HARMONY AND STRUCTURE IN
RICHARD STRAUSS'S
MACBETH

THESIS

Presented the the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF MUSIC

By

Danny C. Bills, B. M.
Denton, Texas
August, 1996
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This study begins with a discussion of step theory. Included in this discussion is the basis of chord succession, the idea of fundamental representation, and the uses of reinterpretation technique. These concepts are then used to demonstrate the continuity and logic of the harmonic language found in Strauss's *Macbeth.*

Included in the study is a graph of the harmonic details found in *Macbeth.* This graph is organized according to the formal structure of the piece. Accompanying the graph is a discussion of the harmonic details and their relationship with the formal structuring.
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INTRODUCTION

Published writings concerning Richard Strauss's tone poem, Macbeth, are extensive. The most recent publication is an article entitled "Structure and Program in Macbeth: A Proposed Reading of Strauss's First Symphonic Poem," written by James Hepokoski. Most of the writings about Macbeth try to connect specific scenes and characters from the play with parts of the music. Hepokoski provides one of the more accessible readings and, he offers a few harmonic details to support his poetic interpretation.¹

Macbeth is representative of the harmonic practices found in the late nineteenth century, and is a composition that makes use of a highly-inflected chromatic language. Much of current music theory has either dealt with

Strauss's chromatic language in a superficial way or neglected it altogether.² In this study I shall argue that Macbeth represents a continuation of, rather than a departure from the harmonic and structural practices of the eighteenth and early nineteenth centuries. This study will draw together the harmonic practices of eighteenth and nineteenth-century treatises in order to devise an approach that shows how Macbeth conforms to the accepted practice, and how these elements, of the practice, are used to construct the extremely large structures that characterize this work.

This study relies heavily on the writings of Arnold Schoenberg. Schoenberg moved to Berlin in December of 1901, and by this time was well acquainted with Strauss.³ As president of the General German Musical Society, Strauss helped Schoenberg acquire a stipend of Fifty German Marks. He also recommended Schoenberg for a one thousand German-Mark scholarship from the Liszt Foundation. Schoenberg received this scholarship twice.⁴ Hans Heinz Stuckenschmidt's biography of Schoenberg devotes a whole chapter to the relationship between Strauss and Schoenberg. In spite of their eventual breakup, Schoenberg very clearly addresses the harmonic practices of Strauss and his contemporaries in his Theory of Harmony.

In this study Schoenberg represents an entire lineage of theorists who wrote about extended harmonic practices, including Rameau, Kirnberger, and

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⁴ Ibid., 63.
Simon Sechter. However, Schoenberg's writings are worked out to explain the full extent of chromatic practice. Schoenberg's chapter "At the Frontiers of Tonality", found in the Theory of Harmony, puts together many of the individual ideas addressed by these earlier theorists. Schoenberg's classification of vagrant harmonies such as the augmented-sixth and half-diminished-seventh chords is an example of this bringing-together of ideas.\footnote{See example 189 from Schoenbergs Theory of Harmony.}

Although much of Schoenberg's book deals with his own ideas, "At the Frontiers of Tonality" is a collection of extended-harmonic techniques derived from the ideas of Rameau, Kirnberger, and Sechter. Therefore, this study will quote extensively from Schoenberg with the assumption that his ideas concerning extended-harmonic practice originated long before either Strauss or Schoenberg were born.
CHAPTER 1

FUNDAMENTALS OF STEP THEORY

In contrast to Hugo Riemann's assertion that all diatonic harmonies fall within one of three possible classifications; subdominant, dominant, or tonic, Step Theory recognizes seven classifications of chords, one for each step of the scale. Each harmony has a unique effect that may vary according to context. Succession of harmonies is described in terms of weak or strong movement without consideration of chord quality or tonal center.

Chord Succession

The same basic procedures of chord succession apply to both the triads of the major scale and the triads of the minor scale. The vertical position of the triad with its root as the lowest sounding pitch most clearly defines the triad. Schoenberg writes, "Any setting of a chord that has the root in the bass imitates most closely the acoustical relation of the tone to its overtones." Obviously the fundamental pitch contributes most to the identity of the chord. This hierarchical system, analogous with the relative positioning of the pitches of the overtone series, provides the basis of chord succession.

Schoenberg's explanation of chord succession is based upon ideas taken

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from a lineage of theorists that begins with Jean-Philippe Rameau, and Johann Philipp Kirnberger, and encompasses a tradition from the early 18th century to the 20th century.

Schoenberg explains that the strongest type of chord succession occurs when the fundamental of a given harmony becomes one of the subordinate pitches of the following harmony. In example 1a, the fundamental or root of the first harmony becomes the fifth of the second harmony. In other words it changes its position in relation to the fundamental and can be seen as the pitch second only to the fundamental in contributing to the identity of the fundamental. In following with this logic, example 1b shows the fundamental pitch becoming the third of the harmony. Therefore this succession may be considered strong, yet not as strong as that shown in example 1a.

Example 1. Schoenberg's explanation of strong chord successions.

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Graham H. Phipps summarizes Schoenberg’s framework of harmonic logic as follows.

First, chord successions may be reduced to three types: strong, downward root movements by fifth or third in which the more fundamental notes of the first chord are subordinated to become lesser members of the second chord; weak upward root movements by fifth or third in which the subordinate notes of the first chord become more fundamental notes of the second chord; and super-strong, and ascending or descending stepwise root movements, which may be understood as sums of two strong progressions—either downward third and downward fifth, comprising the ascending stepwise progressions, or two downward fifths, comprising the descending stepwise progression.\(^9\)

Phipps then provides the two examples from Schoenberg’s *Theory of Harmony* to illustrate a progression by step. “Schoenberg’s example 74 illustrates a downward step progression as a sum of two downward fifths, where the I (six-four chord) and V, ordinarily coming between this dominant (V/V) and the closing chord are often left out.”\(^{10}\) (see Ex. 2)

Example 2. Schoenberg’s example with an added illustration.

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\(^{10}\) Ibid., 190.
Eighteenth-century theorists assert that the harmony built on the leading tone (i.e., seventh scale degree of the major scale) presents a unique circumstance in which the fundamental is said to be missing. In the key of C major or minor the harmony built on the leading tone is spelled B-D-F. It contains the intervals of a minor third and a diminished fifth. Assuming that the B is the fundamental creates a problem because the other pitches of the triad occur only in the most distant parts of the overtone series, and they do not appear to support B as the fundamental tone. However, the pitches of the harmony built on the seventh scale degree B-D-F can be found within the harmony built on the fifth scale degree that has an added seventh tone.\(^\text{11}\) This harmony is spelled G-B-D-F. (see Ex. 3)

Example 3. Fundamental of the diminished triad.

Therefore, the diminished harmony built on the seventh scale degree

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represents a major harmony whose fundamental lies a major third below its spelled root. Both harmonies are said to have dominant function and in this case are assigned the fundamental G. When this harmony is followed by tonic harmony, it represents fundamental movement of a descending fifth, and thus the strongest succession. (see Ex. 4)

Example 4. Succession of the diminished triad.

