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Analytical Perspectives of Thematic Unity: Applications of Reductive Analysis to Selected Fugues by J.S. Bach and G.F. Handel

Adam C. Perciballi
University of South Florida

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by

Adam C. Perciballi

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Major Professor: Ann Hawkins, M.A.
David Williams, Ph.D.
Chichun Lee, D.M.A.
Jill Brasky, Ph.D.

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Analytical Perspectives of Thematic Unity: Applications of Reductive Analysis to Selected Fugues by J.S. Bach and G.F. Handel

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ABSTRACT

Thematic unity in music occurs when elements from a musical idea appear frequently, in significant places and their presence is recognized or experienced on or beneath the surface. In fugal compositions, thematic unity is evident in the opening statement of the subject and it permeates each layer of its texture. Three analytical perspectives are used to investigate the degree to which local thematic material anticipates later structural features in Johan Sebastian Bach's *Fugue in G minor WTC II*, and Georg Frederic Handel's *Fuga II in G Major*. The analytical perspectives identify: (1) cohesive relationships between motivic fragments, (2) underlying motives and their relationships to keys and harmonic progressions, and (3) voice leading reductions relative to linear and tonal prolongation. Arnold Schoenberg, Hans Keller, and Rudolph Reti provide valuable insights concerning the organic nature of thematic material. The voice leading reductions of Heinrich Schenker and William Renwick offer procedures that reveal underlying thematic relationships. The cohesive elements of the selected fugues will be explained with reference to immediate and long-range relationships.

Chapter One

Introduction

Thematic unity in music occurs when similar relationships appear in various dimensions of the musical fabric and provide cohesive elements throughout the composition. While these relationships are often more prominent in melodic features, they also provide significant points of reference when they anticipate later harmonic progressions, key schemes, and rhythmic patterns. Arnold Schoenberg, in his discussion of *Grundgestalt* (basic shape) creates an appropriate framework for understanding thematic unity. A musical idea or basic motive contains the seeds of its development and as the composition progresses, it continuously evolves through a process he calls "developing variation". A description by Josef Rufer, an assistant to Schoenberg at the Prussian Academy of Arts in the 1920's, adds further clarity to the concept.

> Everything else is derived from this – in music of all kinds, not only twelve-note music; and it is not derived merely from the basic *series* which is contained in the basic shape, but also from *all* the elements which together with the series as the melodic element, give it its actual shape, that is, rhythm, phrasing, harmony, subsidiary parts, etc.[1]

Thematic unity in the structure of a fugue is evident through the continuous development of the theme and is reinforced by imitative treatment throughout the composition. In recent analytical discussions about the fugue,

[1] David Epstein. *Beyond Orpheus: Studies in Musical Structure* (Oxford: Oxford University Press, 1987), 18.

features of thematic unity are identified in linear dimensions that occur within the smallest thematic units and that also become significant within broader segments. These relationships create underlying connections through various techniques of prolongations that mirror similar surface material.

A primary objective of analysis is to identify structural elements and perspectives within a composition that may enhance our musical understanding and provide insight into the way we experience unity. Michael Rogers describes characteristics of analysis as explanations, connections, relationships, patterns, hierarchies, and comparisons.[2]

Traditional and innovative approaches to the analysis of tonal music contribute a variety of perspectives to structural relationships. Many of the traditional approaches are used to identify unique characteristics and explain connections between elements of melody, harmony, rhythm and form. An innovative approach to analysis by Heinrich Schenker, reveals elements of tonal unity that are revealed through a process of voice-leading reduction. The concept of tonal unity is expressed in the *Urlinie* (fundamental line) and its prolongation through successive stages of embellishments. The technique of reductive analysis provides an opportunity to observe the underlying structural features of the *Urlinie* and its relationships on hierarchical levels of the foreground, middleground and background.

In this thesis, concepts of thematic unity are explored in the philosophical and practical applications of Arnold Schoenberg, Hans Keller and Rudolph Reti.

[2] Michael R. Rogers. *Teaching Approaches in Music Theory* (Southern Illinois University Press, 1984), 75-76.

These theorists discuss the embryonic and generative nature of a basic idea and the compositional techniques that contribute to a series of continuously developing patterns. The result of this process provides a unifying framework for immediate and more remote relationships. The analytical approaches of Heinrich Schenker and William Renwick are used to observe thematic unity in hierarchical relationships that appear on the surface and beyond. The use of reductive analysis to clarify structural patterns and pitches on one level and to anticipate others on a broader level offers a valuable dimension to the study of thematic unity.

Traditional and contemporary procedures are used to identify features of thematic unity in two selected fugues by Johan Sebastian Bach and Georg Frederic Handel. In addition, modifications to these procedures are made to add further insight concerning the concept of thematic unity. Analytical procedures of Schenker and Renwick are used as a point of reference for relevant innovative procedures and as points of departure for the modified techniques in this thesis. Traditional procedures indicate significant motivic material that occurs at the beginning of the composition and that define other structural sections of the fugue. Three analytical perspectives in chapter four are given by the author of this thesis and they incorporate many ideas of the theorists discussed in earlier chapters. These perspectives are expanded to offer additional explanations concerning various dimensions of thematic unity. The subject and countersubject in the fugue provide the source of thematic material and consequently they are used as the musical source for these analytical perspectives. In the first perspective, cohesive relationships between motivic fragments are identified

within the fugal subject and countersubject. The second perspective contains structural pitches that implicate later harmonic functions and key schemes. In the third perspective, voice-leading reductions are used to indicate broader dimensions of tonal unity through various stages of structural prolongations.

Chapter Two

Theoretical and Philosophical Views of Thematic Unity

In the late 19th and early 20th centuries, there were significant theoretical discussions related to the function of thematic material and its relationship to structure on many levels of a composition. Arnold Schoenberg, Hans Keller, and Rudolph Reti provide interesting perspectives of cohesive elements that evolve from thematic material and that appear throughout the composition. In a prefatory note written by Donald Mitchell to *The Thematic Process in Music* by Rudolph Reti, the statement below comments on the concept of thematic unity in relationship to these theorists:

> Dr. Reti, I am sure, would not have claimed that his book provided all the answers to so fundamental a question; nor would he have failed to acknowledge the influential work already accomplished in the analytic field by two renowned seekers after musical unity, Arnold Schoenberg and Heinrich Schenker. I know that he was pleased that a most significant later development in musical analysis, Mr. Hans Keller's *Functional Analysis*, owed something to his brilliant pioneering.[3]

In this chapter, the theoretical philosophies and specific concepts of Schoenberg, Keller, and Reti are discussed as they relate to the compositional techniques that appear on and beneath the surface.

Arnold Schoenberg

One of the most detailed discussions of concepts relating to thematic unity

[3] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), v.

is given by Arnold Schoenberg in *Style and Idea*. In this discussion, he describes *Grundgestalt* as a 'basic idea' or the source that generates fragments of thematic material in order to create unity within a composition.

> A real composer does not compose merely one or more themes, but a whole piece. In an apple tree's blossoms, even in the bud, the whole future apple is present in all its details–they have only to mature, to grow, to become the apple, the apple tree, and its power of reproduction. Similarly, a real composer's musical conception, like the physical, is one single act, comprising the totality of the product. The form in its outline, characteristics of tempo, dynamics, moods of the main and subordinate ideas, their relations, derivations, their contrasts and deviations– all these are there at once, though in embryonic state. The ultimate formulation of the melodies, themes, rhythms, and many details will subsequently develop through the generating power of the germs.[4]

The *Grundgestalt* (motive**)** is primarily a pitch-oriented feature, however its influence may be observed in other areas of musical structure. As a point of departure, it contains the seeds of its own growth and its various contexts provide a means of continuous development. This basic idea becomes a unifying feature in that its reappearances provide connective tissue for related ideas. The unifying features that result from varied transformation of the idea is evident in many of the compositions of the Baroque and Classical-Romantic period. The concept of the *Grundgestalt* as the original source of pitch content is also evident as a generative force in twelve tone music. In the analysis of pitch structure in selected compositions of Mozart, Schoenberg observes similarities in his conception of

[4] Arnold Schoenberg. *Style And Idea: Selected Writings Of Arnold Schoenberg* (University of California Press, 1975), 165.

patterns within the 12-tone procedure.[5]

Josef Rufer, an assistant to Schoenberg at the Prussian Academy of Arts in the 1920's, states that the basic shape refers to a configuration of pitches, however the driving forces inherent in this shape also extends to motivic rhythm and harmony.[6] One of these forces in tonal music is the union of melodic and rhythmic material within the motivic and thematic character of the composition. Another force is the tension that arises from the harmonic material with reference to chordal content and different harmonic progressions.

The motive (*Gestalt*) according to David Epstein, author of *Beyond Orpheus*, assumes a significant role as it gradually unfolds during the process of developing variations. This process of development in later passages of a composition may give the impression on the surface that the motive is in contrast to previous material, however, there are underlying features that also reflect earlier themes. In the development of the *Grundgestalt,* variations that contribute to the formal and structural representation of a composition include inversion, retrograde, transposition, augmentation and diminution as well as other forms.[7]

The topic of variation in context to motive, motive-forms and developing variation, is described by Schoenberg in three of his pedagogical books: (1) *Models for beginners in Composition*, (2) *Preliminary Exercises in Counterpoint*, and (3) *Fundamentals of Musical Composition*. This topic is also discussed in various essays from *Style and Idea*. The purpose of these books is to inform

[5] David Epstein. *Beyond Orpheus: Studies in Musical Structure* (Oxford: Oxford University Press, 1987), 17.
[6] *Ibid*., 18.
[7] *Ibid*., 19.

students about the compositional methods and concepts of the common-practice era.[8]

Motivic and variation techniques are important features described in *Models for Beginners in Composition* by Schoenberg. Motives are identified by their use in strict and varied repetitions that contain rhythmic and intervallic alterations. During the process of development, these motives produce new motive-forms that are used as continuations, contrasting sections, new segments, and new themes of a composition. During the process of development, motives acquire new characteristics while they retain enough distinguishing features to assure a sense of coherence. A motive may contain a characteristic feature that has the potential to develop in one way, however this potential may be replaced with a different variation. Schoenberg refers to this departure from the expected developmental treatment as a means of developing new segments.[9]

In the construction of phrases, the motive provides unity by establishing relationships in different sections. In *Fundamentals of Musical Composition*, Schoenberg states that the intervals and rhythm of a motive are combined to produce a memorable shape and harmony. The motive is a part of everything that follows within a phrase and it generates the rest of the material within the composition. The subject, a longer thematic statement provides the basic motivic material for a large number of phrases within a composition. In some instances, motivic material may contain secondary pitches while retaining all of the original ones. Further variations of phrases are created when both rhythmic and intervallic

[8] David Epstein. *Beyond Orpheus: Studies in Musical Structure* (Oxford: Oxford University Press, 1987), 207.

[9] Arnold Schoenberg. *Models for Beginners in Composition* (G. Schirmer, 1943), 15.

material is changed during the compositional process and they provide extended and contrasting themes. The result of these changes through variation is the development of new motive-forms which are further changed throughout a composition.[10]

In *Style and Idea,* Schoenberg describes the technique of variation and repetition as a method of generating related features that link thematic material on various levels of musical structure. Schoenberg defines variation as changing some features while others are preserved. When some features are taken out of context their original function decreases and allows for variations of those features. The author provides insight into the way these passages are connected in order to create a cohesive bond.[11]

Schoenberg associates the technique of developing variation with homophonic-melodic music and the technique of unraveling to contrapuntal compositions. In homophonic-melodic music, a main theme is supported by harmonic material, and the technique of developing variation provides fluency, contrast, variety, logic and unity during the elaboration of the basic idea. Schoenberg makes a distinction between the artistic result of continuously varying a basic idea and the occasional addition of repeated notes within new material. He refers to contrast, variety, logic and fluency as a method of achieving configurations, combinations and variants of the theme of the musical idea.[12]

In contrapuntal compositions, the initial organization of the 'basic idea' is

---

[10] Arnold Schoenberg. *Fundamentals of Musical Composition* (St. Martin's Press, 1967), 8-9.

[11] Arnold Schoenberg. *Style And Idea: Selected Writings Of Arnold Schoenberg* (University of California Press, 1975), 256.

[12] *Ibid*., 397.

re-assembled through the technique of unraveling. A contrapuntal composition contains a brief statement that has the potential for development by regrouping, reshaping and reordering various motivic patterns.[13] Schoenberg uses the statement below to describe the variations of basic shapes within contrapuntal compositions.

> Whatever happens in a piece of music is nothing but the endless reshaping of a basic shape. Or, in other words, there is nothing in a piece of music but what comes from the theme, springs from it and can be traced back to it; to put it still more severely, nothing but the theme itself.[14]

The pitches and pitch groups in a contrapuntal composition, which initially occur in the *Grundgestalt*, are presented both simultaneously and successively throughout the composition.[15]

In *The Musical Idea*, Schoenberg includes the characteristics of the musical idea, along with the concepts of logic, technique, and artistic presentation. The logical order within a musical idea guides the listener toward a predetermined point or goal within a composition. An artistic presentation of an idea affects the coherence and comprehensibility throughout the composition. He explains that the effectiveness of a composition is influenced by forces of the basic idea, and the ways in which they are realized and transformed into new motive forms within a systematic and artistic framework.

Coherence in music may be achieved by exact or varied repetitions of a

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[13] Arnold Schoenberg. *Style And Idea: Selected Writings Of Arnold Schoenberg* (University of California Press, 1975), 397.

[14] *Ibid*., 290.

