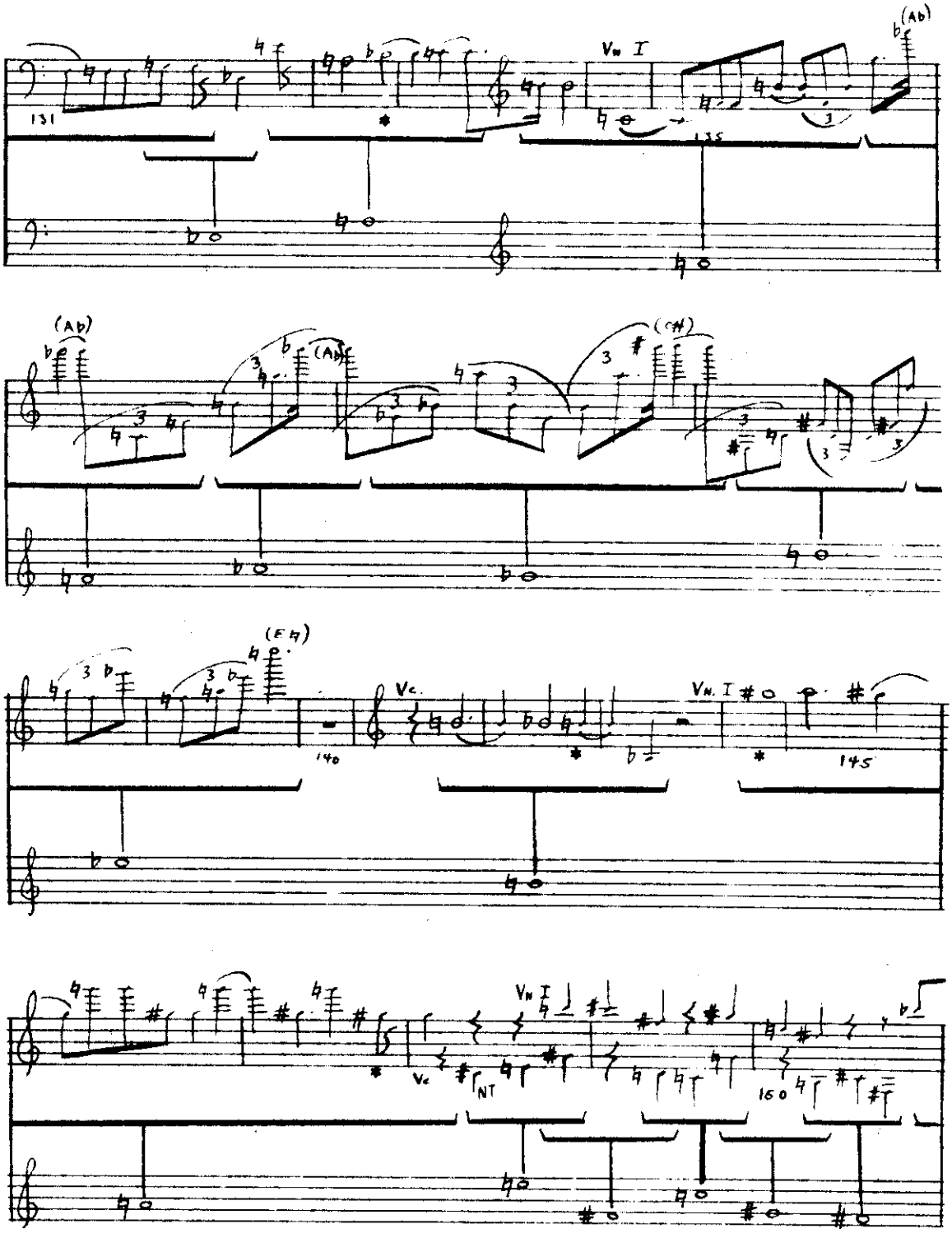

Vc.
VN I
VN II
VN I
Vc.