In practice the diminished triad built on the second scale degree, found in the minor mode, does not follow the same logic as the diminished triad on the seventh degree. In the former, the root of the triad, the second scale degree, is considered the fundamental, and its strongest tendency is movement by descending fifth. (see Ex. 5)

Fundamental Representation and Reinterpretation Technique

Fundamental representation provides points of reference from which observations concerning strength of chord succession can be made. The fully-diminished-seventh chord B-D-F-A\(^\flat\) has four pitches in common with

\(^{12}\) Ibid., 85-86.
the dominant ninth chord G-B-D-F-A♭. In the key of C major, both chords are considered to have the same purpose, which is to proceed to tonic, and they are

Example 5. Fundamental of the diminished triad built on the second degree of the minor scale.¹³

![Chord Diagram]

\[
\begin{array}{ccc}
[c] & ii_0^0 & V \\
\text{fundamental} & D & G \\
\end{array}
\]

often found in similar context. Therefore, both the fully-diminished-seventh chord and the dominant ninth chord in this case, are assigned the fundamental G. Schoenberg writes,

Theory, however, which has recognized the root progression a fourth upward to be the simplest and most natural, cannot admit here the progression a second upward as the most natural. Hence, it will do better to trace the resolution of the chord (the fully-diminished seventh) back to the root progression a fourth upward by assuming that the diminished seventh chord is a ninth chord with the root omitted.¹⁴

Stated simply, a fully-diminished-seventh chord represents a chord whose fundamental lies a major third below the spelled root of the fully-diminished seventh-chord.

The concept of reinterpretation expands the possible number of

¹³ Ibid., 58.

fundamental pitches any specific fully-diminished seventh chord might represent. The fully-diminished seventh is an equidistant chord consisting of four pitches that split the octave into four equal parts. The result is an ambiguous root that relies upon its context for definition. Schoenberg writes concerning this chord,

> It consists of three intervals of the same size, which divide up the octave into four equal parts, minor thirds. If we put still another minor third above its highest tone or under its lowest, no new sound enters the chord; the added tone is the repetition of one already present at the higher or lower octave. There are, then, as far as the sonority and the components are concerned, only three diminished seventh chords. Since, however, there are twelve minor keys, every diminished seventh chord must belong to at least four minor keys. Accordingly, the sonority F-A\(_b\)-C\(_b\)-D can signify VII in G\(_b\) (F\#) minor, if F (E\#) is considered the root; VII in A minor, if G\# be the root; VII in C minor, if B; VII in F\(_b\) minor, if D. It will thus be unclear to which key it belongs whenever the diminished seventh chord appears out of context or in an ambiguous one.\(^\text{15}\) (see Ex. 6)

The D fully-diminished-seventh, found in the first measure of example 6, may be seen to represent a B\(_b\) harmony, the dominant of E\(_b\). The same chord in the third measure, however, is presented in a different context. In this instance the chord anticipates the D\(_b\) seventh chord that follows it. Here its meaning is that of a F fully-diminished-seventh chord, representing a D\(_b\) harmony, the dominant of G\(_b\).

Schoenberg considers the fully-diminished-seventh to be a vagrant chord; "Such a chord belongs to no key exclusively; rather, it can belong to many, to practically all keys without changing its shape."\(^\text{16}\)

\(^{15}\) Ibid., 194.

\(^{16}\) Ibid., 195.
Example 6. Liszt, Sonetto 123 Del Petrarca, measures 3-8, showing fundamental bass.

Schoenberg classifies the augmented triad as another type of vagrant harmony. He writes concerning reinterpretation of the augmented triad,

Therefore, apart from any other reason, by analogy with the diminished seventh, every augmented triad belongs to at least three minor keys. If in all three minor keys, to which it belongs we regard as
its two most important tonal resolutions those to I and to VI, then we find that the same sonority, now called E-G\#-C, now E-G\#-B\#, or E-A\b-C, connects with three different roots, twice with each. Each of these is in the one case, root of a major chord, in the other root of a minor chord.\(^1\)

Any one of the three pitches of the augmented triad may be interpreted as the fundamental pitch and its strongest resolutions are movement up by fourth or down by third. Like the fully diminished-seventh chord, the augmented triad has an ambiguous root that is defined by its context. (see Ex. 7)

The F augmented triads, in measures 274 and 276 of Strauss's *Macbeth*, are the enharmonic equivalent of the A augmented triad. In measure 274 the triad resolves to B\b and therefore the harmony is represented with an F fundamental. In measure 276, the F augmented chord resolves to a D-minor harmony; therefore, it represents a harmony whose fundamental is A. In measure 280, the G\b augmented triad is the equivalent of a B\b augmented triad, and in this context, followed by the E\b chord, represents a harmony whose fundamental is B\b.

The second inversion triad is another example of a chord whose fundamental is defined by its context. This fundamental may or may not be the spelled root of the chord. In his discussion of the second inversion triad, Schoenberg states that the bass is the foundation of harmony. He points out that root position harmony gives the clearest sense of tonality. The first inversion triad is a melodic phenomenon and can replace the root position triad at almost any point without affecting the tonal sense, the exception is at the final where the greatest sense of closure is required.

\(^1\) Ibid., 241-242.
The overtones of the bass note in a second inversion triad, appear to clash with the other pitches of the upper voices and this creates a situation that requires special treatment. Schoenberg writes,

Thus the bass tone, by virtue of the reinforcement brought to it by the upper voices, (when in root position), is here predominant and conspicuous. If, however, the actual tones and the overtones of the bass do not correspond, then clashes are produced among the elements above the bass. These clashes may be felt as barriers, as resistance (to the harmonic flow), over which the will of the bass, the participant whose overtones are most numerous and most audible, prevails.¹⁸

A dominant-preparation harmony provides a contextual situation where the dominant harmony is expected. The second inversion triad can be seen to fulfill this expectation, however the bass note, not the root of the chord, is seen as the fundamental of the harmony. (see Ex 8)

¹⁸ Ibid., 57.
The augmented sixth chord is a harmony that may or may not contain its fundamental, depending upon which of its three forms is used. The augmented sixth, in its most common contextual setting, resolves to the dominant. In keeping with the assumption that the strongest succession is down by fifth, the augmented sixth chord functions as dominant preparation; therefore it is assigned the fundamental associated with the second scale degree. (see Ex. 9)

Phipps describes a nineteenth-century Step-Theory view of the augmented sixth chord.

The so-called "French sixth" chord is a II\(^7\) chord with a major third and diminished fifth, in the key of a minor, it is spelled B-D\(\sharp\)-F-A; the root is B and the chord usually appears in second inversion. The so-called "Italian sixth" chord is a II\(^7\) chord with a major third and diminished fifth and the root is missing; in the key of a minor, it is spelled D\(\sharp\)-F-A; the "real" root is B and the chord usually appears in second inversion reckoned above the "real" root. The so-called "German sixth" chord is a I\(^1\)\(^9\) chord with a major third, diminished fifth, minor ninth, and the root is missing; in the key of a minor, it is spelled D\(\sharp\)-F-A-C; the "real" root is B and the chord usually appears in second inversion reckoned
above the "real" root. Thus explained, the "real" root of each of these chords is the second scale degree; furthermore, the vertical position of the chord does not affect its identity.¹⁹

Example 9. Beethoven Symphony no. 5, 1st movement, measures 18-21, fundamental of the augmented-sixth chord.