[15] Arnold Schoenberg. *The Musical Idea and the Logic, Technique, and Art of its Presentation* (Columbia University Press, 1995), 400.

basic idea. The technique of exact repetition contributes significantly to the clarity of a coherent statement. In slightly varied statements the coherence is retained, however elaborative features provide a sense of development. Techniques of variety may also be applied when harmony, basic pulse, and accompaniment are changed for the purpose of variety.[16]

Rudolph Reti

Rudolph Reti states that thematic or motivic structure, as a form building element in music, is almost completely neglected and no real attempt to comprehend the motivic process has been made.[17] In his book, *The Thematic Process in Music*, Reti addresses the development of thematic unity from a stylistic perspective of music in the Baroque and Classical eras. He describes the compositional process involved in thematic unity as that of forming themes from one consistent musical idea. In multi-movement compositions, themes may appear to be contrasting on the surface yet similar in substance. The content of a theme consists of structural pitches that are prevalent in the initial theme and later varied in subsequent statements. Reti emphasizes the importance of maintaining homogeneity within the internal content of a composition. The result of inner homogeneity is that the theme may not be recognizable as it progresses, however it remains derivative of one consistent musical idea.[18]

Reti continues a discussion of the compositional principles that are reflected in the evolution of musical styles, specifically that of the Baroque and

[16] Arnold Schoenberg. *The Musical Idea and the Logic, Technique, and Art of its Presentation* (Columbia University Press, 1995), 157.
[17] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), 3.
[18] *Ibid*., 3-7.

Classical-Romantic period. He associates a significant compositional style of the Baroque period as one of contrapuntal imitation. Compositions such as the canon and fugue are ones in which a motive is developed by direct repetition or indirect treatment, techniques that he considers to include inversion or augmentation. A sense of clarity is achieved in the developmental process when literal statements that are gradually varied during the course of development.[19] Reti identifies a significant compositional style of the Classical-Romantic period as one that results form thematic transformation. In this period the concept of form, especially in the sonata or symphony is enhanced by elements of contrast. Thematic shapes are transformed so that new themes appear on the surface to be distinctly different. Reti elaborates on this compositional style by explaining that:

> a thematic transformation must be regarded as most impressive from a structural angle if the identity is rooted strongly and firmly in the depths of the shapes in question and at the same time is as inconspicuous and little traceable as possible on the surface.[20]

There are various compositional devices that are used to add variety to motivic material. Reti, in his discussion of motivic variants such as inversion and reversion (retrograde) clarifies some of the different perspectives that are associated with inversion, contrary motion and reversion. He explains that inversion of interval occurs when a fifth becomes a fourth, however contrary motion or inversion by direction is used to identify an ascending fourth (C up to F) that becomes a descending fifth (C down to F). In musical practice, he shows how these two techniques might be combined. Figure 2.1 contains two treatments

[19] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), 57.
[20] *Ibid*., 58.

of a motive, the first statement (a) consists of a skip upward of a fourth from E-A followed by a stepwise descent to D. The second statement (b) is an inversion of the first statement and consists of a skip downward from E-A followed by a stepwise ascent to F.

Figure 2.1. Technique of Inversion (Cited from Reti's Book on p. 68).

Reversion (also referred to as retrograde) occurs when the last note of a segment is used at the beginning of the transformation and the second to last follows, and so forth, until the first pitch of the original is reached. Figure 2.2 contains a C minor triad (a) that is followed by its reversion or retrograde (b).

Figure 2.2. Technique of Reversion (Cited from Reti's Book on p. 68).

Thematic transformations occur in statements that are further removed from the original theme, however these transformations contain elements that are derived from their earlier theme. An interversion may be considered as a technique that results in a transformation of the theme. In this technique, the notes of the transformed statement have been reordered from its original source. Reti states the following concerning interversion:

> It consists of interchanging the notes of a thematic shape in order to produce a new one. Since the current theory is so unaware of this type of transformation that not even a name has been designated for it, we are compelled to invent a new term and may call in an *interversion*.[21]

[21] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), 72.

In Figure 2.3 there are two examples, (a) an ascent of three pitches followed by a downward skip of a third, and (b) a reordering (interversion) of the material which yields a descent of the same notes from highest to lowest.

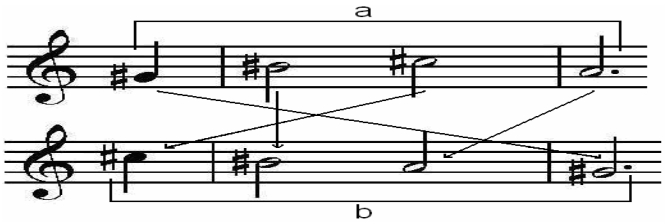


Figure 2.3. Technique of Interversion (Cited from Reti's Book on p. 73).

Other techniques that contribute to transformation of a statement consist of a change in tempo, and changes in rhythm and accent. In contrapuntal music, tempo changes are achieved by augmentations and diminutions which lengthen or shorten the motivic idea. In Figure 2.4, *motive a* occurs at the begging of the Allegro movement and *motive b* its augmentation, the result of a tempo change occurs at the beginning of the Andante movement.[22]

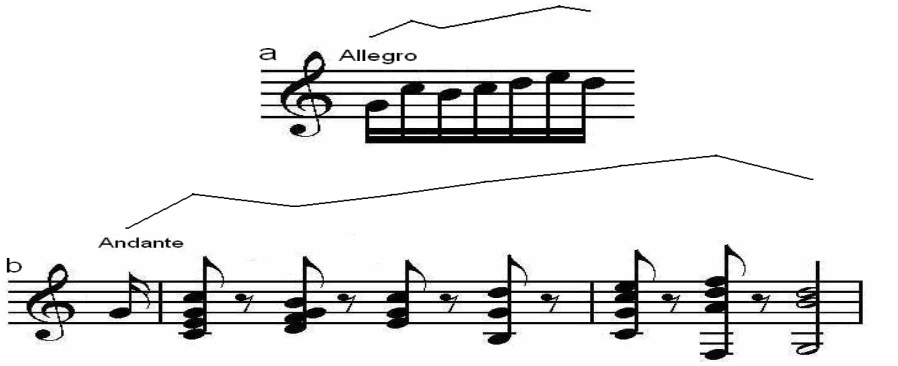


Figure 2.4. Augmentation in tempo change in *Sonata in G Major*, Op. 14, No. 2 by Beethoven (Cited from Reti's Book on p. 76).

Rhythm and accent changes are other ways in which a theme can appear to be disguised by developmental procedures. In Figure 2.5, *motive a* and *b* share similar contours, and the circled pitches in *motive b* may be described as a transposition that begins on the pitch D. The changes in rhythm and the shift in

[22] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), 75.

accent that is initiated by the pitch E-natural create a transformed version of *motive a*.

Figure 2.5. Transposed variation in *Pathetique Sonata*, Op. 13 by Beethoven (Cited from Reti's Book on p. 77).

In another discussion of thematic transformation, Reti relates two significant themes from the Beethoven's *Rondo in G Major*. In Figure 2.7, the first four measures of each theme are given and are identified as (a) and (b) respectively. An immediate relationship can be made between the first two measures of each theme, by recognizing that the rhythmic version of an ascending triad in theme (a) is replaced in theme (b) by a descending triad with only a slight rhythmic feature. The thematic fragment in the next two measures of theme (b) however, is further removed from the corresponding measures in theme (a). For example, notice that in theme (a), the fragment in mm. 3-4 contain a neighboring treatment of the pitch D before it skips down to the pitch A. The interval of the outer pitches (D down to A) creates an interval of a perfect fourth. In the corresponding measures of theme (b), an interval of a perfect fourth (D up to G) is filled in stepwise and followed by a similar treatment of another perfect fourth (A up to D). While the relationship between the two themes may be most noticeable in their qualities of inversion, theme (b), in the last two measures provides a transformation of the earlier statement.

Figure 2.6. Thematic transformation in *Rondo in G Major* by Beethoven (Cited from Reti's Book on p. 69)

Hans Keller

Thematic unity is directly related to the presence of motivic material throughout a composition. In his article, *Unity of Contrasting Themes and Movements,* Hans Keller discusses similarities between passages in the Piano Concerto K. 503 by, Wolfgang Amadeus Mozart that have previously been identified as contrasting material. The author describes specific compositional techniques that gradually provide elements of variety during the developmental process. Keller defines and explains techniques that are used to modify the initial idea and to combine it with other fragments in a variety of musical contexts. The concept of unity is demonstrated in passages that contain obvious relationships as well as those where thematic material is hidden and might otherwise be identified as contrasting material. In order to reveal relationships that contribute to thematic unity, the author raises questions that should be considered during the analytical process.

> The analysis which here follows is based on the tenet that a great work can be *demonstrated* to grow from an all-embracing basic idea, and that the essential, if never-asked questions of why contrasting motifs and themes belong together, why a particular second subject necessarily belongs to a particular first, why a contrasting middle section belongs to its principle section, why a slow movement belongs to a first movement, and so

> forth, must be answered if an "analysis" is to deserve its name.[23]

In the following paragraphs, a discussion of specific techniques and musical examples from his book will be given to demonstrate his concepts of melodic and harmonic interversion, simultaneous suppression, augmentation, diminution, and accumulated motives. It should also be noted that terms used by Keller to describe some of these variation techniques may not coincide with ones that are in current use.

The opening theme of the concerto (Figure 2.7) contains three significant motives: (1) a triadic passage (x) that appears in the character of a march-like fanfare, (2) a retrograde version (y) that has the character of a three note anacrusis, and (3) a short legato passage (z) that begins with a dotted-note rhythm and continues with stepwise motion within an interval of a third. The author also uses the letters a, b and c (Figure 2.8) to describe the compositional manipulations of a three-note pattern that emerges between measure four and five (see the first slur below) and becomes the three-note pattern that he labels as motive (z). An explanation of technique he calls interversion will be discussed in figure 2.8.

Figure 2.7. Theme from *Piano Concerto in C Major*, K. 503 by Mozart.

[23] Keller, Hans. 1956. "K.503: The Unity of contrasting Themes and Movements–I." *MusicReview*, Vol. 17, No. 1 (February), 48.

The term interversion, originally associated with Reti Keller refers to a re-grouping or reordering of pitches in which some of the pitch classes are retained.[24] In addition to the retention of a few pitches, the process of regrouping might substitute a new pitch for the remaining notes while reordering might result in a new succession of pitches. Keller adopts this terminology in his article and uses it to explain the process of motivic manipulations of melodic as well as harmonic patterns.

Melodic interversion involves the reordering of at least two consecutive pitches and when it contains notes of the same pitch class, it provides a point of reference to the earlier motive. Figure 2.8 contains a series of three-note patterns that appear in the opening measures of the Mozart theme from K. 503. In measure four, the first pattern (a) in the violin and the second pattern (b) in the flute, later yield the derived motive (c) that occurs in bassoon at measure seven, A reference to the figure below will show that the pitch classes g and e of the patterns (a and b) in measure four have been reversed. The later pattern (c) that occurs in measure seven has been further reorderd as a stepwise pattern within an interval of a third.

Figure 2.8. Reduction of structural pitches from mm. 4-7 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 51).

Keller associates harmonic interversion with a re-ordering of harmonic progressions. In Figure 2.9 the circled pitches F, E, and C are re-ordered in the

[24] Rudolph Reti. *The Thematic Process in Music* (Faber and Faber Limited, 1961), 72.

later musical example of Figure 2.10. The re-ordering of pitches in these two examples is also accompanied by a re-ordering of the chord progression.

Figure 2.9. Flute, mm. 62-63 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 53).

Figure 2.10. Violin, mm.70-71 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 54).

Simultaneous suppression is a technique in which a fragment of the thematic material is omitted during the initial conception of the idea, however, it appears during the process of its development. This later use implies that the composer is aware of the significance of this fragment and its unifying function in relationship to other thematic material. In a further explanation of this process, Keller hypothetically impersonates Mozart by saying that the composer's response might be "don't let's say it, but vary it immediately".[25] Keller continues by identifying this technique of simultaneous suppression as "definite implication of the self-evident".

A traditional definition of augmentation and diminution is the lengthening and shortening respectively by half the original value of the rhythmic statement. Keller's treatment of these techniques relate in a general way to the expansion and contraction of the statement that might occur with the addition or subtraction of notes. In the Keller article, the examples of augmentation refer to an extension or

[25] Keller, Hans. 1956. "K.503: The Unity of contrasting Themes and Movements–I." *MusicReview*, Vol. 17, No. 1 (February), 51.

compression of time and they are not always in relationship to the duration of note values in the original rhythmic statement. In Figure 2.11, the example of augmentation is related to the pitches C, D and E^b in the lower bracket (*motive c*) and their extended appearance as longer structural pitches in the upper bracket (see the circled pitches).

Figure 2.11. Bassoon and violin, mm.18-20 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 52).

The example of diminution in Figure 2.12 illustrates that the thematic statement occurs in the first two measures and is directly followed by a shorter version that has been condensed within one measure. In the diminuted version of measure three, a slight modification is achieved by the absence of rests between the last two pitches.

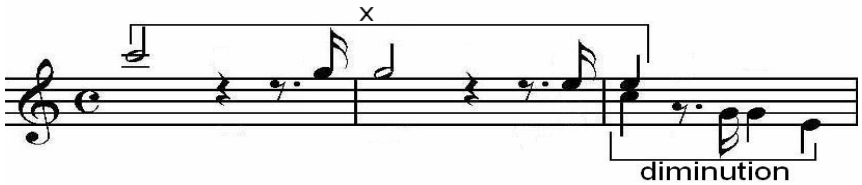


Figure 2.12. Oboe, mm.1-3 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 54).