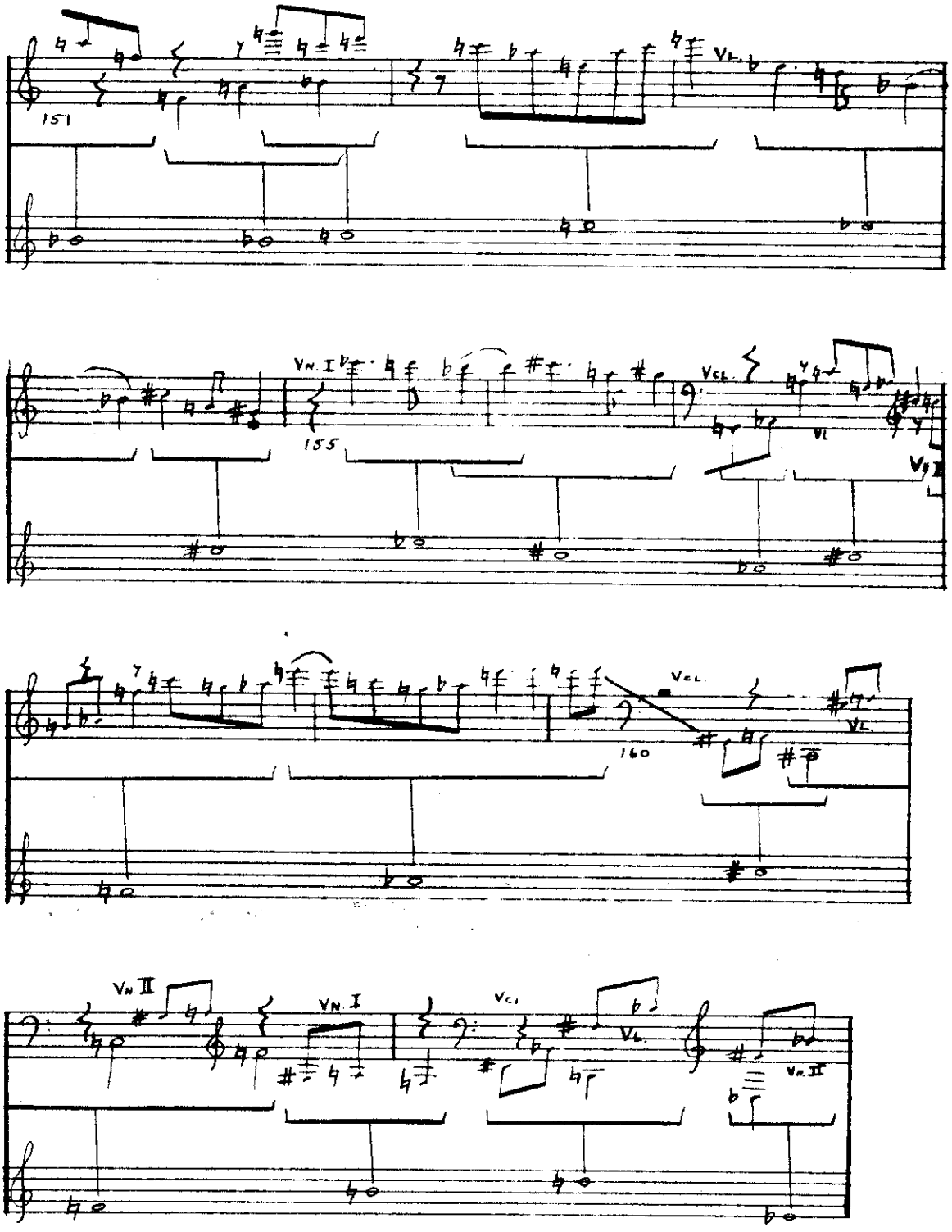

Vn I
Vn II
Vc.
Vn. I
Vn. II

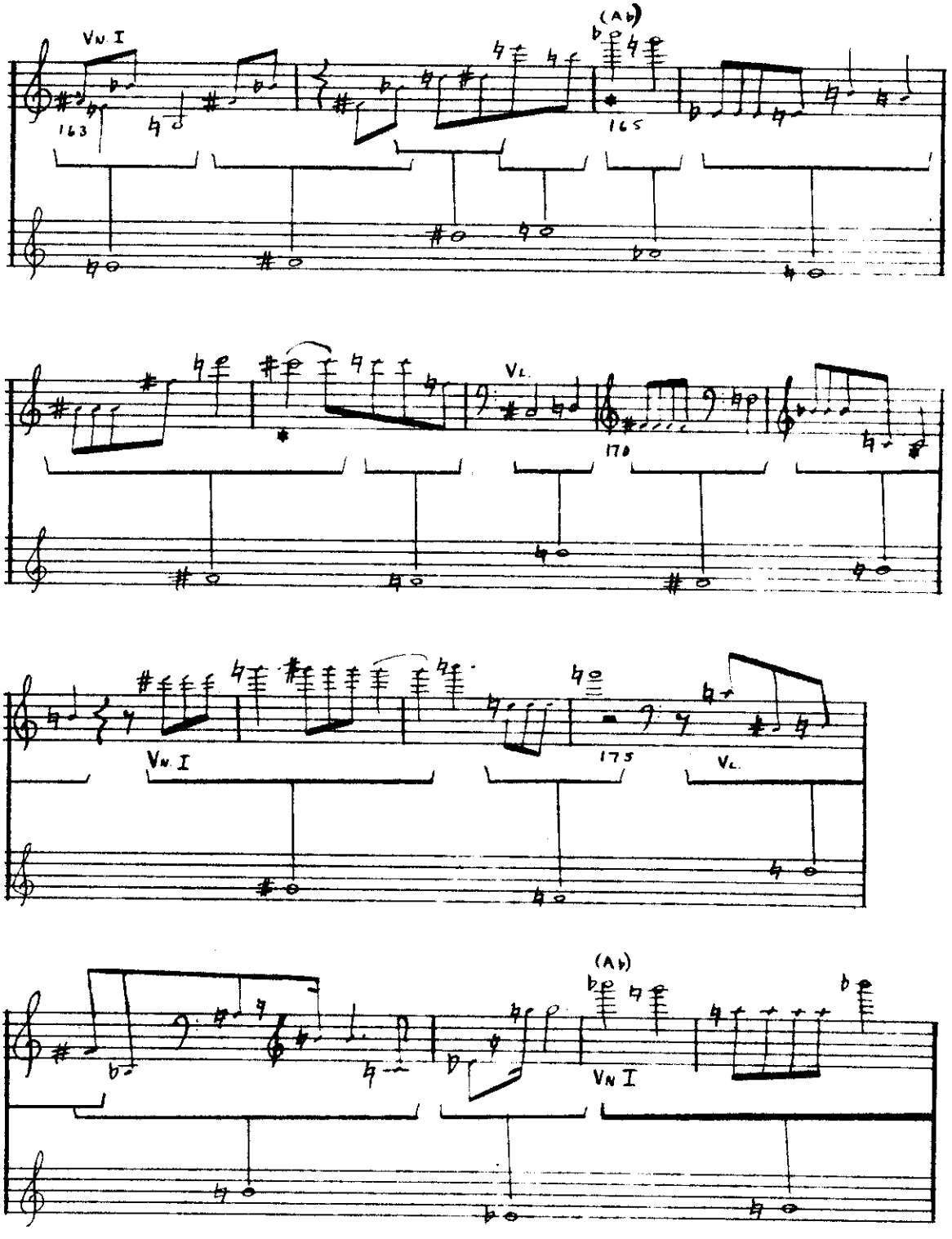

Vc.
Vc.
3
3
Vn. I