The German form of the augmented-sixth chord spelled A♭-C-♭-F♯, is the enharmonic equivalent of the dominant-seventh harmony spelled A♭-C-♭-G♭. Therefore, either harmony may be treated as if it were the other, depending upon the context. Schoenberg writes concerning the use of these harmonies,

The fact that the sound of an augmented six-five (four-three, two, or sixth) chord is identical with the sound of a dominant seventh chord can now be easily exploited by treating (introducing and continuing) the one as if it were the other. For example, an augmented six-five chord on some degree is taken to be the seventh chord with the identical sound and is resolved according to the patterns V-I, V-IV, or V-

VI. or a dominant (or secondary dominant) seventh chord is interpreted as an augmented six-five, four-three, or two chord and resolved accordingly. This technique, together with the idea of the Neapolitan sixth on secondary degrees, produces great enrichment of the tonality.  

Therefore, the harmony used in this fashion may be considered to represent either of two possible fundamentals. For example, the augmented-sixth harmony spelled A\textsuperscript{b}-C-E\textsuperscript{b}-F\#\textsuperscript{#}, would represent a harmony whose fundamental is (D), and the dominant-seventh harmony spelled A\textsuperscript{b}-C-E\textsuperscript{b}-G\textsuperscript{b}, would represent an A\textsuperscript{b} harmony. The following example demonstrates the use of a chord that is spelled as a major-minor seventh harmony but resolves as an augmented-sixth harmony. (see Ex. 10)


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Successive and Reflexive Relationships

Because of the frequent changes of tonal level associated with the harmonic language of Macbeth, a distinction should be made between reflexive and successive relationships.\textsuperscript{21} The reflexive relationship describes the connection between the tonic key and any specific tonal level occurring as an important tonal region. The successive relationship describes only the connection between any two conjunctive tonal levels.\textsuperscript{22}

This terminology may also be applied to individual harmonic relationships. The harmonic logic associated with some of the transitional passages within Macbeth requires that the relationship between individual harmonies be examined without reference to specific tonal centers. For example, the harmonies A major and D major are said to function as VII and III on the level of B minor, and this is the reflexive relationship. However, the successive relationship of these two harmonies is a succession by perfect fifth.

Schoenberg's discussion of harmonic succession is in terms of strength of movement without reference to tonal level or quality of harmony.\textsuperscript{23} Schoenberg does provide roman numerals in many of his writings. He uses upper case numerals representing the scale degree upon which a particular harmony is built. Thus the successive level of harmonic activity is governed

\textsuperscript{21} In this study the term tonal level will have the same meaning as key.

\textsuperscript{22} Dennis Cranford, "Remote Key Relationships in the Music of Cesar Franck," unpublished paper presented at the 1991 meeting of the Texas Society for Music Theory, Houston, Texas, February 1991, uses this terminology to describe key relationships.

\textsuperscript{23} See page 6 of the present study.
by the principles of succession described by Schoenberg.

Functional Theory appears to address strength of repose in reference to a governing key center. Tonic is the most restful harmony and all other harmonies are positioned according to their respective distances from the point of repose. These issues appear at the reflexive level of harmonic activity, and are concerned with something different than Schoenberg's presentation concerning strength of movement.

These two relationships provide a basis for discussing the harmonic language found in Richard Strauss's Macbeth. The issues are harmonic stability, repetition of harmonic patterns, and the logic of chord succession. These issues address the relationship between harmony and structure, and the answers to questions about harmonic organization are found at both the successive and reflexive levels of activity. Therefore, in some cases I will offer dual readings that involve elements of both Step Theory and Functional Theory. From the functional perspective, I will use roman numerals to demonstrate the harmonic stability of a particular passage. However, in highly-unstable passages step theory provides the only basis from which observations can be made.

Modulation

Strauss's Macbeth uses a highly-chromatic language involving directly and indirectly related tonal levels. Movement to and from these levels is achieved by methods established by Strauss's predecessors.\footnote{The term modulation refers to this movement from one key or tonal level to another.} The most
common type of modulation is the pivot modulation. The pivot modulation uses a triad, as a pivotal point, that is considered functional on both tonal levels. At measure four of example 11, Mozart uses a D major harmony as a pivotal point. This harmony functions as I on the level of D major and IV on the level of A major.


Modulation may also occur without a pivot harmony. One tonal level appears to end then another begins, and there is no overlapping. This type of modulation is often found between phrases, as shown in mm. 55-56 of Schubert's Moments Musical no. 2. (see Ex. 12)

Modulation may also be achieved by the use of a harmonic-sequential pattern. This is the repetition of a series of harmonies at different tonal levels. Chopin's Mazurka, Op. 56, no. 1, serves as an example of modulation by harmonic sequence. Chopin uses three similar statements of material on three different levels B major, A major, and G major. (see Ex. 13)

In the Chopin example, both B major and G major are well established tonal levels; however, the level of A major appears here as only a temporary level. A temporary level may appear in almost any part of a composition and may employ the use of secondary harmonies. Secondary harmonies are harmonies that appear functional on the temporary level, yet are not functional on adjacent levels. (see Ex. 14)

Example 14 begins in E major, temporarily moves to g# minor, then returns to E major. The dominant seventh chord in the second measure is a secondary harmony because it can be seen as a primary harmony on the level of g# minor but only a secondary harmony on the level of E major.

Macbeth appears, at first glance, unusual because of the highly-chromatic harmonies used and the seemingly unrelated tonal areas. However, Strauss's use of vagrant harmonies enlarges the number of keys related by common chord. Strauss's modulations are achieved by methods that were commonly used by his predecessors, but his use of vagrant harmonies at or near points of modulation often obscures his method. Through the application of fundamental representation and reinterpretation technique, Strauss's harmonic language can be shown to have logic and continuity so that the label of non-functional harmony does not apply.
CHAPTER 2

THE HARMONIC DETAILS OF STRAUSS'S MACBETH

The following graph presents the harmonic details of Macbeth as they appear in each period structure. Each of the individual periods ends with a strong cadence. Within each period there are smaller phrases that end with weaker cadences; however, the graph does not necessarily represent the phrase as a single line of the graph. Individual lines of the graph are intended to illustrate the organization of the melodic line by indicating sequential, parallel, or contrasting types of melodic organization. These appear at many different levels of structure and are not necessarily set apart by cadence, nor are they complete within themselves. The term period is used to identify the large structures set apart by strong cadence. Phrase is used to distinguish the smaller structures that end with lesser degrees of repose. The terms head and tail identifies the use of different motives within a phrase and should not be confused with the antecedent or consequent of the phrase.

Some of the details are represented in the following way.