Keller illustrates motivic variants that result from a combination of motives. In Figure 2.13, the ascending triad (y^1) is indicated in circled notes as a triadic inversion. *Motive* z^1 (a fragment of z), appears in a series of quarter notes.

Figure 2.13. Violin, mm. 50-52 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 53).

A reference to Figure 2.14 will show another version of these combined motives. Following the anacrusis, there is a direct statement of the ascending triad in yet another inversion. Also, in this example *motive z* (in circled notes) is elaborated by intervening pitches.

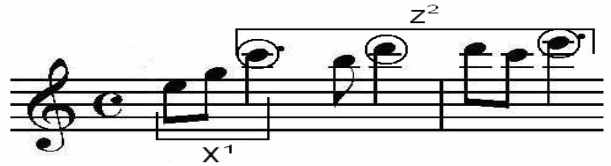


Figure 2.14. Flute, mm. 63-64 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 53).

In Figure 2.15, the *x* and *z* motives appear with rhythmic and melodic variations. The motives are stated in a reversed order from their appearance at the beginning of the movement and these exchanged statements enhance their varied treatment. The neighbor pattern is used to add embellishments to both statements. In *motive* z^3, the circled pitches G-F-E represent a transposed inversion of the original motive (D-E-F). The pitch f is elaborated by a lower neighbor E. It should be noted that this motive also contains a rhythmic fragment from the original. *Motive* x^2, a version of the descending triad is preceded by a lower neighbor and its rhythmic framework is also varied. In *motive* x^4, the repeated neighbor patterns precede the descending triad and offer yet another rhythmic variation.

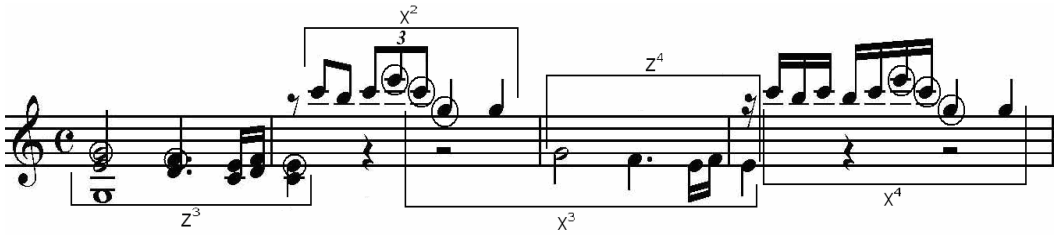


Figure 2.15. Strings and piano, mm. 91-94 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 53).

Chapter Three

Reductive Analytical Approaches to Fugal Structure

In reductive approaches, surface elaborations of musical patterns are gradually replaced by structural pitches in larger segments of the composition. In the fugue, motivic material is recognized by relationships within and between patterns, as well as the underlying pitches that preserve the structure of the prominent tonality. The procedure for reductive analysis developed by Heinrich Schenker offers a method for defining and accessing relationships on various structural levels of the composition. Schenker's method is based primarily on the significance of outer voices, however William Renwick has expanded this method to include, where appropriate the structure of inner voices. In this chapter a series of Heinrich Schenker's reductive analytical procedures for the fugue are discussed as they appear in Volume 2 of *The Masterwork in Music*. In addition, analytical procedures by William Renwick are taken from his book *Analyzing Fugue: A Schenkerian Approach*.

Heinrich Schenker

The analytical method of Schenker is based on structural levels which consist of a hierarchy of tones, and structural voice-leading that occurs at these successive levels.[26] The perception of musical structure on the foreground, middleground, and background create a format for the comparison of hidden

[26] William Renwick. *Analyzing Fugue: A Schenkerian Apporach* (Pendragon Press 1995), vii.

relationships. In the statement below, Schenker compares the traditional methods of fugal analysis with his approach.

> The difference between this study and all of the textbooks on the fugue as well as all other analysis is readily apparent. The textbooks and analysis always describe the organization of the fugue in terms of exposition, restatement, episode, and every other device imaginable: eg. contrary motion, retrograde motion, augmentation, diminution, stretto, etc. The only thing they never mention is the most important of all: the fundamental hidden relationships that bind the fugue into an organic whole, into a true work of art.[27]

An application of his approach to tonal structure in the fugue is evident in the C minor fugue from Bach's *Well-tempered Clavier*, Book I. In this analysis from *The Masterwork in Music*, his concept of tonal unity is expressed on each structural level with reference to the way that musical patterns coincide with the broader structures of the *Urlinie* and its complimentary *Bassbrechung*. In Figure 3.1 from this book, the foreground contains graphic representations of structural melodic and harmonic patterns. In this first stage of analysis, the pitches from the fugue appear with rhythmic notation and other analytical groupings that are unrelated to the original notation. This foreground representation is also a composite of middleground and background relationships. A reference to this example will show that certain pitches have gained more structural significance while various embellishing patterns prolong these pitches over longer periods of time. The structural pitches are indicated by scale degree numbers with carets to indicate the eventual background structure of the *Urlinie*. Harmonic progressions

[27] Heinrich Schenker. *The Masterwork in Music Vol. 2* (Cambridge University Press 1996), 42.

are also summarized to show the structural harmony of the ultimate *Bassbrechung* are considered to have an embellishing structural pitches from melodic patterns of the original composition are indicated.

Figure 3.1. Foreground of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 33)

A further reduction of the foreground is contained in the background of Figure 3.2. The surface elaborations in the previous figure have now been removed and the long range connection of the *Urlinie* is more evident. Note that

within each section of this fugue a separate *Urlinie* provides the tonal unity. A reference to Figure 3.2 indicates that the *Urlinie* of the exposition (5-1), the development (5-1), and the recapitulation (8-1) are self contained in each section. In addition, a larger *Urlinie* (5-1) unifies the sections.

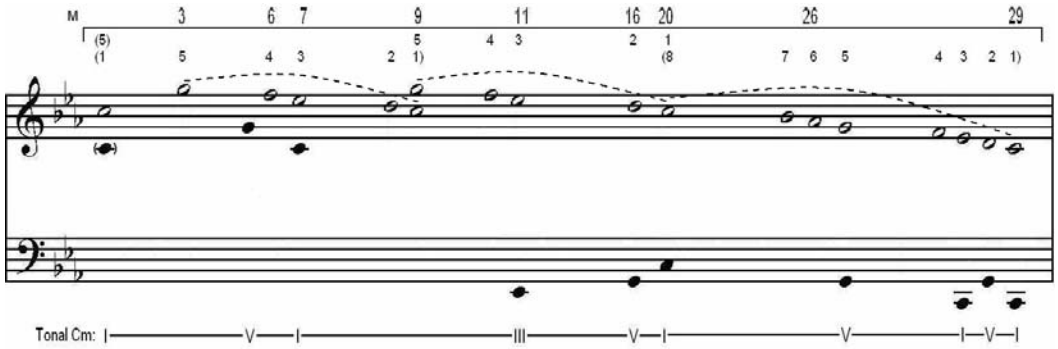


Figure 3.2. Background of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 32).

Schenker discusses the entrances of the subject, answer, and countersubjects in relationship to the *Urlinie* as well as the linear progressions that occur in the thematic statements of the fugue. The entrances of the subject, answer, countersubjects are provided in the table of entries, shown in Figure 3.3. In this table, the numbers refer to the entrances of thematic material throughout the fugue. Number 1 is designated for either the subject or answer, number 2 indicates the first countersubject, and number 3 is indicative of the second countersubject.[28] The keys associated with the thematic entries reinforce the prominent triad of the overall tonality (C-E^{b}-G). A reference to this chart indicates the relationship of these thematic entrances to the tonality.

[28] Heinrich Schenker. *The Masterwork in Music Vol. 2* (Cambridge University Press 1996), 33.

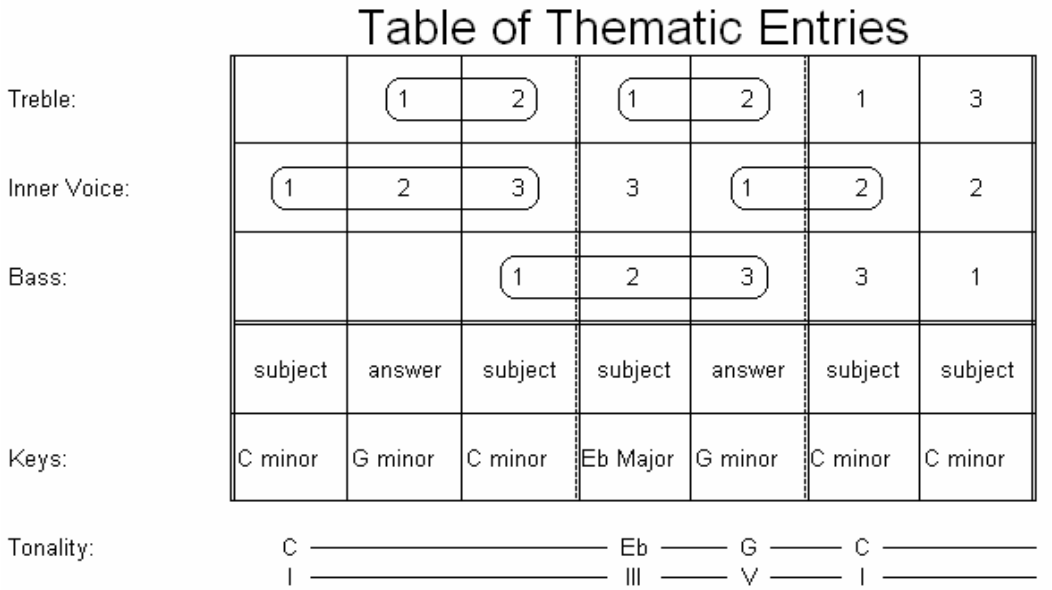


Figure 3.3. Table of Thematic Entries of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 33).

Figure 3.4 contains reductions of the fugue subject, each containing the linear progression of the third (G-F-E^b). These reductions provide a sense of unity over the changing bass progressions that create harmonic variety. In the first two examples of Figure 3.4, the 3d progression (G-F-E^b) occurs, each supported by two versions of dominant support. In the next two examples, the linear progression in the upper voice is elaborated by extended neighbor patterns and the bass line is expanded by the inclusion of the subdominant that precedes the dominant. In the last example, the pitch C accompanies the linear progression (G-F-E^b) with a neighbor pattern, culminating in the structural pitches of the C minor tonality.

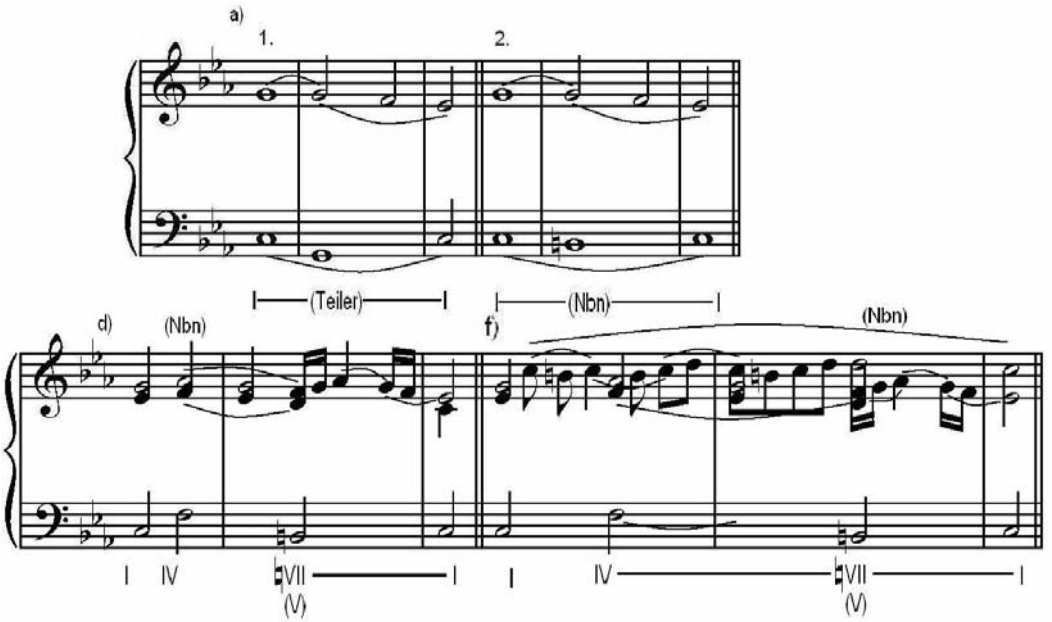


Figure 3.4. Reductions of subject of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 34).

An example of broad tonal relationships is evident in the answer of a fugue. The primary function of the answer is to express the dominant tonality, however it also reinforces the tonality of the tonic. In Figure 3.5 (m.1 b.3) the C minor chord (IV in G minor) provides a connecting link to the overall tonality of C minor. The prominence of this dominant area is achieved by immediate and prolonged neighbor patterns. In the lower voice, the $F^{\#}$ (m. 2) assumes a neighboring function that also helps to prolong this dominant area.