70
(D#)
G
(e)
75
Vn. II
Vc.
80
Vn. I

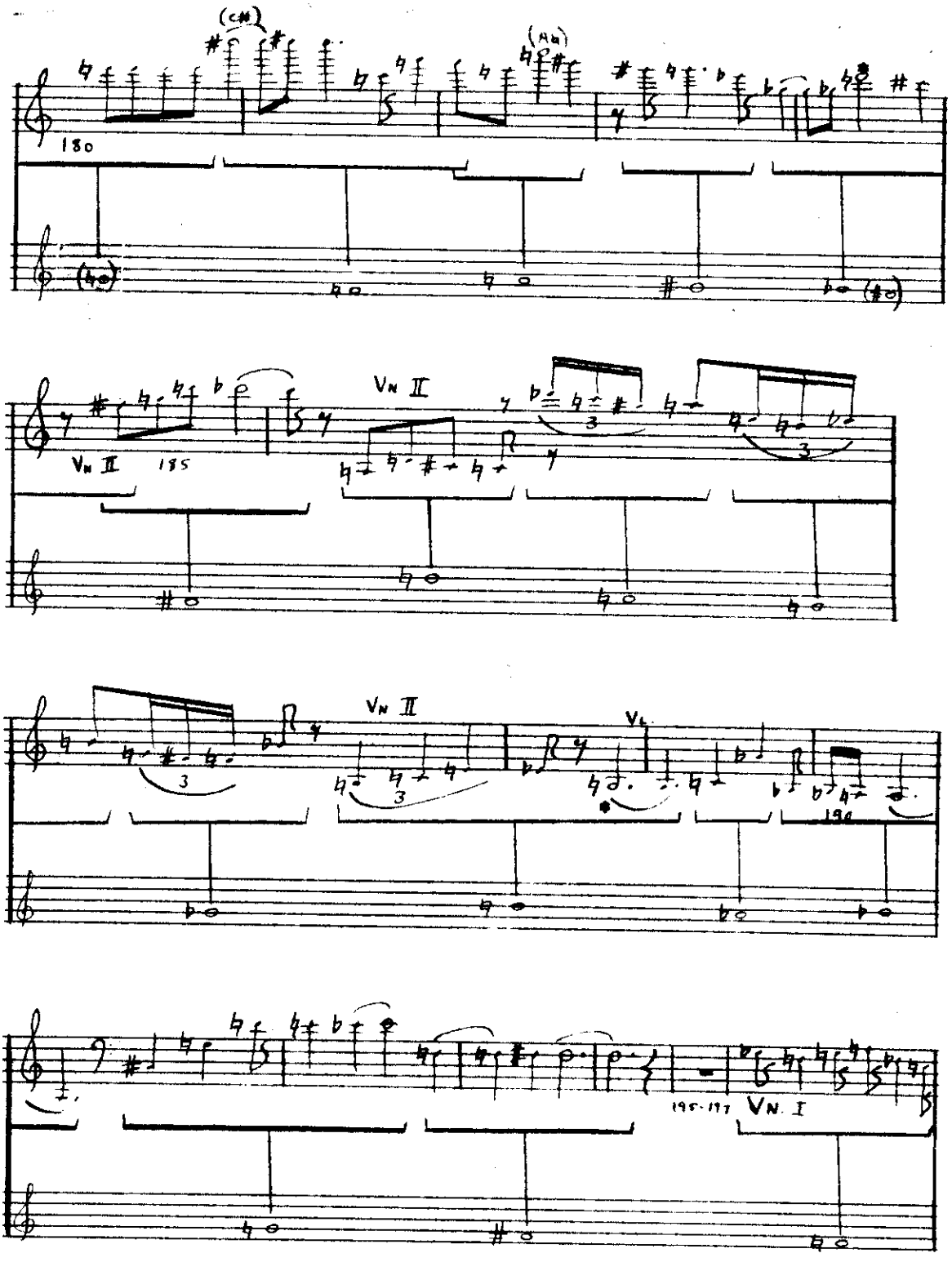

Vc.
92
93
94
95
Vn. I
100
(Bb)
(A)
105
110
(Ab)