<table>
<thead>
<tr>
<th>example</th>
<th>detail</th>
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<tr>
<td>1) G</td>
<td>Large case letters represent major harmonies, in this case G major.</td>
</tr>
<tr>
<td>2) g</td>
<td>Small case letters represent minor harmonies, in this case G minor.</td>
</tr>
<tr>
<td>3) (G)</td>
<td>Fundamentals that are not physically present are shown as large case letters in parentheses, as, for example, the B diminished triad as vii° in C.</td>
</tr>
<tr>
<td>4) [G]</td>
<td>Tonal levels are placed in brackets. This represents the key of G major. Minor keys are shown as small case letters in brackets.</td>
</tr>
</tbody>
</table>
Period 1
measures 1–19

measure  1  2  3  4  5
harmony  A | | | | |
fundamental

measure  6  7  8  9
harmony  d | | f |
fundamental [d] [f]

measure  10  11  12  13
harmony  D b | G7 | C6 B | E |
tonal function VI IV V7 V6 VI VII

measure  14  15  16  17  18  19
harmony  C7 | G7 | C6 | C | A7 | B | d |
fundamental (A) (E) G# A (D) (G) (E) A

D cadence delayed by submediant
Period 2
measures 20–63

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<tr>
<td>harmony</td>
<td>d</td>
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<tr>
<td>tonal function</td>
<td>i</td>
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<tr>
<td>tonal level</td>
<td>[d]</td>
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<td>dec. cadence on dom. of natural sixth</td>
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<td>(F)</td>
</tr>
<tr>
<td>tonal level</td>
<td>A (D)</td>
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series of reflexive relationships
reinterpreted as E+
descending minor third

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<td>C7</td>
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<td>C</td>
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<td>[d]</td>
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</table>

elaboration of A harmony

<table>
<thead>
<tr>
<th>measure</th>
<th>49 - 51 - 53 - 55 - 57 - 59 - 61 - 63 -</th>
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<tbody>
<tr>
<td>(m. 49)</td>
<td>extension employing head over dominant pedal</td>
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<td>closing/codetta</td>
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<td>A</td>
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<td>A</td>
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<tr>
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</table>

e llipsis of dom descending minor third
### Period 3
measures 64-122

<table>
<thead>
<tr>
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<th>Head</th>
<th>Tail</th>
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</thead>
<tbody>
<tr>
<td>64-66</td>
<td>A</td>
<td>f#6</td>
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<tr>
<td>68-70</td>
<td>A#</td>
<td>C#</td>
</tr>
<tr>
<td>71-73</td>
<td>D</td>
<td>E4</td>
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<tr>
<td>75-77</td>
<td>E6</td>
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<tr>
<td>79-81</td>
<td>E2</td>
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<tr>
<td>81-82</td>
<td>D6</td>
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</table>

#### Head
- **Harmony**: A, A#, C#
- **Fundamental**: [f#]
- **Tonal Level**: [f#]

#### Tail
- **Harmony**: D, E#, A, A, E, C, E
- **Fundamental**: D
- **Tonal Function**: [D]
- **Tonal Level**: [D]

#### Developmental Extension of Tail
- **Harmony**: f#6, C#, D6, E4, A, E6, A, E, C, E
- **Fundamental**: D, E, A, A, C, E
- **Tonal Function**: [D]
- **Tonal Level**: [D]

#### Measure 83-85-87-89-91-93-95-97-99-101
- **Head**
  - **Harmony**: f#6, A, A#, F#7
  - **Fundamental**: C#
  - **Tonal Function**: [f#]
  - **Tonal Level**: [f#]
- **Tail**
  - **Incomplete Tri-sub as Pivot**

#### Measure 102-104-106-108-110-122
- **Head**
  - **Harmony**: f#6, A, A#, F#7
  - **Fundamental**: C#
  - **Tonal Function**: [f#]
  - **Tonal Level**: [f#]
- **Tail**
  - **Incomplete as Pivot**
Period 4
measures 123–145

measure 123 – 125 – 127 – 129 –

head

harmony \( F_2^4 | B^6 F_3^4 | B^6 D_9 E_6 | B^9 E_2 | B^8 F_7 \)

tonal function \( V_2^4 | V_3^4 | V_7^6 \)

tonal level \([B^1]\)

measure 131 – 133 – 135 – 137 –

head

harmony \( B^9 | B^6 G D_9 E_6 | E_7 C 9 | A 9 \)

tonal function \( V_9^4 | V_6^7 \) descending m3

tonal level \([B^1] [F]\)

measure 139 – 141 – 143 – 145

tail

harmony \( B^9 | B^6 | E_7 | A \)

tonal function \( V_7^7 \) i

tonal level \([B^1] [a]\)
Period 5
measures 145-260

measure 145 - 147 -
harmony a | | | |
tonal level [a]

measure 149 - 151 - 153 - 155 -
harmony F7 |F2g3 F3 |B17 E14 | | | E10 | E10 |
har. function V2 V2 vi V3 | V7 IV4 ii IV6 IV ii
ntonal level [B1]

measure 157 - 159 - 161 - 163 - 165 - 167 - 169 - 171 -
harmony F7 |F2 g3 F3 |B | [C] | G | E5 | g | B6 | B g | F6 | | | B F# | B| F7 | F| F| D1
har. function V7 V7 vi V3 | V7 vi IV vi IV6 |
fundamental (C#) (F#) (F#) (C) (F)
tonal level [B1] [B] [G] tri-tone tri-sub ellipsis of dom.
Continuation of Period 5

<table>
<thead>
<tr>
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<th>Harmony</th>
<th>Tonal Function</th>
<th>Fundamental</th>
<th>Tonal Level</th>
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<tr>
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<td>7</td>
<td>[G♯1]</td>
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<tr>
<td>177 - 179</td>
<td>G♯4</td>
<td>7</td>
<td>V2</td>
<td>[C♯1]</td>
</tr>
<tr>
<td>181 - 189</td>
<td>A♯4</td>
<td>7</td>
<td>IV</td>
<td>(A♯1) (C)</td>
</tr>
<tr>
<td>190 - 194</td>
<td>b6</td>
<td>7</td>
<td>i</td>
<td>[B♭1]</td>
</tr>
<tr>
<td>196 - 200</td>
<td>F</td>
<td>7</td>
<td>i</td>
<td>[F]</td>
</tr>
</tbody>
</table>
Continuation of Period 5

measure 202 - 204 - 206 - 208 -

harmony a^0 | i | i | c^7 | C^7 | f^#0 | f^#0 |

tonal function
fundamental
tonal level [b^1]

measure 210 - 212 - 214 - 216 -

harmony g^6 | E^6 | D^6 | E^6 | B^3 | B^7 |

tonal function
fundamental
tonal level

measure 218 - 220 - 222 - 224 -

harmony E^7 | i | F | F^7 |

tonal function
fundamental
tonal level

measure 226 - 228 - 230 - 232 -

harmony b^1 | f^6 | C^6 | f | G^4 | C^6 | C |

fundamental (E) F C F

fundamental [f] [c]

measure 234 - 236 | 238 - 240 -

harmony D^4 | 0^4 | G^6 | 0^4 | a | d^0 | a | e |

tonal function
fundamental (D) (E) (B)

ellipsis of dom.

tri-tone
sub
ellipsis of dom.
Continuation of Period 5

<table>
<thead>
<tr>
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<th>Harmony</th>
<th>Tonal Function</th>
<th>Tonal Level</th>
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</thead>
<tbody>
<tr>
<td>242 - 244</td>
<td>d°</td>
<td>(B)</td>
<td>ellipsis of dom.</td>
</tr>
<tr>
<td>246 - 248</td>
<td>A⁶</td>
<td>A</td>
<td></td>
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<tr>
<td>250 - 252</td>
<td>E⁷</td>
<td>(B)</td>
<td>tri-sub</td>
</tr>
<tr>
<td>254 - 256</td>
<td>F⁷</td>
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<tr>
<td>258 - 260</td>
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<td></td>
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</table>
Period 6
measures 260-308

measure 260 - 262 -
harmony $B^4 F^6 | B^4 E^4 | F^6 | C^6 | B^1 | C^6 | G^7 | B^1 | C^6 | G^7 | B^1$
tonal function $I \, v^6 \, V^6 \, I^6 \, I^6 \, v^7 \, I^6 \, v^7 \, v^7$
fundamental
tonal level $[B^1]$