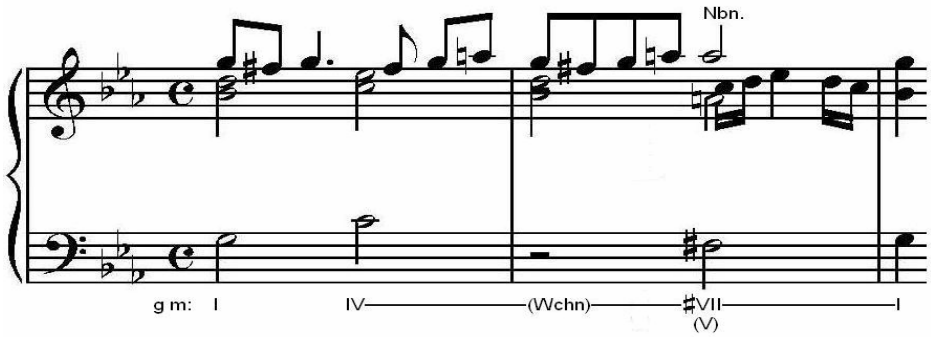


Figure 3.5. Mm. 3-5 of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 36).

In Figure 3.6 and 3.7 respectively, countersubjects I & II reinforce the

tonic tonality through a series of third progressions that are first presented in the subject. In the foreground graph shown earlier (Figure 3.1), the function of third progressions within the subject was discussed. A reference to these countersubjects also indicates the cohesive function of the third progressions. In countersubject I (Figure 3.6), the pitches G down to C are connected by a prolonged pitch E^b that reinforces the significant pitches of the C minor triad.

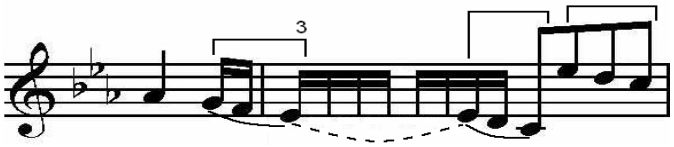


Figure 3.6. Countersubject I of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 37).

In countersubject II (Figure 3.7), a series of third progressions end with the pitches G-F-E^b, the same third progression that occurs toward the beginning of countersubject I and the subject. The third progression (G-F-E^b) also anticipates two measures later, the key of E^b major.

Figure 3.7. Countersubject II of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 39).

Schenker's analytical approach to the fugue recognizes the organic nature that is inherent in thematic material of the subject).[29] In selected examples from his analysis, thematic relationships occur in various dimensions of the musical texture, both in immediate and long range connections. As a result they provide long range connections between thematic and tonal levels.

William Renwick

In his book *Analyzing Fugue: A Schenkerian Apporach*, William Renwick

[29] Heinrich Schenker. *The Masterwork in Music Vol. 2* (Cambridge University Press 1996), 42.

expands the limitations of Schenker's approach to reductive analysis of thematic treatment within the fugue. One of the main challenges that he identifies in fugal analyses is the individual character that each voice assumes in expressing and developing thematic material that is relative to the fugal themes. Schenker assigns specific functions for individual voices as they relate to his background tonal structure. For example, the specific designations that he gives to the upper voice as the *Urlinie*, the lower voice as the *Bassbrechung*, and the inner voices as contributing elements. Renwick presents these questions in regards to Schenker's concept of an ideal tonal structure. The reductive analytical approaches that Renwick presents are indicative of compositional similarities rather than unifying material which Schenker presented.

Renwick's account of the historical development of contrapuntal music links the master composers who unified the art of counterpoint and triadic harmony. He notes that a significant contribution to this development was the compositional processes and performance practices in thorough bass realization in the 18th century. The harmonic implications of the bass line were gradually expanded vertically by chord progressions and linearly by voice-leading strands. Individual lines gradually gained more independence as these strands were interchanged in an imitative-like texture. Figure 3.8 illustrates a three-step process involved in this harmonic realization. The top stave contains the figured bass with harmonic implications. The second system below contains a linear elaboration of the bass line and is supported by chords in the upper stave. The third system consists of periodic elaborations of passing tones and skips in all parts,

culminating in an imitative texture. The process of thoroughbass realization allowed the composer to gradually develop a linear texture with greater independence while retaining the harmonic stability governed by the figured bass.

Figure 3.8. Thoroughbass compositional process (Cited from Renwick's book on p. 4).

The process of thoroughbass realization reflects a method of creating a composition from the background structure of the figured bass to the foreground textures in imitative counterpoint.

A reductive analysis of contrapuntal texture is enhanced when observations of structural pitches are made from the composition level of the foreground, and through a series of reductions, these pitches are related on a background level. While motivic connections of thematic relationships are observed on the foreground level, it is the structural voice-leading that reinforces underlying tonal stability. Johann Philipp Kirnberger, a pupil of J.S. Bach, considered this analytical process, in conjunction with performance, improvisation, composition, and theory to be an essential skill for the baroque

musician.[30] In Figure 3.9, Renwick provides a reductive analysis of this process from foreground to background and related underlying voice-leading connections. On the reductive level, the vertical intervals of parallel tenths contribute to the prolongation of the I and IV chords. This sustained harmonic rhythm helps to preserves the harmonic framework during the active melodic texture.

Figure 3.9. French Suite 1 in D minor BWV 812, *Allemande*, mm. 1-5 by Bach (Cited from Renwick's book on p. 15).

The application of reductive analysis to fugal compositions must consider ways to accommodate the presence of thematic material in all of the voices. From the initial statement of subject and answer, thematic material appears either in complete statements such as stretto and invertible counterpoint or as motivic

[30] William Renwick. *Analyzing Fugue: A Schenkerian Apporach* (Pendragon Press 1995), 11.

fragments in various stages of continuous development.

The concept of invertible counterpoint provides a texture in which thematic material appears simultaneously, such as the subject along with its countersubject or the treatment of stretto by the delayed entrance of the subject in each voice. In these treatments, the thematic material serves a dual function, both as a prominent and a subordinate statement. A question then arises as to which voice or voices contribute to the organic unity of the passage. Heinrich Schenker addresses this issue by saying the following:

> The equality of individual voices of invertible counterpoint is invalid, since in any polyphonic construct one of the several linear progressions serves as the leader and represents the underlying linear basis of the passage.[31]

He explains that the ultimate unity will be displayed in the voice with the *Urlinie*. Schenker's concept of 'fundamental structure' refers to the role of outer voices (melody and bass) as the determinants of tonal unity. With invertible counterpoint, these roles are interchangeable during the course of thematic development.

Renwick expands the limitations of Schenker's perspective about fundamental structure and he explores ways to acknowledge the structural significance of thematic material when it occurs in any voice. He creates a theoretical construct based on the voice-leading patterns of 8-7-8, 5-4-3, and 3-2-1 along with the bass pattern, 1-5-1. These patterns can appear in different voices and simultaneously and together they reinforce the tonal stability of I - V - I. In

[31] William Renwick. *Analyzing Fugue: A Schenkerian Apporach* (Pendragon Press 1995), 79.

Figure 3.10 (a) these patterns are shown as they appear in a simple form and in 3.10 (b), they are prolonged in time.

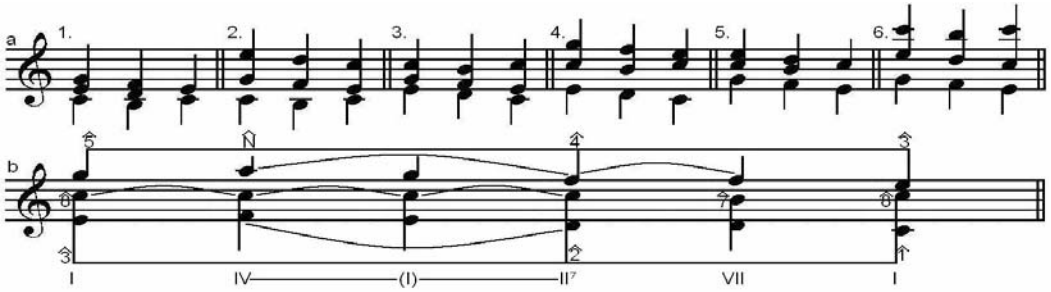


Figure 3.10. Prolongation of inner voices (Cited from Renwick's book on p. 84).

The treatment of invertible counterpoint occurs when a thematic statement in one voice exchange positions with the previous statement. Renwick uses the theoretical constructs in the paragraph above to demonstrate that a shift in position does not interrupt the function of voice-leading patterns to reinforce the tonality. In the fugue, the subject and countersubject appear simultaneously in different voices throughout the composition. In Figure 3.11 (a), an excerpt from the *Fugue in g minor* (WTC I) consists of the subject and countersubject in an original and inverted context. Figure 3.11 (b) on the second system, contains reductions in which the scale degrees of voice-leading patterns prolong the tonic and dominant harmony.

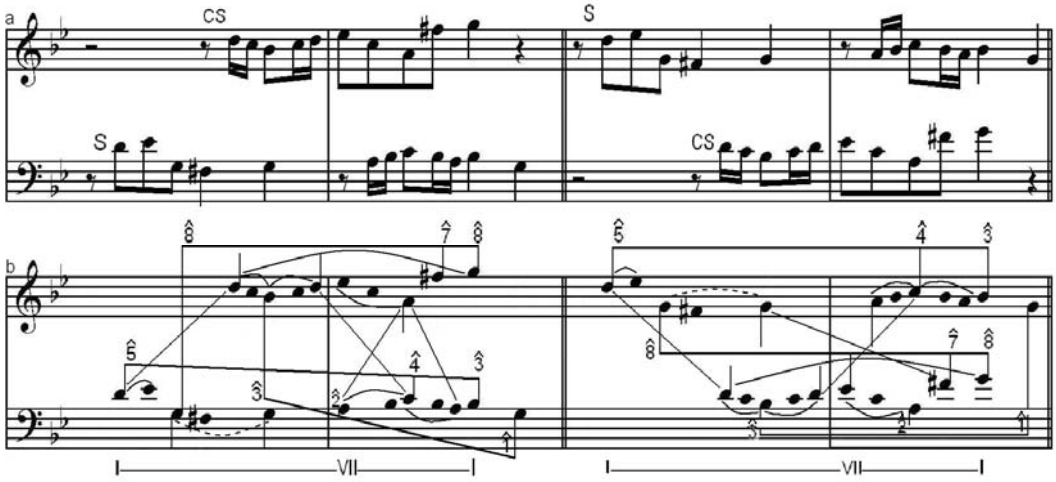


Figure 3.11. Invertible counterpoint in *Fugue in G minor* by Bach (Cited from Renwick's book on p. 89).

In episodic passages of fugues, sequential patterns provide a connective link between thematic material. Sequential patterns contain transposed repetition based on voice-leading patterns, and their appearance in episodes prolongs structural harmonies and creates a strong sense of overall unity. Schenker disregards the topic of sequence because the repetition in motivic development is not embodied in the *Urlinie*. Renwick**,** however recognizes its function of generating voice-leading patterns that ultimately prolong basic harmonies.

The next two examples are excerpts from *Fugue 6 in D minor* (WTCII) by J. S. Bach. In Figure 3.12 (a), the motive is imitated between the middle and lower voice at the interval of an octave. The reductive analysis in Figure 3.12 (b) indicates the voice-leading patterns that serve to preserve the stability of the tonic chord in D minor.

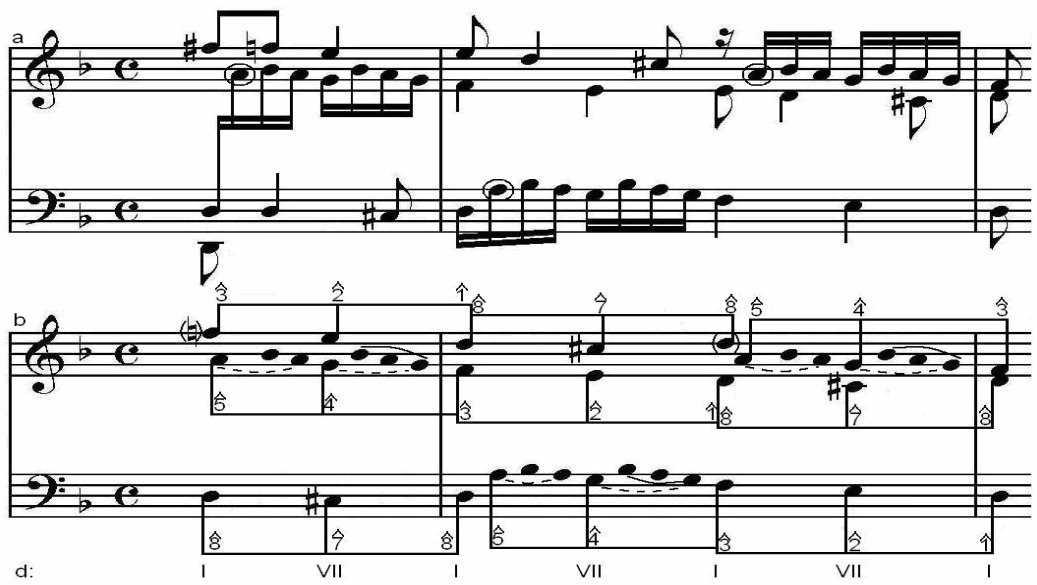


Figure 3.12. Mm. 12-14 of *Fugue in D minor* by Bach (Cited from Renwick's book on p. 143).

In figure 3.13 (a), the imitative patterns occur between voices at an interval of a fifth. The voice-leading patterns that are generated from this passage reflect tri-tone resolutions in various forms of repetition. In the reduction of Figure 3.13 (b), the dominant harmony is prolonged in a passage of tonal instability. The broken line in the upper and lower voices indicates pitches of the dominant chord that frame most of this passage. Within this transitional passage, voice-leading patterns from the tonality of the tonic (see numbers), appear periodically and may suggest an anticipation of the later tonic, confirmed.

Figure 3.13. Mm. 7-10 of *Fugue in D minor* by Bach (Cited from Renwick's book on p. 143).