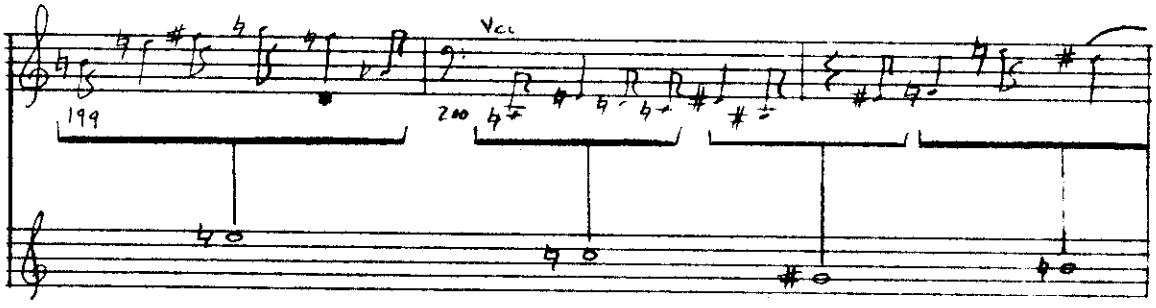

111
Vc.
3
3
115
120
Vn. II
125
Vc.
130


131
Vn I
135
(Ab)
(Ab)
(Ab)
(A)
(A)
(E♮)
140
Vc.
Vn. I
145
Vc
NT
Vn I
150


151
Vn. I
155
Vcl.
Vl.
160
Vn. II
Vn. I
Vcl.
Vl.
Vn. II


Vn I
163
(Ab)
165
Vc.
170
Vn I
175
Vc.
(Ab)
Vn I


(C#)
(A#)
180
Vn II
Vn II
185
Vn II
Vc.
190
195-197
Vn. I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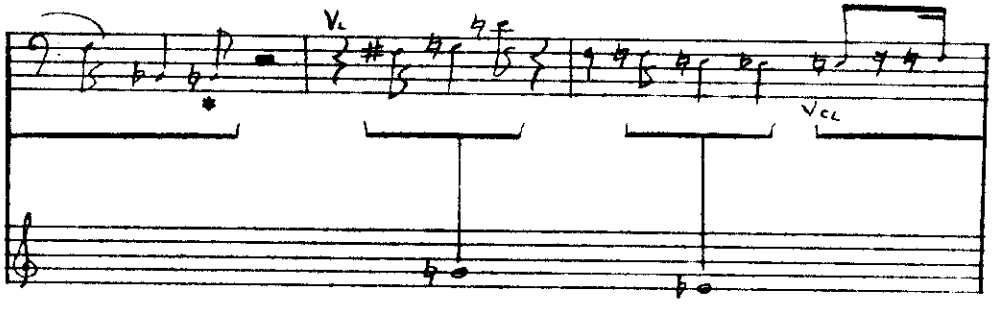
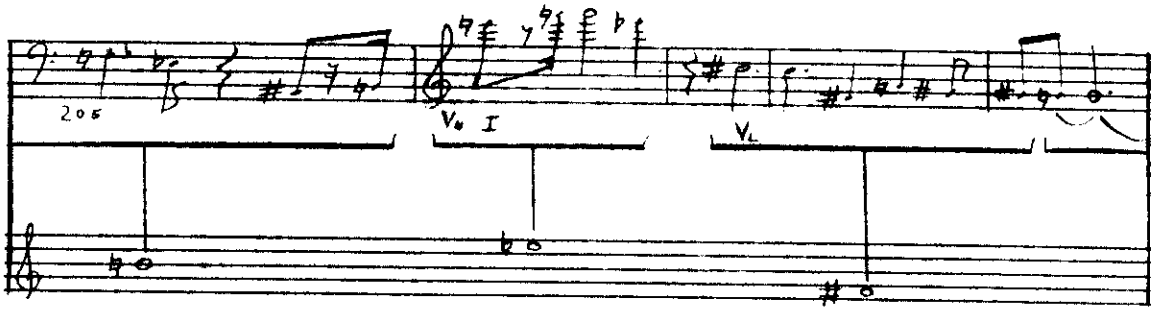
200
Vcl


Vl
Vcl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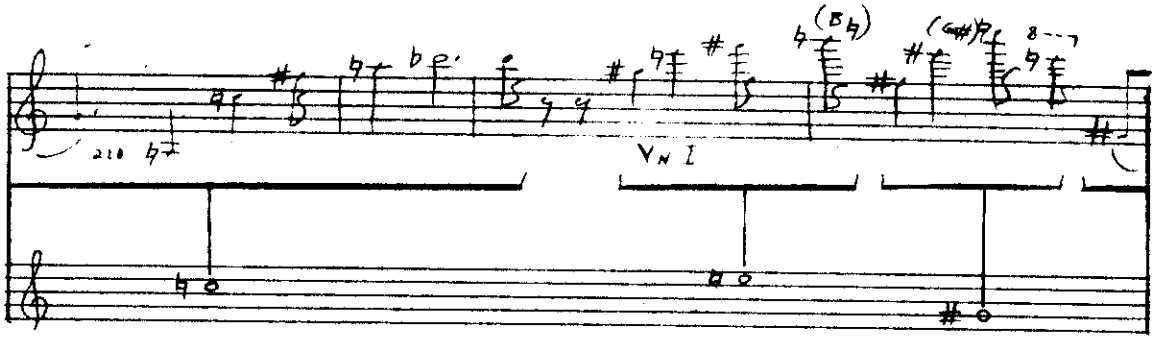
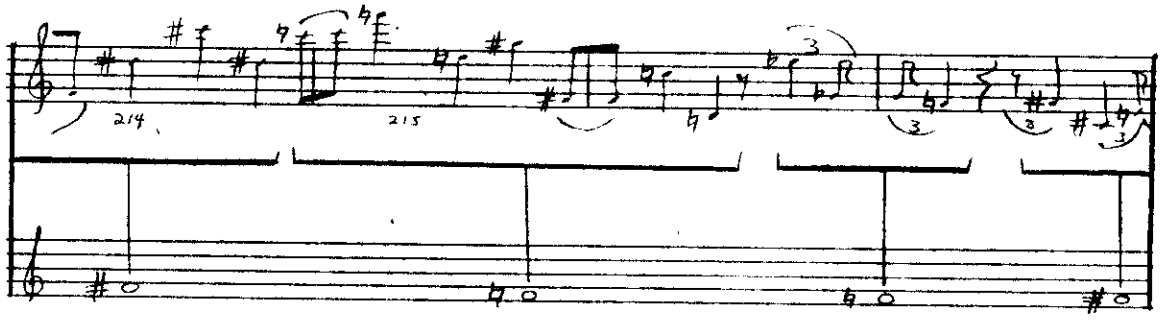
Vn I
Vl