measure 264 - 266 -
harmony $f \, c \, | F \, C^6 | F^7 | |$
 tonal function $v \, ii \, ii^7 \, v^7$
fundamental
tonal level

measure 268 - 270 - 272 -
harmony $E^1 B^1 | E^1 | A^1 | E^1 | F^1 | E^1 | E^1 | C^6 | A^1 | A^1 | D^1 |$
 tonal function $IV \, ii \, iv^6 \, iv^6 \, vii^6 \, vii^6 \, IV \, V \, v^7 |$
fundamental
tonal level $(A^1)$

measure 274 - 276 -
harmony $F^+ | B^1 | F^+ | D^+ |$
 tonal function $D^+ \, T \, D^+ \, T$
 fundamental $(A)$
tonal level $[G^4] \, [D]$

measure 278 - 280 -
harmony $G^+ | E^+ | G^+ | C^4 |$
 tonal function $D^+ \, T \, D^+ \, T$
 fundamental $(B^4)$
tonal level $[E^4] \, [C^4]$

measure 282 - 284 -
 tonal function $E^7 |$
 fundamental $(C), (B), (C)$
tonal level $[B^4]$ ellipsis of dom
Continuation of Period 6

<table>
<thead>
<tr>
<th>Measure</th>
<th>286 - 288 - 290</th>
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<tbody>
<tr>
<td>Harmony</td>
<td>B♭ F⁶ g</td>
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<tr>
<td>Tonal function</td>
<td>I V vi IV i6 ii7</td>
</tr>
<tr>
<td>Tonal level</td>
<td>[B♭]</td>
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</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>292 - 294 - 296</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony</td>
<td>F C F⁶</td>
</tr>
<tr>
<td>Tonal function</td>
<td>v v 6 v 2</td>
</tr>
<tr>
<td>Tonal level</td>
<td>[B♭]</td>
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</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>298 - 300 - 302 - 304 - 306 - 308</th>
</tr>
</thead>
<tbody>
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<td>Harmony</td>
<td>e⁴</td>
</tr>
<tr>
<td>Tonal function</td>
<td>iv</td>
</tr>
<tr>
<td>Tonal level</td>
<td>[B♭]</td>
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</tbody>
</table>

Period 7
measures 309-323

<table>
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<tr>
<th>Measure</th>
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</thead>
<tbody>
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<tr>
<td>Tonal function</td>
<td>i</td>
</tr>
<tr>
<td>Tonal level</td>
<td>[B♭]</td>
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<table>
<thead>
<tr>
<th>Measure</th>
<th>316 - 318 - 320 - 322</th>
</tr>
</thead>
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<tr>
<td>Harmony</td>
<td>B♭</td>
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<tr>
<td>Tonal function</td>
<td></td>
</tr>
<tr>
<td>Tonal level</td>
<td>[B♭]</td>
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**Period 8**
measures 324–369
**recapitulation**

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<th>Harmonic Function</th>
<th>Fundamental Tonal Level</th>
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<td>324</td>
<td>d</td>
<td>g♯⁷</td>
<td>C</td>
</tr>
<tr>
<td>326</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>331</td>
<td>d</td>
<td>g</td>
<td>C♯</td>
</tr>
<tr>
<td>333</td>
<td>g</td>
<td>e⁰</td>
<td>F#</td>
</tr>
<tr>
<td>337</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>338</td>
<td>D</td>
<td>d</td>
<td></td>
</tr>
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<td>340</td>
<td>f♯⁴</td>
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<td>(F)</td>
</tr>
<tr>
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<td>344</td>
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<tr>
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<td>G♯⁷</td>
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<tr>
<td>347</td>
<td>G</td>
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<tr>
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<td>F♯</td>
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<tr>
<td>362</td>
<td>G ♯⁷</td>
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<td>366</td>
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<tr>
<td>370</td>
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*Ellipses of dom.*

```
Period 8
measures 324–369
recapitulation

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<th>Harmonic Function</th>
<th>Fundamental Tonal Level</th>
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<td>g</td>
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<td>F#</td>
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<td>370</td>
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*Ellipses of dom.*

**Tri-sub**