The treatment of stretto occurs when the subject is repeated in different voices, at delayed entrances. In his discussion of stretto, Renwick suggests that the underlying structural patterns in stretti are a product of prolonged harmony, linear progressions, the voice-leading complex, and sequences. He provides examples from Bach's contrapuntal literature and suggests that Bach was aware of similar underlying voice-leading patterns and that he was able to incorporate their imitative potential in his thematic material. In the analysis of a segment from Bach's *Fugue in d# minor* (WTC I), voice-leading strands in the key of D# minor appear in various voices to prolong the sub-dominant (G# minor) and the mediant (F# Major) of that key. In Figure 3.14, the voice-leading strands in each prolongation is written once and the imitations of that strand are circled.

Figure 3.14. Mm. 52-56 of *Fugue in D-sharp minor* by Bach (Cited from Renwick's book on p. 168).

Renwick's study of fugal analysis provides recognition of structural similarities in the fugue whereas Schenker theory deals with the fundamental structure of the fugue.[32] Both styles of reductive analysis contribute to hidden connections in fugues even though they were presented with different intentions.

[32] William Renwick. *Analyzing Fugue: A Schenkerian Apporach* (Pendragon Press 1995), 209.

Chapter Four

Three Analytical Perspectives in Selected Fugues

The analytical perspectives of selected fugues that are presented in this chapter, offer additional insights related to thematic unity. The fugue is a continuously developing process in which the subject, answer and countersubject are stated at the beginning of the composition and developed in different keys and structural patterns. Concepts of thematic unity are used to explain the developmental process on the surface and approaches to reductive analysis provide explanations concerning underlying relationships. The approach to different perspectives of thematic unity in previous chapters influenced the conceptual methodology of the analysis in this chapter. The current analytical perspectives reveal surface and hidden relationships and their function in small as well as larger structural areas.

In this chapter, excerpts from the *Fugue in G minor WTC II* by J.S. Bach, and the *Fuga II in G Major* by G.F. Handel are used to illustrate the analytical perspectives. Thematic material from the subject, answer and countersubject are analyzed for their motivic references and for the hidden features that anticipate later structural events. A three stage approach provides insight into the compositional treatment of motivic structure, key relationships, chord progressions, and thematic unity on reductive levels. The first stage is a foreground perspective which contains motives in the subject, answer, and

countersubject as well as their treatment in significant portions of the fugal structure. The second stage, a middleground perspective consists of structural pitches from the beginning of the composition, defined by the process of reduction. These pitches are placed on a series of hierarchical levels in order to reveal key and chordal relationships that lie beneath the surface. The third stage or background perspective is a reductive approach, similar to the process used in Schenkerian analysis. These voice-leading analyses are used to reveal structural pitches that prolong basic tonal structure and provide thematic unity and tonal unity.

Stage One: Foreground Perspective of Fugue in G minor

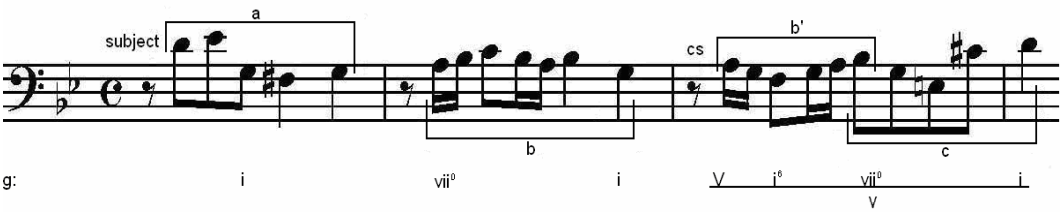


Figure 4.1. Motives of subject and countersubject as stated in *Fugue in G minor* by Bach.

In the first stage, motives within the subject and countersubject are segmented into motivic fragments. The brackets in Figure 4.1 indicate these motives and their modified relationships. *Motive a* begins on the pitch D, followed by an ascending step (escape tone) which interrupts the skip to G and is completed by a lower neighbor pattern. *Motive b* contains a stepwise ascent that outlines an interval of a third (A-C) and is followed by a lower neighbor on the pitch B^b and a descending skip to G. *Motive* b^1 (the first fragment of the countersubject) represents a modification of the previous motivic fragment. This motive begins with descending stepwise motion that also outlines an interval of a third (A-F), however it is followed by another ascending stepwise third (G-B^b). In *motive c*,

the last pitch of the previous motive is also the first pitch of this motive. The pitch B^{b} becomes a member of a descending e diminished triad that is followed by an ascending step from $C^{\#}$-D. A sense of unity is achieved between the subject and the countersubject by the modified treatment of *motive* b^{1}. The overlapping of the two motives in the countersubject enhances this unity so that a combined statement of the subject and countersubject could be described as a modulating subject. At this point in the discussion Figure 4.2, a portion of the Exposition and the first episode is given to illustrate the frequent use of motivic material and the relationship between motivic fragments. A process of thematic unity is achieved while developmental techniques add a sense of variety.

Figure 4.2. Mm. 1-12 of *Fugue in G minor* by Bach.

The technique of motivic development is a successive and modified

treatment of fragments which emerge from motives and appear in structural positions within the fugue. In the countersubject, an ascending stepwise interval of a fourth (*motive* b^1) appears in the lower voice (see first bracket in Figure 4.3). In the next measure, this motivic fragment appears at the beginning of an episode and is followed by a sequence. In m. 5 this interval of a stepwise 4th appears as an ascending skip. This treatment of the 4th and its variations in episodes throughout the fugue are indicative of motivic development.

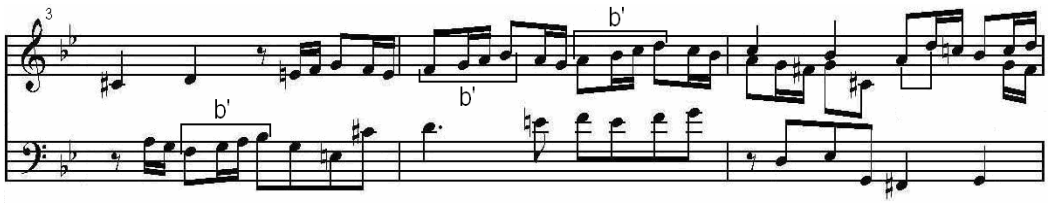


Figure 4.3. Mm. 3-5 of *Fugue in G minor* by Bach.

In Figure 4.4 the motivic fragment related to the 4th is given greater significance when it appears in developmental treatment within the first episode (mm. 8-12). This motivic fragment is transposed, rhythmically altered, and inverted in subsequent statements. The two rhythmically altered patterns in brackets 2 and 3 are used together in the form of rhythmic counterpoint. The linear stepwise pattern within the interval of a 4th creates a dominant to tonic statement which culminates in deceptive resolutions within brackets 3 and 5. The deceptive treatment in fragment 5 anticipates the stronger resolution to B^b Major in the next measure.

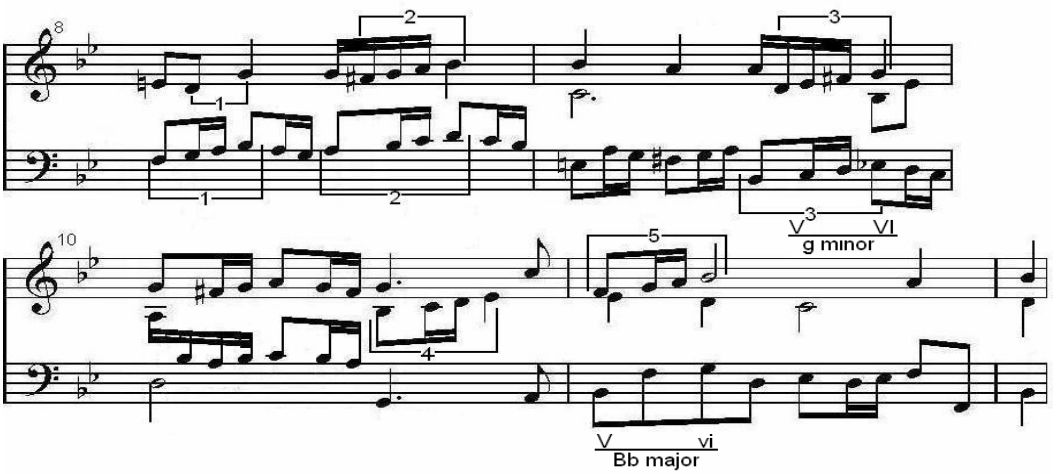


Figure 4.4. Mm. 8-12 of *Fugue in G minor* by Bach.

In Figure 4.5 (mm. 24-28), the developmental treatment of the fragment of a 4th is imitated repeatedly in the upper two voices. In both Figure 4.4 and 4.5, this fragment appears in conjunction with *motive b* of the countersubject. The fragment is also used to create a dominant to tonic statement that results in deceptive resolutions in G minor within brackets (4) and (12).

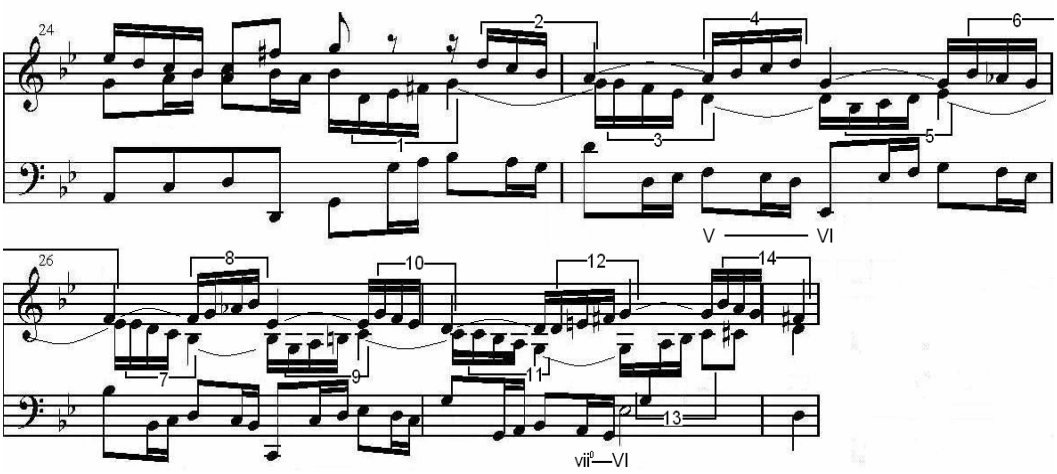


Figure 4.5. Mm. 24-28 of *Fugue in G minor* by Bach.

A sense of thematic unity is experienced with the simultaneous appearance of motivic fragments. These fragments consist of motivic statements along with other hidden features. Figure 4.6 represents the second statement of the subject in the Exposition. A fragment from the subject appears on the bottom staff,

accompanied by a fragment of the answer on the top staff. On the middle staff, fragments from the answer are embedded in the elaborative texture. The fugue is a continuously developing process in which the subject, answer and countersubject are stated at the beginning of the composition and developed in different key and structural areas.

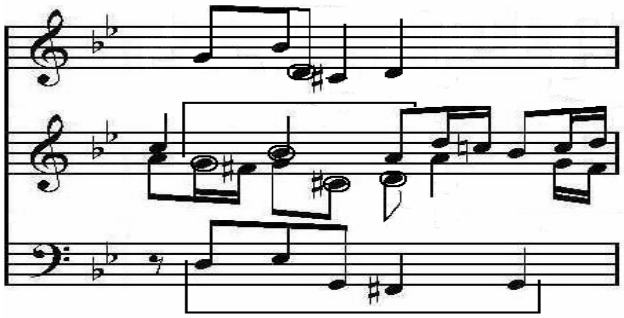


Figure 4.6. M. 5 of *Fugue in G minor* by Bach.

Figure 4.7 represents the beginning of the third middle entry in the key of C minor. *Motive a* appears on the bottom staff while *motive* b^1 (the first fragment of the countersubject) appears directly above on the middle staff. Within the top staff pitches embedded within *motive* b^1 also reflect *motive a*.

Figure 4.7. M. 20 of *Fugue in G minor* by Bach.

Stage Two: Middleground Perspective of Fugue in G minor

In the second stage, successive staves beneath the example contain intervals or pitch groups that suggest a link to keys, key areas or other harmonic

material throughout the fugue. The exclusion of rhythm allows more attention to be placed on these pitches and the underlying function they assume in anticipating keys that are defined later in the composition. In Figure 4.8, these successive staves (Figures 4.8 (b) to (f)) contain structural pitches that have been abstracted from the subject and countersubject. The structural pitches are then assigned the keys of G minor, B^b Major, F Major and D minor that appear in prominent areas during the developmental process of the fugue. The presence of E^b Major is included because of its prominent appearance as a chord of a deceptive resolution in G minor. Figure 4.9 contains a chart of keys and key areas in this fugue.

Figure 4.8. Underlying pitch groups in the subject and countersubject of *Fugue in G minor* by Bach.

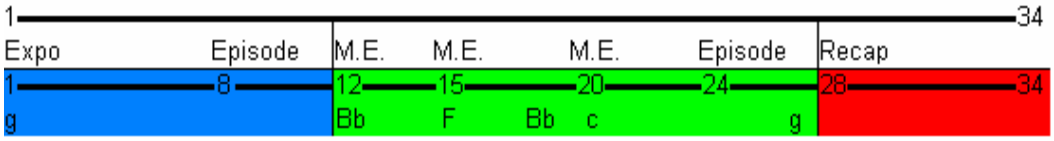


Figure 4.9. Key Chart of *Fugue in G minor* by Bach.