210
Vn I
(Bb)
(G#)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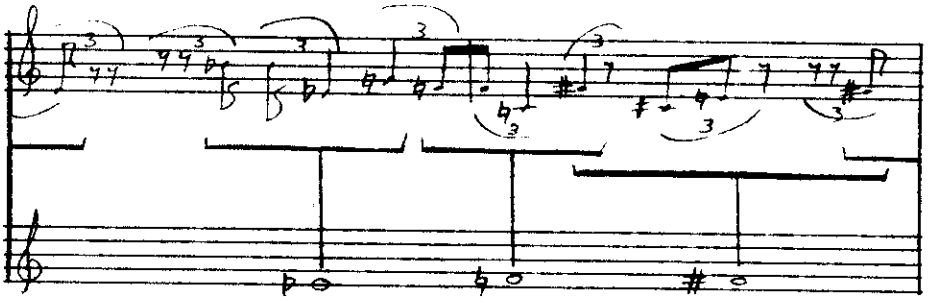
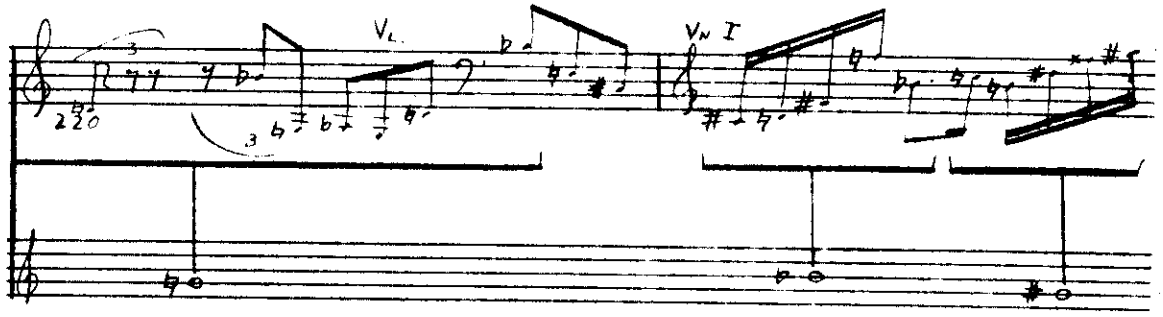