```
```
Continuation of Period 9

measure 401 - 403 - 405 -

harmony $B^7 | B_2^4 | \frac{3}{2} | E_{5/4}^1 | A_{16/2}^X | A_{16/2}^X | f |$

harmonic function
fundamental $(B^1)$ $(E^b)$
tonal level

measure 407 - 409 - 411

harmony $f | l | l | f | C | f^\# |

harmonic function $i | l | i |

fundamental $(F^\#)$
tonal level $[f]$ tri-sub

measure 412 - 414 - 416 -

harmony $f^\# | l | l | C^\#6| f^\# | l | l |

harmonic function $i | \sqrt{6} | i$
tonal level $[f^\#]$

measure 418 - 420 - 422 - 424 - 426

harmony $f^\# | g_5^6 | E_{6/4}^c | D^7 | E_{17}^1 | l | A | G_{6/2}^6 | B | C^\#6^7 | A_{16/2}^1 |$

harmonic function $i | ii_5^6 | vi_4^6 | v | vi_1$

fundamental $(A)$ $(B)$ $(E)$ $(E^1)$
tonal level $[f^\#]$ tri-sub

measure 427 - 429 - 431 - 433 -

harmony $c_4^6 | l | f^7 | l | l | G | l | l$

harmonic function $vii_1^7$

fundamental $(G)$
tonal level $[G]$
Continuation of Period 9


harmony G | I 6 | C 6 | G 6 | E 6 | D 6 | F 6 | G 6 | A 6 |
fundamental C G (C) (G) (F) (Bb) (Bb) (C) (D) (G) (ascending)

measure 452 - 454 - 456 - 458 - 460 - 462 - 464 - 466 - 468

harmony G | G 6 | G 6 | G 6 | D 7 | E 7 | B 7 | Bb | G 6 |
tonal level (A) (A) (D) (Bb) (E) (F) (Bb) (D) G (G) (C) (A) (D)

measure 469 - 471 - 473 -

harmony E 7 | B | G 7 | C |
fundamental (E) (D) (ellipsis of dom.)

measure 475 - 477 - 479 - 481

harmony F 7 | C | F 7 | C | A 7 | D |
fundamental (C) (C) (tri-tone sub.)
Period 10
measures 482-515

measure  482 - 484 - 486 - 488
harmony  D [G] D 6 | D 6 | D 6 | D | D 6 | F# |
fundamental  (D) (A) (B)
tonal level  D

measure  489 - 491 - 493 - 495 - 497 - 499 -
harmony  | F# | | | F# | a 4 | a 4 | a 4 | a 4 | a 4 | a 4 |
         6 6 7 6 7 6 7 6 7 6 7 6 7
         D | D | D | D | D | D |
tonal function  | | | | | | |
fundamental
         D 4 |
tonal level  F#

measure  501 - 503 - 505 - 507 - 509 - 511
harmony  C 6 | C 6 | C 6 | E 1 | A 7 | B 7 | E 7 | E 7 | A 7 | A 7 | A 7 | G 6 |
         6 6 6 1 7 7 7 7 1 7 7 7 6 7
         D | D | D | D | D | D |
tonal function
fundamental  (G) (A) (A)(D)(D) G D G (A) (E) (C#) F# (B) (E)
tonal level

measure  512 - 514 -
harmony  A 6 |
         G 6 |
         | C 6 |
         | E 1 |
fundamental  (B) (B) (E)
tonal level  [A]

series of reflexive relationships
Period 11
measures 516-536

measure 516 - 518 - 520 - 522
harmony A | | | | | | A7 |
tonal level [A]

measure 523 - 525 - 527 - 529 -
harmony A7 | | | | | | A7 |
tonal level

measure 531 - 533 - 535 -
harmony A | | | | | |
tonal level

Period 12
measures 537-558

measure 537 - 539 - 541 - 543 - 545 - 547 - 549 - 551
harmony d | D7 | | | | | | d6 | E6 | E | A | d |
har. function N V i
ntonal level [d]

measure 552 - 554 - 556 - 558
harmony d | | | | | |
tonal level [d]
CHAPTER 3

HARMONIC PATTERNS IN STRAUSS'S MACBETH

The following discussion is intended to demonstrate how the ideas of reflexive and successive relationships might be used to distinguish two different levels of harmonic construction. The following three examples are taken from Strauss's Macbeth. All three may be described as patterns or series of relationships, however, the first appears at the successive level and the second and third at the reflexive level.

The first example contains three minor harmonies an ascending-minor third apart, an intervening harmony, and the final F# minor. Here Strauss appears to have been preparing the arrival of the key F#, enharmonic equivalent to Gb, which is a minor third above Eb. (see Ex. 15.)

Example 15. Macbeth, mm. 91-102.

---

24 The music for the examples found in chapter 3 is provided in the attached appendix, and this appears at the end of the study.
The terms "series" or "pattern of successive relationships" should not be qualified by a single interval between harmonies or by the quality of the harmonies involved. This terminology implies only that the pattern or series is found on the successive level of harmonic activity.

The following two examples show patterns at the reflexive level of harmonic activity. Patterns at the reflexive level involve pairings or groups of harmonies that create patterns as a result of the succession of these groupings. The relationship between the harmonies of a single group places the pattern on the reflexive level. However, to be considered a pattern or series the intervals between the groupings need not be constant. Some of these patterns also involve the elimination of some of the individual harmonies within the group as each leg or unit of the pattern is heard. Therefore, this should not be confused with sequence, which most often involves regular recurring events. A sequence may be seen to appear at the successive or reflexive levels, but all series or patterns do not necessarily fit the idea of sequence.

Example 16 contains what might be considered three statements of dominant-to-tonic harmonic successions on three different tonal levels. The interval between each statement is not consistent, and the dominant harmony is the only one that appears in the same place each time. Each statement of the pattern is differentiated from the next through melodic means, and is identifiable from the clear functional sense of the harmonies involved.\textsuperscript{25}

Example 17 involves dominant and tonic harmonies on four tonal levels.

\textsuperscript{25} The first two groupings of the pattern contain similar melodic materials. The third begins with contrasting material.
In this case, both major and minor tonics are used. Each grouping is two measures in length, and contains similar melodic materials. Because of these recurring elements, example 17 appears most like what is commonly referred to as sequence.


<table>
<thead>
<tr>
<th>Measure</th>
<th>Harmony</th>
<th>Tonal Function</th>
<th>Fundamental</th>
</tr>
</thead>
<tbody>
<tr>
<td>173</td>
<td>D,6</td>
<td>V,5</td>
<td>G,3</td>
</tr>
<tr>
<td>175</td>
<td>D,3</td>
<td>V,2</td>
<td>V,3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Harmony</th>
<th>Tonal Function</th>
<th>Fundamental</th>
</tr>
</thead>
<tbody>
<tr>
<td>177</td>
<td>G,10</td>
<td>V,7</td>
<td>G,3</td>
</tr>
<tr>
<td>179</td>
<td>G,3</td>
<td>V,2</td>
<td>V,3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Harmony</th>
<th>Tonal Function</th>
<th>Fundamental</th>
</tr>
</thead>
<tbody>
<tr>
<td>181</td>
<td>A,6</td>
<td>V,6</td>
<td>iv</td>
</tr>
<tr>
<td>183</td>
<td>A,3</td>
<td>(A,3)</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td>D,7</td>
<td>(D,7)</td>
<td>(b,1)</td>
</tr>
<tr>
<td>187</td>
<td>(D,7)</td>
<td>(D,7)</td>
<td>(b,1)</td>
</tr>
</tbody>
</table>

Although Strauss's use of these patterns involves vagrant harmonies whose roots are not always present, or sequential legs that do not involve tonic harmonies, these patterns are used in a fashion that is reminiscent of earlier practice. As such, the patterns facilitate modulation and enlarge the musical phrase. For instance, example 15 contains a repeated series of harmonies with
a constant interval between them. This procedure works to accomplish modulation through a series of equal steps that fill the interval between a-minor and f# minor.


<table>
<thead>
<tr>
<th>Measure</th>
<th>274 - 276</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony</td>
<td>F + B</td>
</tr>
<tr>
<td>Tonal function</td>
<td>D T D T</td>
</tr>
<tr>
<td>Fundamental tonal level</td>
<td>[e^#] [d]</td>
</tr>
</tbody>
</table>

- dominant and tonic

<table>
<thead>
<tr>
<th>Measure</th>
<th>278 - 280</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony</td>
<td>G + e</td>
</tr>
<tr>
<td>Tonal function</td>
<td>D T D T</td>
</tr>
<tr>
<td>Fundamental tonal level</td>
<td>[e^#] [c^#]</td>
</tr>
</tbody>
</table>

Examples 16 and 17, found in the developmental section of *Macbeth*, work to enlarge the musical phrase through a kind of repetition of a much larger sequential leg than that found in the other example. These two examples facilitate modulation, but the interval between individual groups is not necessarily constant. The harmonies involved in each leg establish clear tonal levels and the expectation is for this tonal clarity to continue. The new key appears with the arrival of the last group of the pattern.

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26 The specifics of Sonata form will be discussed in chapter 4 of this work.
Tri-tone Substitute and Ellipsis of the Dominant Function

I will refer to two harmonic conjuctions, found in Macbeth, as the tri-tone substitute and ellipsis of the dominant function. The first example illustrates ellipsis of the dominant. Example 18 contains two examples where the expected A-major harmony is left out and the dominant preparation harmony resolves directly to tonic. Through repeated use, this conjunction emerges as a characteristic of the piece.

Example 18. Macbeth, mm. 57-64.