The motivic and harmonic material stated from the beginning of the Exposition to the first middle entry contains structural implications and statements of keys. Chord progressions reflect these tonal areas and anticipate other structural appearances later in the fugue. At the beginning of the fugue, the subject and answer are stated in the traditional manner as tonic and dominant, respectively. After the four-voice entrances repetition of the subject and answer, an E^{b} Major chord appears on the last beat of m. 9 is emphasized by the slower motion of eighth notes, surrounded by passing sixteenth notes. This deceleration of motion at the E^{b} Major chord provides a reference point, especially when it reappears later in other structural positions. This chord appears as the result of a deceptive resolution before the Recapitulation which begins in m. 27.

A traditional harmonic progression (ii – V – I) provides cadential support as well as modulations to new key areas. The progression later appears sequentially and reflects the key areas from the chords of the progression in B^{b} Major. The key areas of the middle entries are B^{b} Major, F Major and C minor in measures 12, 15 and 20 respectively. In Figure 4.10, mm. 18-20, the ii - V – I progression occurs sequentially in tonal areas of B^{b} major, E^{b} Major (not anticipated), F minor and in C minor. The resolution of the V chord in C minor is delayed by the middle entry of the subject in the same key.

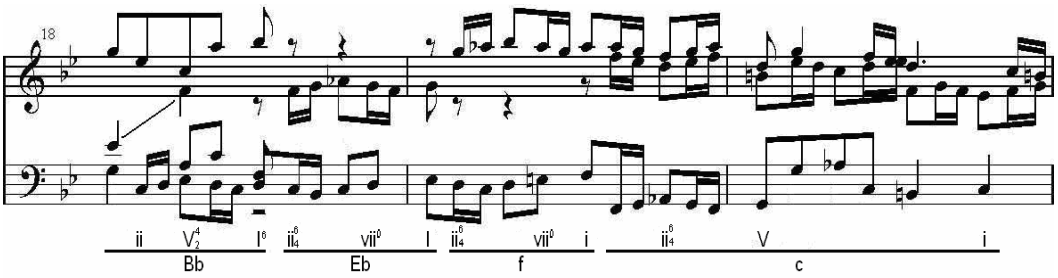


Figure 4.10. Mm. 18-20 of *Fugue in G minor* by Bach.

Stage Three: Background Perspective of Fugue in G minor

In the third stage, underlying relationships appear within the subject and countersubject. Voice-leading reductions related to the analytical procedure of Heinrich Schenker are used in order to expose these hidden features. In this analytical perspective linear progressions and other unifying features will be revealed through reductive analysis.

In Figure 4.11, the subject and countersubject of the fugue appear together with three levels of reduction. The original form of the fugue subject and countersubject are represented in Figure 4.11 and are followed by three levels of reduction. The reductions on the bottom two staves indicate features which provide a sense of underlying unity to the thematic material.

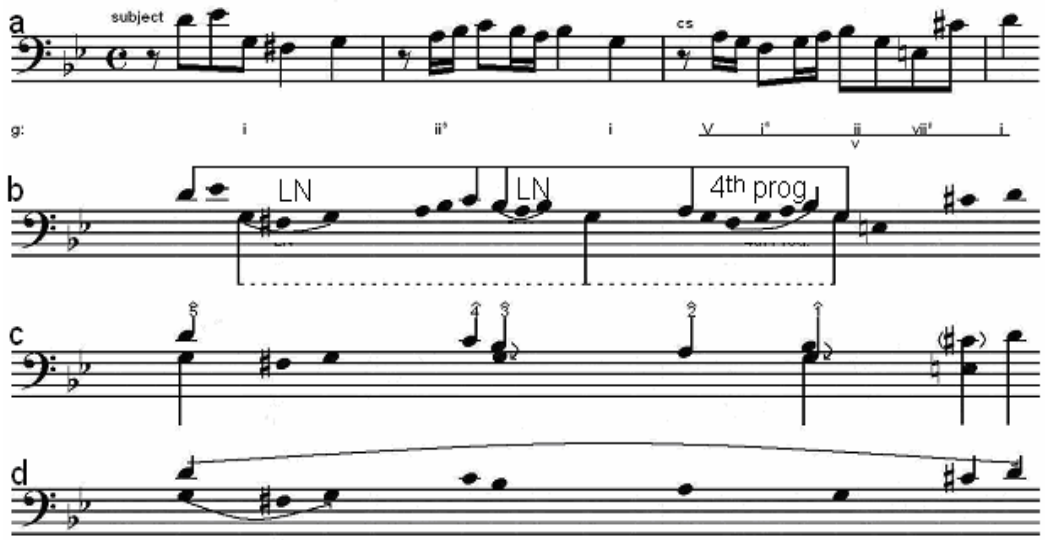


Figure 4.11. Reduction of subject and countersubject of *Fugue in G minor* by Bach.

In Figure 4.11 (b), the first level of reduction indicates a 5-1 linear progression which unites the subject and countersubject. The pedal g provides a unifying feature beneath this linear progression. Within the reduction are other features such as lower neighbors which emphasize the G minor tonality and a 4^{th} progression which has been discussed earlier as a motive derived from the countersubject.

In the second level of reduction from Fig. 4.11 (c), the linear progression is now represented as an *Urlinie*. Unfoldings of the G minor tonality are expressed within the subject and the countersubject (see arrows between B^{b} and G). A reference to G minor is extended in the D minor tonal area of the countersubject and becomes the subdominant to reinforce this area of D minor.

In Figure 4.11 (d), the third level of reduction, the neighbor pattern of the tonic lies within *motive a* while the lower neighbor of the dominant is extended throughout the statement of the subject and countersubject. Unity between this thematic material is evident from the neighbor pattern of the tonic that is nested within the lower neighbor of the dominant.

In Figure 4.12 (mm. 1-4) the answer is included with the statement of the subject and countersubject. This example is given here to show the surface unity that occurs between motives within the fugal process.

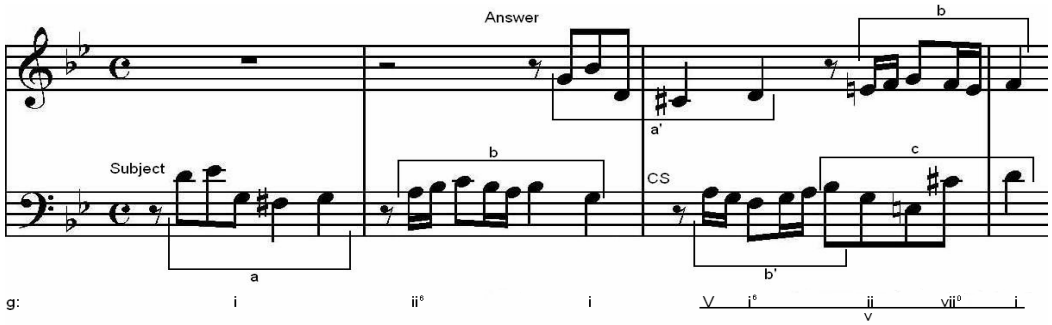


Figure 4.12. Motivic segments of subject, answer and countersubject of *Fugue in G minor* by Bach.

In Figure 4.13 a Schenkerian style reduction of this passage is given to indicate the broader unity that is created when the answer enters. When the tonal answer enters it contains, in the area of the dominant, the lower neighbor (D-$C^{\#}$-D) which anticipates the broader neighbor labeled in Figure 4.11 (d). In addition the first two pitches (G-B^{b}) along with pitches from *motive b* reinforce G minor through voice exchange. Voice exchange also occurs toward the end of the answer when E-natural and G reinforce the ii^{0} of the dominant.

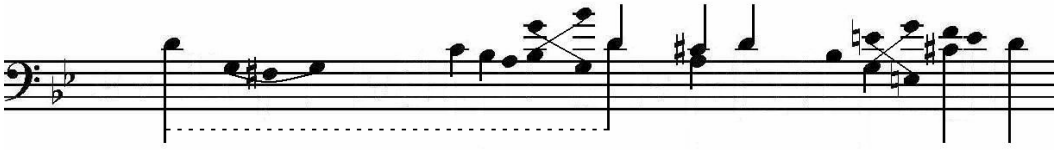


Figure 4.13. Reduction of subject, answer and countersubject of *Fugue in G minor* by Bach.

Stage One: Foreground Perspective of Fuga II in G Major

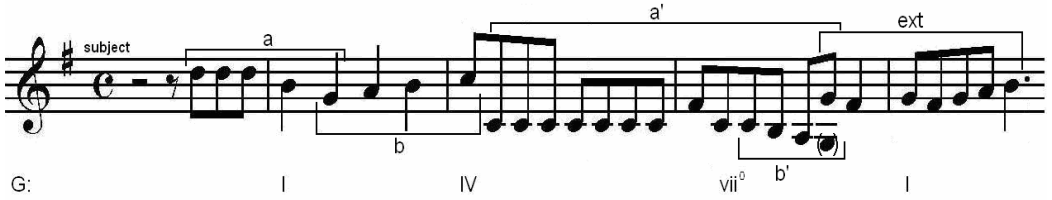


Figure 4.14. Motives of subject as stated in *Fuga II in G Major* by Handel.

In this first analytical perspective, motives within the subject are segmented by their grouping and varied repetition. A reference to Figure 4.14 will indicate these motives and their modified relationships. *Motive a* begins with an

anacrusis of repeated pitches, followed by a descending tonic triad. Later in the subject, a descending diminished triad on $F^{\#}$ (vii^{0}) is expressed within *motive* a^{1} (see circled pitches). *Motive b* is an ascending fourth filled in stepwise, separated from the next motive by an octave skip. *Motive c*, contains a descending octave skip of the pitch C, followed by repeated statements of that pitch. The continuous repetition of this pitch provides an interesting link between *motive b* which is suggestive of the subdominant and *motive* a^{1} which expresses the diminished triad. *Motive d* appears at the end of the subject with an ascending skip of a seventh followed by a lower neighbor.

The treatment of overlapping motives is a unifying technique that is used to generate motivic forms. For example, the pitch G at the end of *motive a* (see circled note in Figure 4.15), is also the first pitch of *motive b*. The pitch C (the last pitch of motive b) links the beginning of *motive* a^{1} by a skip of a descending octave. A reference to Figure 4.15 will show that pitch G in measure 4 links the end of *motive* a^{1} with the extension motive. At this point in the discussion Figure 4.15, a portion of the Exposition is given in order to illustrate the frequent use of motivic material and the relationship between motivic fragments.

Figure 4.15. Mm. 1-11 of *Fuga II in G Major* by Handel.

Stage Two: Middleground Perspective of Fuga II in G Major

The purpose of the second analytical perspective is to identify structural pitches that may indicate prominent keys or key areas in later segments of the fugue. These pitches which are emphasized in various melodic patterns are represented on successive staves without rhythm. This approach offers a perspective of unity that lies beneath the surface, creating another level of tonal cohesion within the composition. These anticipated keys are labeled throughout Figure 4.16. Figure 4.17 contains a chart of keys and key areas in this fugue.

Figure 4.16. Underlying pitch groups in the subject of *Fuga II in G Major* by Handel.

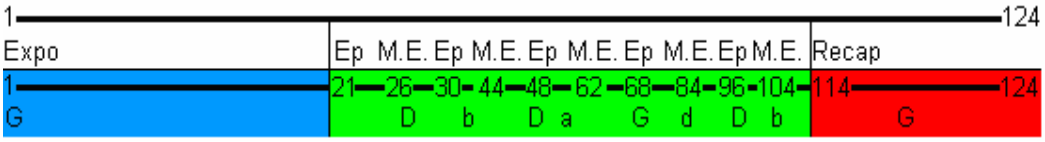


Figure 4.17. Key chart of *Fuga II in G Major* by Handel.

In Figure 4.16, the emphasized pitches or pitch groups that have been extracted from the subject are given names that are suggestive of certain key areas. The keys of B minor, D Major, C Major and G Major are tonicized in cadencial passages at the end of significant sections. The next four figures (4.18 – 4.21) indicate some of the harmonic progressions that reinforce these keys.

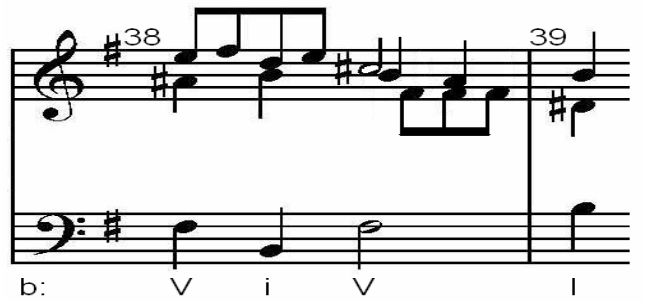


Figure 4.18. Cadence on middle entry, mm. 38-39 of *Fuga II in G Major* by Handel.

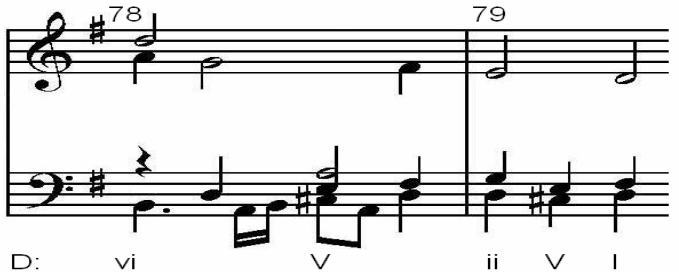


Figure 4.19. Cadence on episode, mm. 78-79 of *Fuga II in G Major* by Handel.