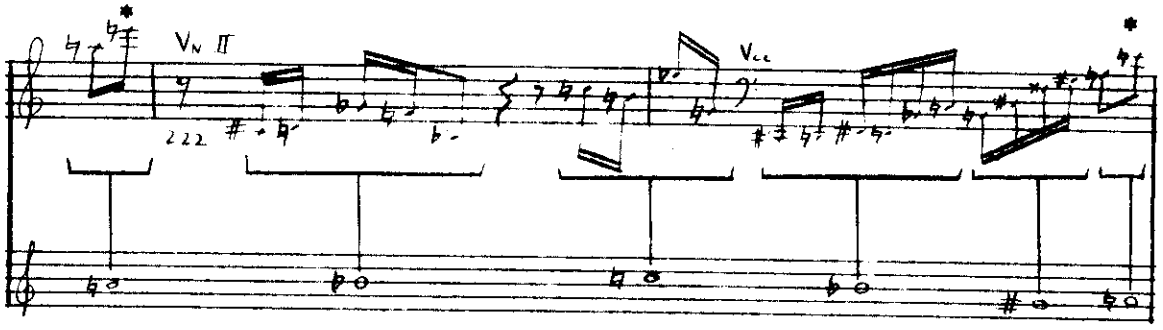
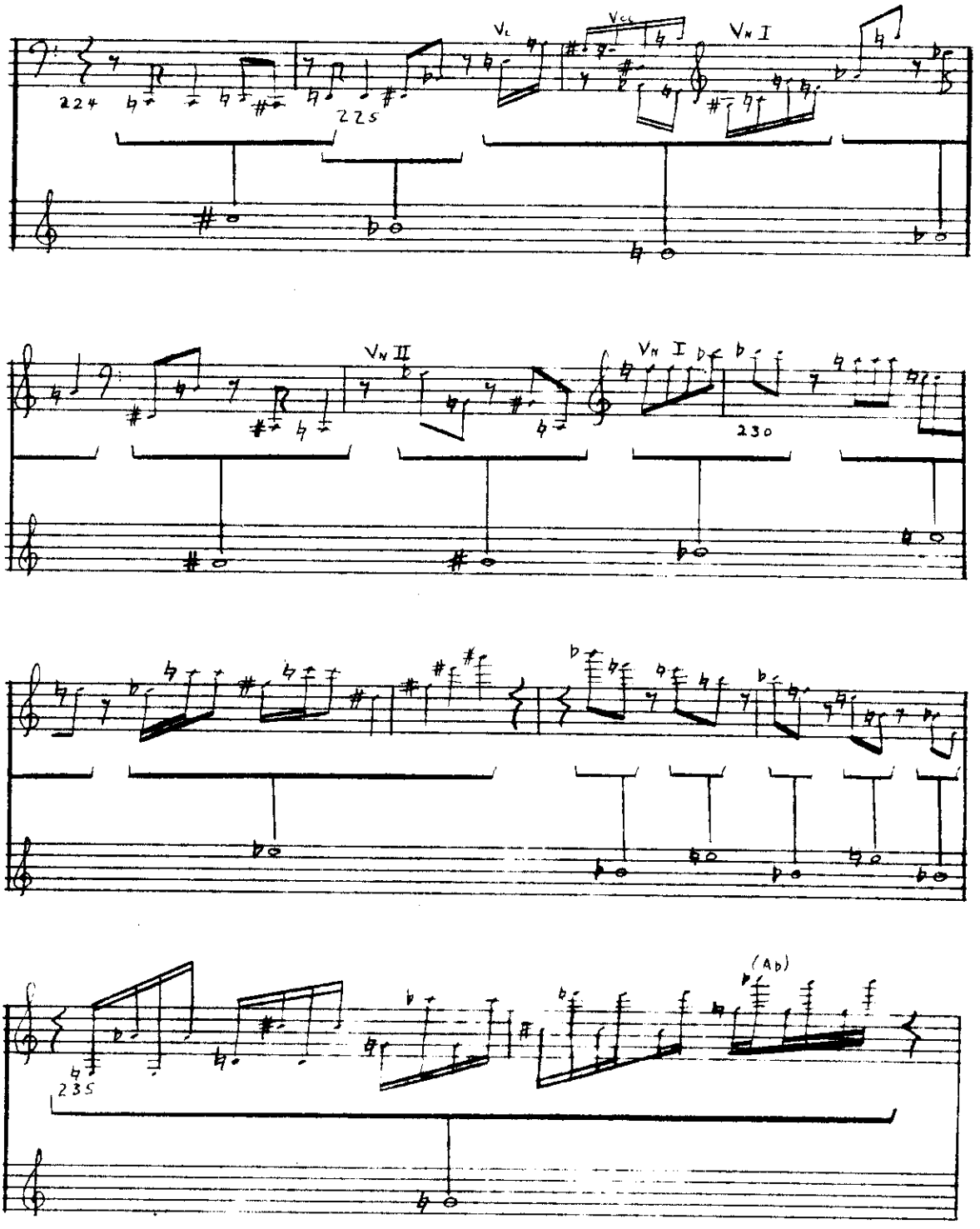
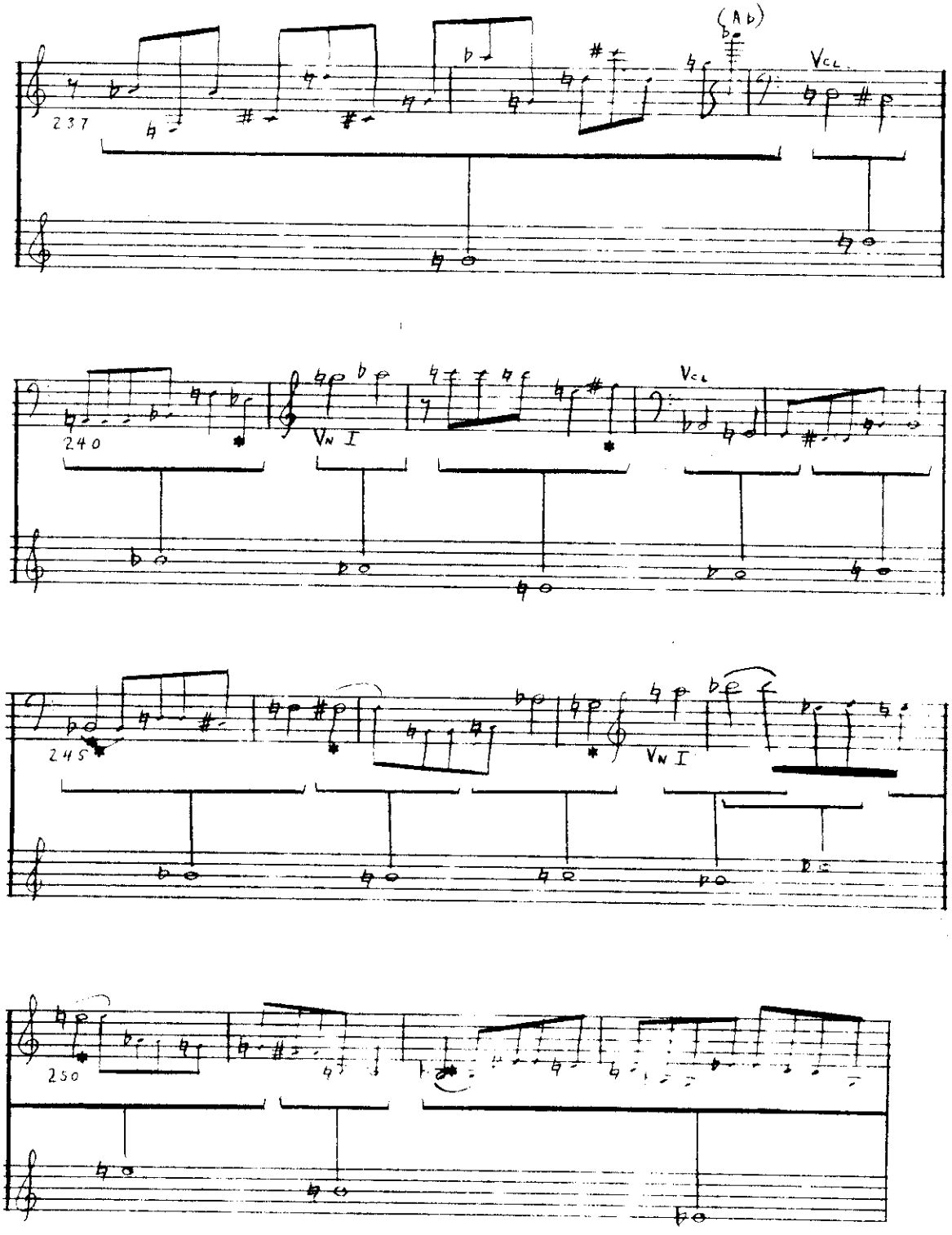
215