Example 19 requires reinterpretation of the E-sharp diminished harmony. It becomes a G-sharp fully-diminished-seventh chord, the leading tone harmony to A. The harmony resolves directly to tonic, leaving out the expected A-major harmony.

Example 19. Macbeth, mm. 75-82.
Example 20 contains an example of another harmonic conjunction used repeatedly throughout Macbeth, the tri-tone substitute. This involves the treatment of a dominant-seventh chord as its enharmonic equivalent, the German-augmented sixth. The F-dominant seventh in m. 109 is spelled F-A-C-\(E^b\). This is enharmonically A-C-D\(^\#\)-F the augmented-sixth of A minor. The expectation is for a resolution to the dominant F-major harmony to a harmony whose fundamental is B. What appears is its tri-tone equivalent.

Example 20. Macbeth, mm. 102-114.

<table>
<thead>
<tr>
<th>measure</th>
<th>102 - 104 - 106 - 108 - 110</th>
</tr>
</thead>
<tbody>
<tr>
<td>head</td>
<td></td>
</tr>
<tr>
<td>harmony</td>
<td>(f^#,</td>
</tr>
<tr>
<td>fundamental</td>
<td>(C#)</td>
</tr>
<tr>
<td>tonal function</td>
<td></td>
</tr>
<tr>
<td>tonal level</td>
<td>([f^#])</td>
</tr>
</tbody>
</table>

Example 21 contains a conjunction that utilizes the tri-tone substitute, however the resolution is to a tonic-six-four chord and not the expected dominant. The G-major seventh harmony in m. 160 is equivalent to the augmented-sixth of B-minor and would carry the fundamental C-sharp. The expected F\(^\#\) harmony does not appear, instead a second inversion B chord is used, a harmony which carries a F\(^\#\) fundamental.

Strauss's use of the tri-tone substitute and the ellipsis of the dominant becomes more frequent toward the end of the piece. The repeated use of these harmonic gestures supports the application of fundamental representation and reinterpretation technique to understanding the logic of chord succession in Strauss's *Macbeth.*
CHAPTER 4

HARMONY AND STRUCTURE IN STRAUSS'S MACBETH

The following discussion refers to the graph found in chapter 2. Strauss's Macbeth represents a continuation of the common practice with regard to formal structuring. Each of the eleven periods ends with strong cadence. Within each period are weaker cadences that divide the period into smaller phrases; however, these phrases within the period are often irregular in size. This disparity is the result of commonly used procedures such as: extension by repetition or sequence (mm. 173 ff.), use of developmental procedures within the phrase (mm. 83 ff.), or the addition of a codetta or closing materials (mm. 57 ff.). Strauss also uses such other devices as employment of the dominant pedal (mm. 49 ff.). All of these devices are commonly found in the works of his predecessors.

What does appear unusual is Strauss's use of these procedures in the exposition of the piece instead of the development. The first three periods are set apart from what follows by the unstable nature of the harmony found within them. Although these periods begin and end with clear tonic harmonies, each period digresses very quickly leaving the majority of the material to accomplish the transition or retransition to the next tonal level. What follows the first three periods are extended sections that have a much clearer sense of tonal center. The following discussion summarizes the nature and specific properties of the twelve periods found in Strauss's Macbeth.

The first period begins clearly in D minor, moves to F minor at m. 9,
then contains a large retransition section that comprises most of the remainder of the period. The period ends with a strong cadence on D minor in m.19.

Period 2 contains a repeated pattern of fundamental relationships at the successive level. This is followed by a sequence of reflexive relationships on the tonal levels of B minor and D minor. Measures 49 through 62 begin with a section over the dominant pedal which is followed by a codetta. The codetta ends with the second-strong cadence of the piece, also in D minor.

Period 3 begins in F♯ minor then moves to D major at m. 71. What follows is a short stable section in D major with some interesting harmonic colors. Note the ellipsis of the dominant at mm. 82 and 83, and the series of successive relationships in mm. 93 through 101. What follows is a restatement of the initial theme that began the period. The return of F♯ minor, along with Lady Macbeth's theme, makes this key appear as the focal point of the second key area. (see Example 22)

Example 22. Graph of the prominent keys found in the first three periods.

<table>
<thead>
<tr>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>[d]</td>
<td>[f]</td>
<td>[d]</td>
</tr>
<tr>
<td>[d]</td>
<td>[F♯]</td>
<td>[d]</td>
</tr>
<tr>
<td>[f]</td>
<td>[D]</td>
<td>[F♯]</td>
</tr>
</tbody>
</table>

What I find interesting are the chord successions just prior to the introduction of each new tonal level. Measure 7 achieves the modulation, from D minor to f minor, by using a vagrant harmony that could represent the dominant of both keys. The F♯ harmony in m. 28 is approached by a harmony

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26 This theme is attributed to Lady Macbeth and first appears at measure 67.
whose fundamental is a minor third above F#. The modulation from F# minor to D major is accomplished by an augmented triad that could represent dominant harmonies on both levels. Measure 109 is an example of a major-seventh harmony resolving like an augmented-sixth chord, its enharmonic equivalent. Each of these harmonic gestures appears more frequently as the piece continues, and they are found commonly at or near points of modulation.

Although these first three periods have a developmental character, they present the primary themes used throughout the piece. They make prominent the keys of D minor and F# minor by their association with the two main themes of the piece and their appearance at the beginning and end of the periods. These factors coupled with the later return of this material at the level of D minor define periods 1-3 as the exposition of the piece.

Period 4 is marked by a change of harmonic character. Period 4 is almost entirely in the key of Bb major, and appears more stable harmonically than the first three periods. The first three periods spend a great deal of time in a kind of tonal flux as the result of the use of many vagrant harmonies in succession. They move away from their initial tonal levels very quickly and then contain extended transitional areas that lead to the next key. Period 4 is made up of extended sections that use primarily diatonic harmonies together with only a few altered harmonies. The designation of period 4 as either "exposition" or "development" is problematic, but harmonic character is the most revealing structural characteristic. Period 4 is so different from what comes before, and so like what follows that it appears to be a part of the development section.
Period 5 contains a succession of tonal levels, but is similar in harmonic character to Period 4. Although Period 5 is not entirely in one key, each tonal level is clearly established with tonic and dominant harmonies, complete melodic statements appear in a single key, and the harmonies used are mostly diatonic. Period 5 is the largest of all the periods found in the piece, and it appears to be a working out of previously heard materials. This thematic treatment together with the continuous extension and enlargement places this period as part of the development section of the piece. Strauss's methods of modulation, throughout Period 5, remain consistent with that found in Periods 1, 2, and 3. (see Ex. 23)

Period 6 is more like the first three periods than Periods 4 and 5 because it contains a large unstable section. Period 6 begins with a clear statement in B♭ major; however, in m. 265 Strauss makes use of modal mixture. This is followed by a series of reflexive relationships ending as it began, in the key of B♭ major. (see mm. 268-284)

Although the harmonic character of Period 6 appears to contradict my established criteria for the developmental section of the piece, the harmonic stability of Period 7 and the return of the tonic key together with the principal melodic material in Period 8, marks the end of the development.

Period 7, like Period 4, is entirely in B♭ major. These stable B♭ periods enclose a large section of the piece that may be described as a working out of

---

27 Here, common chord refers to pivot modulations that involve the simple-diatonic harmonies.

28 Note the use of the C fully-diminished-seventh chord. In this section harmonies from the parallel minor mode appear but the minor tonic does not.
previously heard materials. From this basis periods 1, 2, and 3 appear as the
exposition followed by Periods 4, 5, 6, and 7 which the are development.