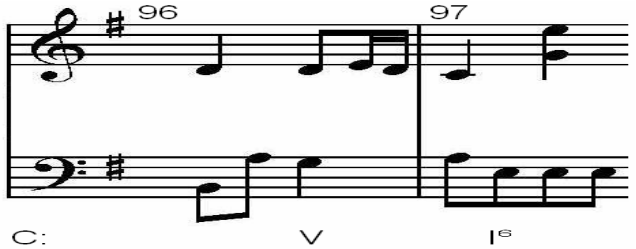


Figure 4.20. Cadence on middle entry, mm. 96-97 of *Fuga II in G Major* by Handel.

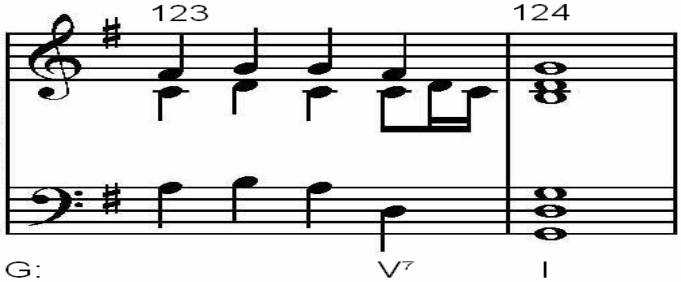


Figure 4.21. Cadence at the end of piece, mm. 123-124 of *Fuga II in G Major* by Handel.

Stage Three: Background Perspective of Fuga II in G Major

The third analytical perspective reveals underlying stepwise motion that prolongs the prominent tonality within the subject. A reductive method is used to indicate structural motion from the surface or foreground to the background level. These levels are compared with reference to the relationship between smaller

linear progressions and larger prolongations that retain the prominent tonality.

In Figures 4.22 and 4.23, the fugue subject and countersubject appear separately with two levels of reduction. The original fugue subject is represented on the first staff and is followed by two levels of reduction. The reductions on the bottom two staves indicate the underlying stepwise motion that unifies the motives with the expression of the G major tonality.

Figure 4.22. Reduction of subject of *Fuga II in G Major* by Handel.

In Figure 4.23, the countersubject is also represented on the first staff and is followed by two levels of reduction that are expressed in the dominant area.

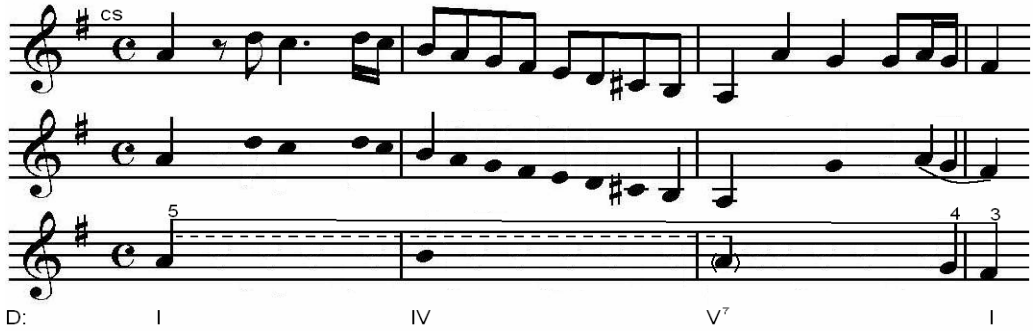


Figure 4.23. Reduction of countersubject of *Fuga II in G Major* by Handel.

In Figure 4.22, the second staff shows that the subject is a polyphonic melody that results in two separate lines. The third staff indicates that the *Urlinie* is interrupted in the upper line with a progression from 5-3 (D-B). The lower line

on this staff provides a complete *Urlinie* (5-1). When both upper and lower lines are combined they reinforce the tonal stability of G major. In Figure 4.23 the second and third staves indicate that the *Urlinie* in D major also contains a descent from 5-3 (A-F$^{\#}$).

Figure 4.24 contains the subject, answer, and countersubject as they appear from mm. 1-11. The indications of motivic fragments within the subject, countersubject, and answer show the ways in which these fragments provide a sense of unity within the opening statement. In addition to the motivic unity, a sense of tonal unity results in the dominant area when the pitch G, the subdominant, is retained as a reference to the prominent tonality.

Figure 4.24. Motivic outlines of subject, answer, and countersubject of *Fuga II in G Major* by Handel.

Figure 4.25, a voice-leading reduction of Figure 4.24 shows the way in which these thematic statements gradually unfold a broader *Urlinie* of 5-1 (D-G) within mm. 1-11. There are 3 segments within this example, the polyphonic

melody of the subject (mm. 1-5), the answer and countersubject (mm. 5-9), and a link (mm. 9-11). The interrupted *Urlinie* on the pitch B that occurs at the end of the subject is prolonged while the countersubject and answer expresses a 5th progression from A-D through the dominant area. In the link that follows the dominant pitch D provides a support for the completion of the *Urlinie* in the upper voice.

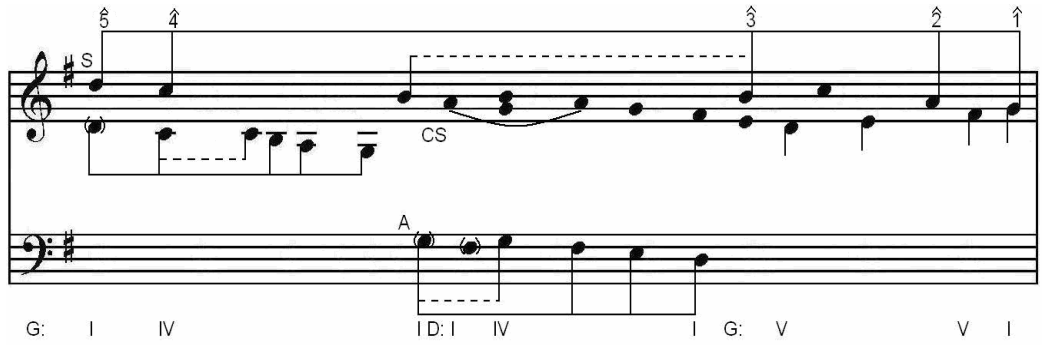


Figure 4.25. Reduction of subject, answer, and countersubject *Fuga II in G Major* by Handel.

Figure 4.26, a further reduction of Figure 4.25 shows the overall tonal unity that results when the interruption of the *Urlinie* in G Major generates a 5th progression in D Major. The interrupted *Urlinie* is completed in the link and a broader sense of unity is achieved because the 5th progression of the dominant area is nested in the *Urlinie* (G Major).

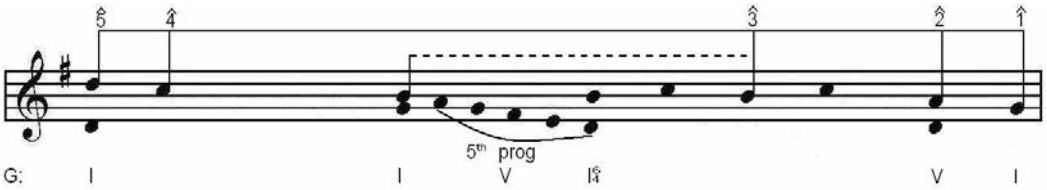


Figure 4.26. Further reduction of subject, answer, and countersubject of *Fuga II in G Major* by Handel.

Chapter Five

The Relationship of Philosophical and Theoretical Views to the Analytical Perspectives of this Study

The concept of thematic unity within selected fugues of J.S. Bach, and G.F. Handel is described in the analytical perspectives of this thesis and in the established writings of Arnold Schoenberg, Hans Keller, and Rudolph Reti. The discussion of the topic includes the origin of a musical idea and the cohesive elements that contribute to immediate and long range relationships. In addition, Heinrich Schenker and William Renwick offer analytical discussions that explain relationships on the surface level of the composition as well as underlying relationships revealed by the application of reductive analysis. In the following paragraphs, there will be a discussion concerning their influence on the analytical perspectives in chapter four, presented by the author of this thesis.

Arnold Schoenberg's concept of the *Grundgestalt* (basic idea) which evolves during a series of developing variations adds considerable insight to the concept of thematic unity. The embryonic nature of this basic idea generates various permutations with both immediate and remote relationships. Rudolph Reti reinforces this concept of thematic process when he refers to the technique of forming themes from one consistent musical idea. He identifies the first stage of development in contrapuntal music as one of direct repetition or indirect treatment that appears in techniques such as inversion or augmentation. Hans Keller the theoretical contributions of Reti and further distinguishes the types of

developmental treatment that adds variety to thematic and motivic material. His discussion further illustrates developmental techniques that add variety and that gradually transform the motive into initially perceived elements of contrast.

The concept of thematic unity in contrapuntal music, especially on the surface is inherent in the compositional process. The subject of the fugue (basic idea), appears initially in all voices and it is fragmented, manipulated and developed in some form that maintains its presence throughout the composition. The role of the subject in creating thematic unity is dependent on the relationship of motivic fragments that it contains and their relationship to the countersubject. An analytical perspective of motivic structure can be effective in revealing these relationships.

In the following paragraphs, analytical perspectives from chapter four are summarized to illustrate the relationship of thematic fragments within the subject of the Handel fugue and the subject and countersubject from the Bach fugue. The significance of motivic fragments by Schoenberg, Reti and Keller consider the derivative qualities of these fragments during the course of development. In the first analytical perspective of the Handel fugue from chapter four (Figure 5.1), motivic fragments are identified by their frequent appearance throughout the composition. An initial reference to the relationships between *motive a* and a^1 are the repeated pitches followed by a descending triad (see circled notes). It should be noted that *motive* a^1 offers an expansion of *motive a* with additional repeated notes and a passing tone between a member of the triad. *Motive b* is indicated by ascending stepwise motion within the interval of a perfect fourth (G-C). *Motive* b^1

(C-G) may be interpreted as a retrograde inversion of *motive b*. In this example, both *motive a* and *b* as a musical idea generates a variation of that idea to complete the subject.

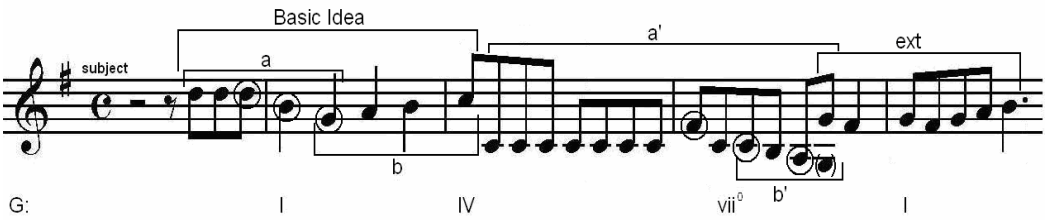


Figure 5.1. Motives of subject and basic idea as stated in *Fuga II in G Major* by Handel.

In the subject and countersubject by Bach (Figure 5.2), motivic fragments have also been bracketed in order to identify their relationships. One reference to the relationships between *motive a* and a^1 is the progression of a half step relationships at the end of each motive that creates a function of a leading-tone to tonic relationship ($F^{\#}$-G) and ($C^{\#}$-D). Another relationship in these motives is somewhat disguised on the surface. In *motive a*, the pitch E^b implies an escape tone that is dissonant to the tonic triad in g minor. If we consider the E^b as a replacement for the pitch B^b, the descending triad (D-B^b-G) reinforces the tonality of G minor. The motive at the end of the countersubject (*motive* a^1) a descending triad (B^b-G-E), followed by a half step progression similar to *motive a*. At the beginning of *motive b*, the ascending third filled in stepwise (A-B^b-C) of the subject is reversed at the beginning of *motive* b^1. The two motives (*motive a* and *b*) of the subject generate the material of the countersubject in a reversed order.

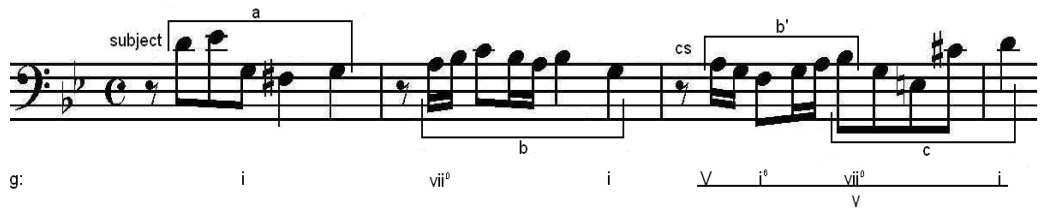


Figure 5.2. Motives of subject and countersubject of *Fugue in G minor* by Bach.

Hans Keller discusses a motivic transformation that may also be related to manipulations of harmonic progressions. He refers to a technique where priches and their harmonic implications are both reordered in another statement. An example of harmonic interversion (Figures 5.3 and 5.4) is taken from Keller's article, *Unity of Contrasting Themes and Movements*. The circled notes in Figure 5.3 occur in a re-ordered version in Figure 5.4. In addition, the first example implies a harmonic progression that is reversed in the second example. The manipulation of melodic material creates a transformation of patterns on the surface, however, the inversion of contour and the underlying harmonic progression retain some of the thematic references.

Figure 5.3. Flute, mm. 62-63 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 53).

Figure 5.4. Violin, mm.70-71 from *Piano Concerto in C Major*, K. 503 by Mozart (Cited from Keller's article on p. 54).