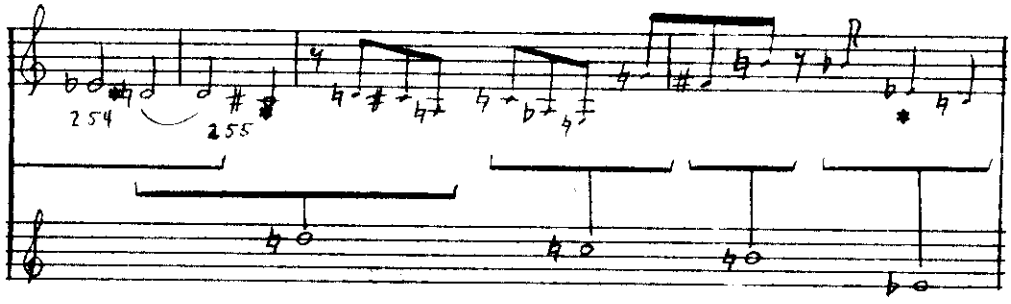



220
VL.
VN I


VN II
222
Vc.


224
225
VL
Vcl.
VN I
VN II
VN I
230
235
(Ab)


(A♭)
Vc.
237
240
Vn I
Vc.
245
Vn I
250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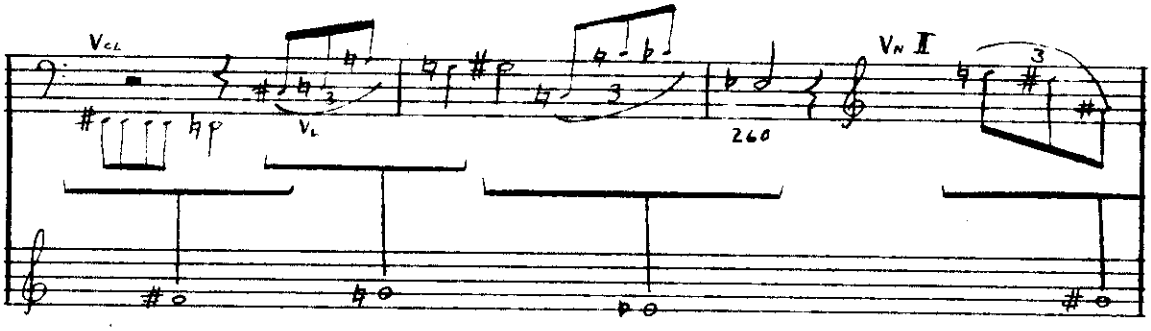
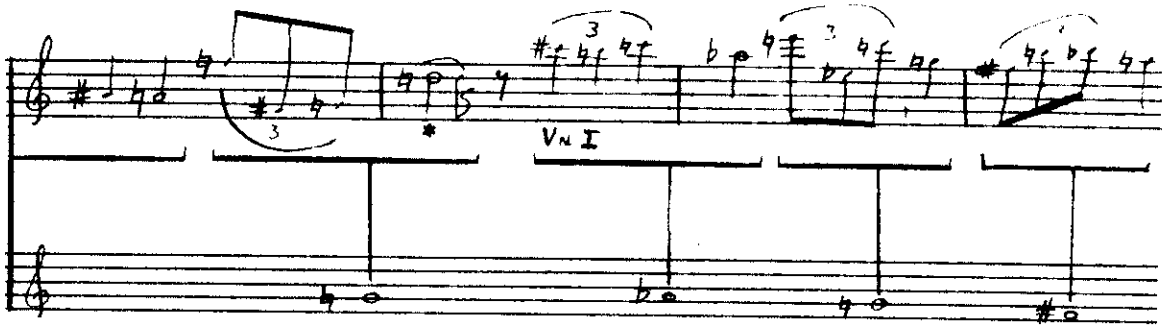
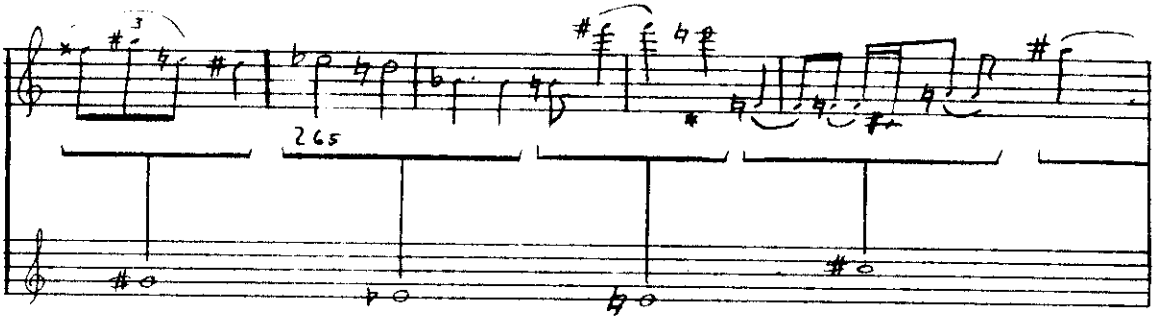