Example 23. Tonal levels found in Period 5.

<table>
<thead>
<tr>
<th>measure</th>
<th>keys</th>
<th>method of modulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>139</td>
<td>[B♭] to [a]</td>
<td>tri-tone sub. as pivot</td>
</tr>
<tr>
<td>149</td>
<td>[a] to [B♭]</td>
<td>phrase</td>
</tr>
<tr>
<td>160</td>
<td>[B♭] to [B]</td>
<td>tri-tone sub. as pivot</td>
</tr>
<tr>
<td>170</td>
<td>[B] to [G♭]</td>
<td>common chord, F♮= G♭</td>
</tr>
<tr>
<td>177</td>
<td>[G♭] to [C♭]</td>
<td>phrase</td>
</tr>
<tr>
<td>181</td>
<td>[C♭] to [D♭]</td>
<td>phrase</td>
</tr>
<tr>
<td>186</td>
<td>[D♭] to [b♭]</td>
<td>common chord</td>
</tr>
<tr>
<td>193</td>
<td>[b♭] to [f]</td>
<td>common chord</td>
</tr>
<tr>
<td>202</td>
<td>[f] to [b♭]</td>
<td>common chord</td>
</tr>
<tr>
<td>228</td>
<td>[b♭] to [f]</td>
<td>augmented triad as pivot</td>
</tr>
<tr>
<td>236</td>
<td>[f] to [a]</td>
<td>tri-tone sub. as pivot</td>
</tr>
<tr>
<td>242-251</td>
<td>[a] to [F]</td>
<td>sequence of successive relationships</td>
</tr>
<tr>
<td>259</td>
<td>[F] to [B♭]</td>
<td>common chord</td>
</tr>
</tbody>
</table>

Period 8 shows a return to the large unstable passages that characterize
the first three periods. This, together with the return of Macbeth's theme,
in the tonic key, marks the beginning of the recapitulation. Period 8 contains
one of the more harmonically complex passages found in the piece, however,
when reduced to fundamental movement it appears as three series of reflexive
relationships, each repeated one time. (see Ex. 24)

---

29 Period 8 brings back Macbeth's first theme in the original key, D minor,
and can be considered the recapitulation.
Example 24, *Macbeth* mm.342-368.

\[
\begin{array}{ccc}
\text{dominant} & \text{tonic} & \text{dominant} \\
\hline \\
\text{harmony} & \text{harmonic function} & \text{tonal level} \\
\text{(m. 342)} & E^4 & d \quad \text{ellipsis of dom.} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{dominant} & \text{tonic} & \text{dominant} \\
\hline \\
\text{harmony} & \text{harmonic function} & \text{tonal level} \\
\text{(m. 349)} & \text{ellipsis of dom.} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{dominant} & \text{tonic} & \text{dominant} \\
\hline \\
\text{harmony} & \text{harmonic function} & \text{tonal level} \\
\text{(m. 355)} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{dominant} & \text{tonic} & \text{dominant} \\
\hline \\
\text{harmony} & \text{harmonic function} & \text{tonal level} \\
\text{(m. 361)} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{dominant} & \text{tonic} & \text{dominant} \\
\hline \\
\text{harmony} & \text{harmonic function} & \text{tonal level} \\
\end{array}
\]
The melodic materials of Period 9 are drawn from Lady Macbeth's theme. This period continues the unstable character of Period 8 with a series of reflexive relationships that involve the ellipsis of the dominant. (see mm.370-386) An apparent movement toward the key of Eb follows in mm. 387-90. Instead of the resolution to tonic, Strauss inserts what might be seen as a palindrome involving the fundamentals of the harmonies. The resolution of the dominant, to Eb major, appears in m. 404. (see Ex. 25)

Example 25. mm. 391-404.

Measures 404 and 405 introduce D-flat minor, but in m. 406 the common chord Ab major is used to pivot to the key of F minor. The major harmony in m. 410 acts as a pivot between the keys of F minor and F# minor.

Measure 411 begins with a clear statement in F# minor; this is followed by a repeated pattern of reflexive relationships that lead to the key of G major at m. 433, next is a series of fundamental relationships that achieves the movement temporarily to C minor at m. 449, then a restatement of m. 435 associated with the same G major tonal level. What next appears is the most
harmonically complex section of the piece. When reduced to fundamental movement this section appears as a repeated pattern of fundamental relationships. (see mm. 454-64) Measure 465 and what follows achieves the modulation to D major by using the ellipsis of the dominant as well as a descending major third gesture.30

Period 10 uses material from Macbeth's first theme, but is constructed more like Period 2. Period 2 begins in the key of D minor then moves through a series of reflexive relationships, arriving once again in D minor. Period 10 begins in D major, moves through a series of reflexive relationships, but arrives in G minor not D minor.31 Period 10 continues for a while in G minor then proceeds through a series of dominant and tonic relationships to arrive, at the end, in the key of A major.

Period 11 begins with an A major harmony that continues throughout the period. The end of the period contains a section that appears over the dominant pedal A, and serves to set up the return to tonic D minor. The final period is clearly in D minor, but uses the Neapolitan for added color in mm. 548-49. The final chord succession is dominant to tonic in D minor. (see mm. 550-51) The final D-minor harmony is present throughout the rest of the piece.

Macbeth represents a continuation of the common practice. Strauss uses triadic harmonies and modulation is achieved in ways that were commonly seen. Pivot modulation takes place using diatonic harmonies, but Strauss also

30 Note the tri-tone substitute in mm. 475 and 477.

31 Note the similar harmonies used in mm. 41-42 and 501-502.
uses common chords that involve enharmonic spellings. This extends the number of keys that are possible to modulation to by common chord.

Tonal direction is perceptible throughout the piece, but confirming gestures appear primarily at the cadential points. The effect is that of harmonic arrival. The careful placement of these affects demonstrates Strauss's understanding of harmony and the role that different harmonies play in the formal structuring of music.

To suggest that Macbeth contains non-functional harmony is to deny that harmonic direction is present or that harmonic arrival happens. Tonic functions as tonic and provides a sense of arrival or harmonic stability. Dominant functions as dominant and may be described as the harmony that precedes the tonic. Step Theory allows that every step of the scale generates a unique harmony. However, because the effect of every triad can not be described as tonic, dominant, or subdominant does not mean that the effect or function does not exist, or that it can not be recognized.

What can be described is a kind of harmonic direction that is the result of chord succession. Chord succession by fifths provides the strongest sense of direction, and succession by seconds or thirds provide a less clear sense of direction. This presents a basis from which the effect of a particular succession might be described without reference to a specific tonal center. When a clear sense of tonal center is not present, which is the case for a large part of Macbeth, the functional perspective fails to see logic. Therefore, I offer the idea of successive relationships and suggest that logic and continuity may be found either in repetition of a particular succession or in a pattern of successions.
Strauss repeatedly used the ellipsis of the dominant, enharmonic pivots, and descending and ascending successions of thirds at critical points of modulation. These gestures allow a succession of tonal levels that appear unusual, but Strauss's methods of modulation; by pivot chord, by phrase, and by sequence are all taken from classical compositional procedures.

Strauss does not obscure the Sonata-Allegro Form of the piece. Each of the three sections of the piece is clearly set apart by strong cadence. The exposition, measures 1-123, presents the principal themes associated with two key areas; the development, mm. 124-323, appears as a working out of these themes through several different tonal levels; and the recapitulation, mm. 324-558, brings back the primary materials in the tonic key.

What makes the piece appear unusual is the displacement of conventional harmonic character. The more harmonically stable part of the piece appears in the development, and the less harmonically stable part occurs in the exposition. Although examples of similar chord condictions can be found throughout the preceding literature, Strauss saturates his music with these vagrant harmonies. This can also be considered an unusual aspect. These aspects might make Macbeth a difficult piece for analysis, but it does not obscure the larger Sonata form. Therefore, I suggest that Macbeth should be considered a continuation of the common practice and not a departure from it.
APPENDIX

MUSICAL EXAMPLES FROM CHAPTER 3
Measures 91-102
Measures 169-189
Measures 272-281

272

277
Measures 103-113

103

109

F# F7
Measures 157-164

157

161
BIBLIOGRAPHY