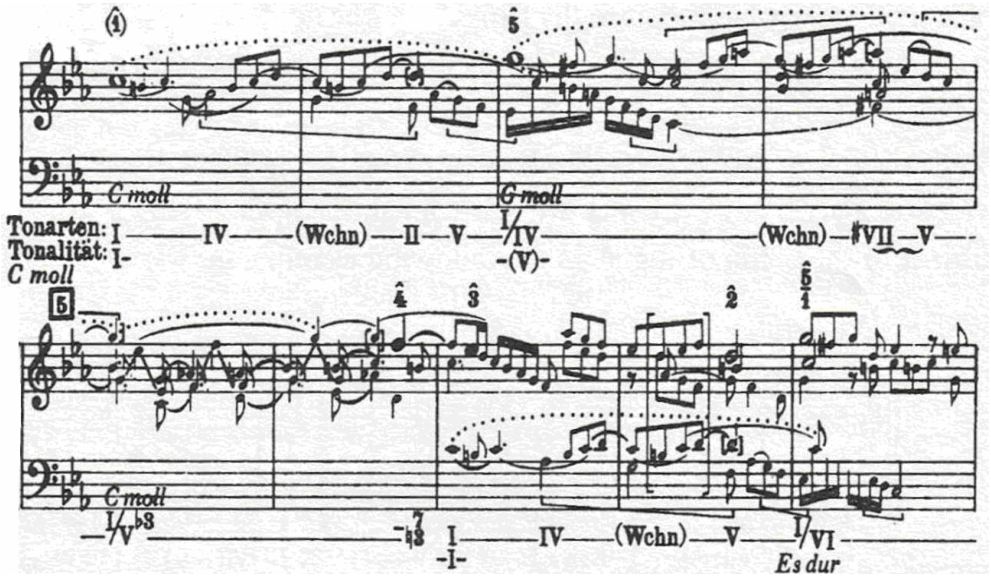
The concept that thematic unity can transcend melodic relationships and implicate harmonic progressions has influenced analytical perspectives presented by the author of this thesis. While motivic manipulations on the surface are allow the listener a gradual perception of thematic relationships, further associations to harmonic progressions and the implications of key areas further contribute to the experience of understanding underlying relationships. In the second analytical perspective from chapter four (Figure 5.5), structural pitches from the subject of

the Handel fugue have been given on subsequent staves. These pitches are assigned to the keys that appear in significant portions of the fugue. The result of this analytical perspective is a suggestion that structural pitches in the subject are used to anticipate later key areas and this procedure may contribute another level of experienced thematic unity. It would be interesting to apply this method to other compositions in order to observe the degree to which it might be applicable.

Figure 5.5. Underlying Pitch Groups in the Subject of *Fuga II in G Major* by Handel.

Heinrich Schenker offers a theoretical explanation for the broad dimensions of tonal unity that are prolonged within a composition. This concept is achieved by the voice-leading of structural pitches from the melodic line (*Urlinie*) and its bass harmonization (*Bassbrechung*) that reinforce pitches of the most prominent tonality. Since the outer voices in Schenker's theory maintain the most

prominent role in defining the musical structure, his analytical approach to imitative texture such as the fugue is limited. However, in volume two of The Masterwork in Music, he does provide an analysis of the *C Minor Fugue* by J.S. Bach. In the first nine measures of this fugue (Figure 5.6), an analysis of the foreground is given along with a skeletal version of a superimposed background. In this excerpt, structural pitches in whole notes indicate that the first two measures are a prolongation of the tonic pitch before the stepwise descent of the *Urlinie* is expressed from scale degrees 5-1. In addition, the ultimate bass progression of I-V-I provides the structural harmony for the upper voice. While the significance of the inner voices is reduced to melodic and harmonic elaborations on a local level, the outer voices maintain the tonality on a broader level throughout the excerpt.



Example 5.6. Mm. 1-19 of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 33).

In the Schenkerian reduction of the background level (Figure 5.7) of the *C minor Fugue*, the melodic patterns that appear on the foreground level have been removed. This reduction, without a rhythmic context, contains linear progressions

as well as an overall *Urlinie*. Schenker's concept of harmonic prolongation has now been further reduced to the chordal structure that reinforces the tonic triad.

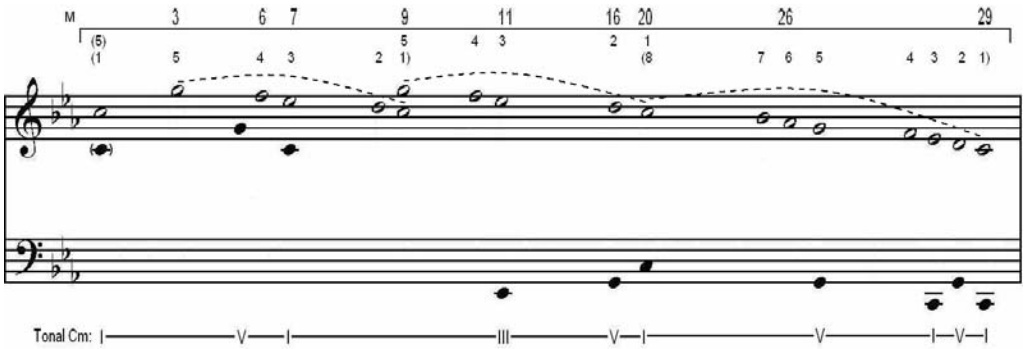


Figure 5.7. Background of *Fugue in C minor* by Bach (Cited from Schenker's book on p. 32).

William Renwick expands the limitations of Schenker's concept to fugal analysis. He retains the advantages of a reductive approach, however he acknowledges that the imitative treatment of individual voices can also contain elements of structural significance. The contrapuntal process that creates thematic identity in these voices, such as inversion and stretto, are recognized for their separate identity while at the same time they contribute to the overall tonal unity in the passage. In the first two measures of Figure 5.8 (a), a simultaneous version of the subject and countersubject are given and immediately followed by an example of invertible counterpoint. Figure 5.8 (b) provides a background reduction of these measures and indicates voice-leading strands that appear in both voices. It should be noticed that these strands are segments of the *Urlinie* and together they serve the same function in creating tonal unity.

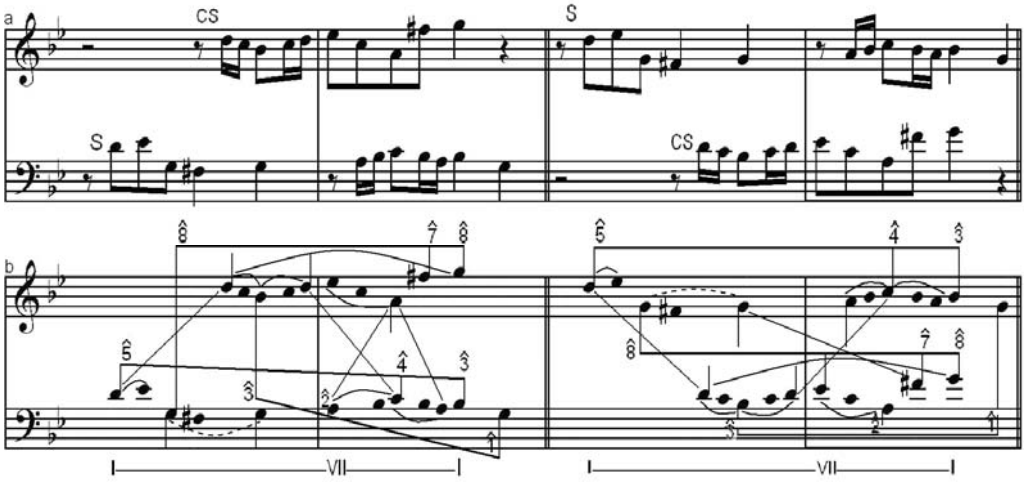


Figure 5.8. Invertible counterpoint in *Fugue in G minor* by Bach (Cited from Renwick's book on p. 89).

The role of the subject and countersubject in establishing thematic unity on an underlying level is enhanced by the technique of reduction. In the third analytical perspective from chapter four (Figure 5.9), a series of three reductions from the subject and countersubject appear on successive staves. In the first reduction, two voices emerge to provide tonal stability. The tonic pitch g is elaborated by a lower neighbor in the lower voice and maintains a reference throughout this statement. The upper voice connected by descending steps, results in an *Urlinie* from 5-1. In the second reduction the linear progressions of a third appear as vertical intervals to observe the basic voice-leading. The third and final reduction eliminates the vertical intervals of a third and shows the significance of the neighbor pattern (D-$C^{\#}$-D) in reinforcing the tonality. The immediate lower neighbor of the tonic pitch (G-$F^{\#}$-G) is supported by a prolonged dominant pitch that is also supported by a lower neighbor. These prominent pitches together reinforce the tonality of G minor in the expression of the subject and the countersubject.

Figure 5.9. Reduction of subject and countersubject of *Fugue in G minor* by Bach.

The analysis in Figure 5.9 shows the tonal unity of G minor that occurs as the thematic material progresses to the dominant area of D minor. This application of reductive analysis from the third perspective in chapter four uses concepts from both Schenker and Renwick. An implied pedal point G allows two voices to be extracted from the single line of the subject and countersubject (Figure 5.9b). The Urlinie of 5-1 in Schenker's concept unfolds through the third beat of measure 3 and this pitch G becomes a common pivot tone in the unfolding of a diminished seventh chord in D minor (Figure 5.9 c). Renwick's use of the neighbor pattern as a voice-leading strand occurs at the beginning of the subject as G-$F^{\#}$-G and the pitch D is prolonged to later confirm the dominant in the pattern D-C#-D (5.9d). The motivic fragments that are generated from the subject and countersubject are reflective of a surface thematic unity. The subsequent reductive perspectives provide underlying voice-leading relationships that contribute to the broader dimensions of tonal unity.

Chapter Six

Conclusion

Thematic unity in music occurs when elements from a musical idea appear frequently, in significant places and their presence is recognized or experienced on or beneath the surface. In this thesis, the concept of thematic unity has been explored in the philosophical discussions of Arnold Schoenberg, Rudolph Reti, and Hans Keller and in the analytical methodologies of Heinrich Schenker and William Renwick. The cohesive elements in music have been described, explained and analyzed by these theorists and some of their ideas have been incorporated in the analytical perspectives used by the author of this thesis.

The theories of Schoenberg have referred to the *Grundgestalt* (basic shape), its potential to embody the essence of the musical idea as well as the techniques of developing variations that generated different motive forms within the composition. In the book *The Musical Idea*, Schoenberg discussed the driving forces within the basic idea and the ways in which they transformed new motive forms in developmental sections. Schoenberg explained these techniques using terminology that described their function in creating various permutations of the basic idea.

In the discussions by Reti and Keller, developmental techniques were described and labeled with terminology related specifically to their explanations. In some cases it is difficult to understand a particular terminology for

developmental techniques when current terms are more descriptive. For example, Reti's distinction between interval by inversion and interval by direction (or contrary motion) was an attempt to add some clarity to his discussion. On the contrary, his concept and explanation of reversion with the same meaning as retrograde may add a degree of ambiguity to the meaning of this concept. Regardless of the terminology, these three theorists have offered valuable insights concerning the relationship of thematic permutations to the basic idea in the composition.

The concept of structural unity beneath the surface was defined in chapter three by the analytical perspectives of Schenker and expanded in further applications by Renwick. The analytical approaches of these theorists distinguished prolongational patterns from structural pitches that revealed underlying relationships. A series of hierarchical levels provided a format to observe the gradual reductions of these pitches on foreground, middleground and background levels. The result of these observations indicated basic voice-leading patterns of the *Urlinie* that contributed to the ultimate tonal unity within the composition. The methodology in Schenker's approach emphasized the structural significance of the outer voices, however, he did not include the thematic material of a fugue's inner voices as part of the ultimate *Urlinie*. Renwick on the other hand, recognized that the imitative texture of the fugue occasionally transferred thematic material to the inner voices and that they also contributed to the tonal unity at the background level.

In chapter four, the analytical perspectives for the fugues by Bach and

Handel were initially based on the inherent concept of thematic unity. In the fugue, the subject as a basic idea is developed in its entirety, fragmented and sometimes transformed into derivative statements during the process of development. Traditional analytical methods have been used to identify many of the surface relationships that have resulted from the permutation of thematic material. Existing techniques of reductive analysis have been used to identify underlying relationships in the fugue and they have been modified in some cases to explain other hidden connections. The analytical approach for the two fugues perspectives was divided into a series of three stages in order to observe the following relationships, (1) motivic fragments, (2) underlying motives and their indications of keys and harmonic progressions and, (3) linear prolongations of voice-leading in reductive levels of foreground, middleground and background levels.

The perception of thematic unity within a composition is strongly influenced by the initial clarity of a statement, the gradual process by which it unfolds in direct and indirect references and concealed relationships that provide a sense of experienced unity on broader levels of the composition. Schoenberg, in his discussion of the musical idea, related coherence and comprehensibility to the use of logic, technique and the art of its presentation. He emphasized that the logical development of the idea guided the listener toward a predetermined point or goal within a composition.

In this thesis, analytical perspectives have been developed for the purpose of revealing surface and underlying relationships in selected fugues. The organic

nature of motivic fragments within the fugue subject was observed in developmental treatment that added variety on an immediate level of the composition and that later transformed thematic material into hidden or suggested references. The research and analytical observations in this thesis have identified elements of thematic unity from the traditional perspective of motivic unity and it has applied the innovative approaches of reductive analysis to reveal voice-leading relationships of tonal unity. This research may be expanded in many directions that include applications of the analytical perspectives in this thesis to more contemporary fugal compositions. In future studies, comparisons of potential structural unity might be made with the fugues of other historical periods.

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