Vcl.
Vl.
260
Vn II


Vn I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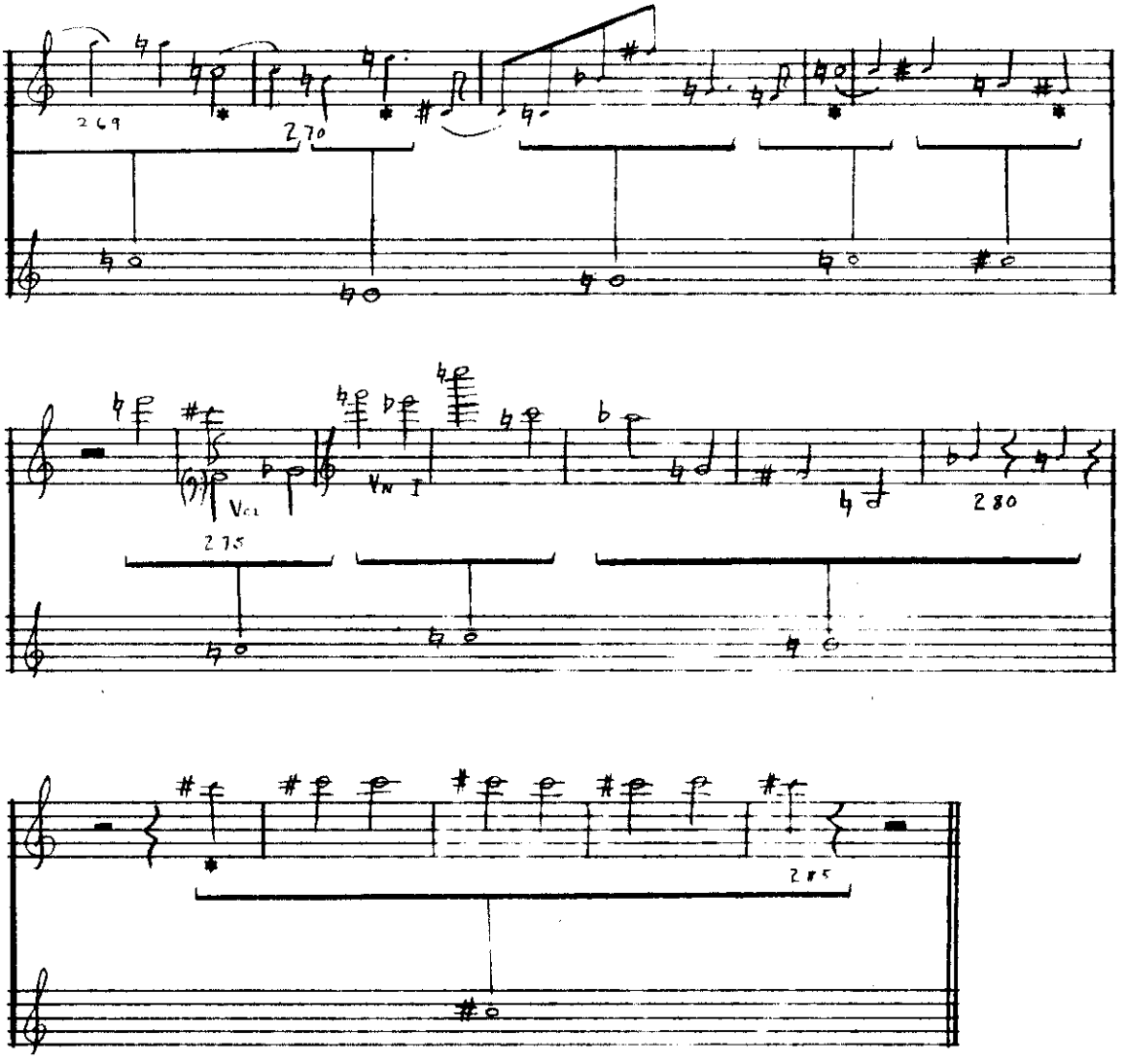
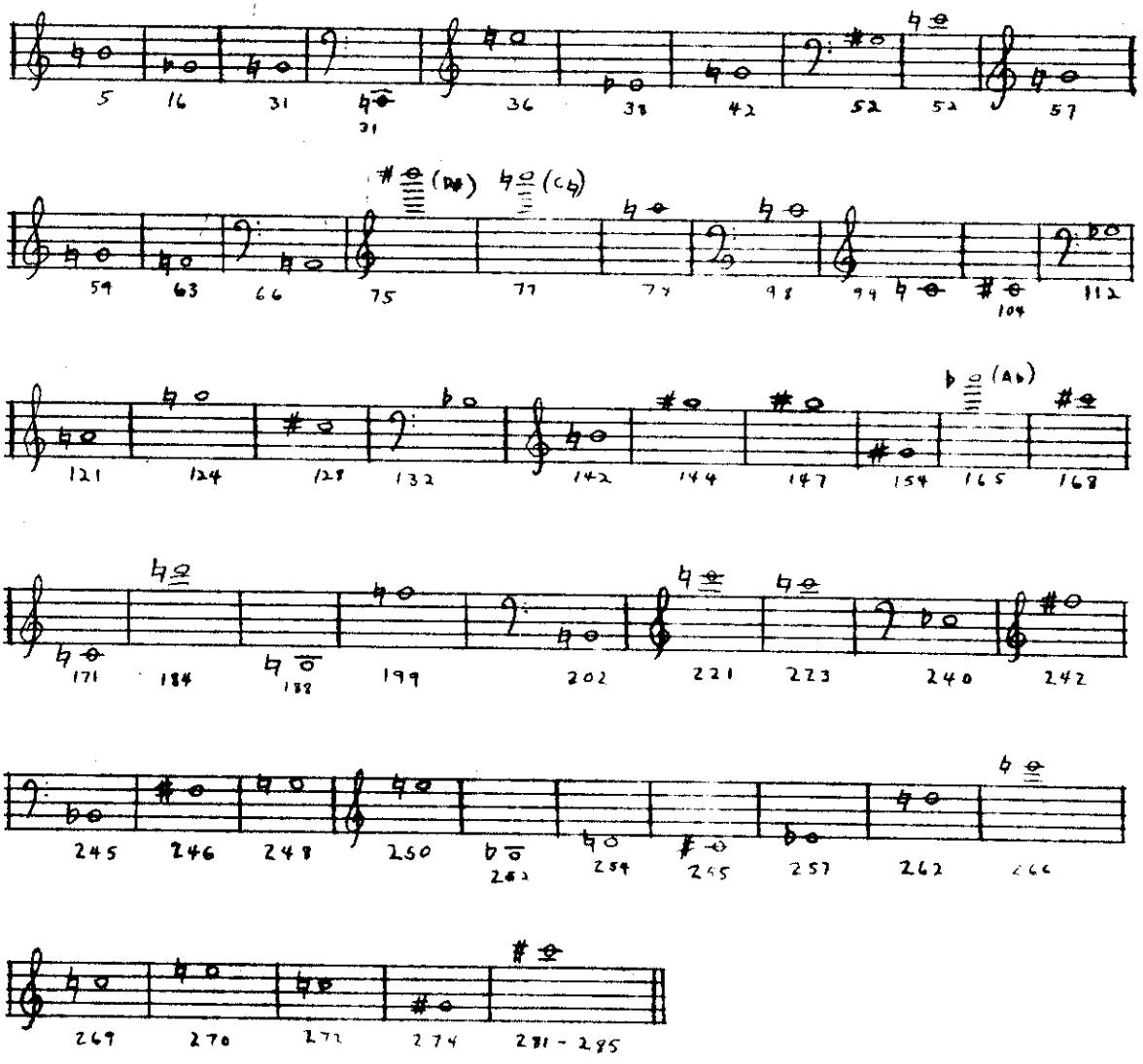

269
270
Vc1
Vn I
275
280
285

APPENDIX F

THE STRUCTURAL POINTS OF SCHOENBERG'S FOURTH STRING QUARTET, FIRST MOVEMENT, ACCORDING TO THE SCHENKER ANALYTICAL SYSTEM AS SEEN FROM APPENDIX E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