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Walter Hawthorne

Dr. Walter Hawthorne, Major Professor

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A COMPARATIVE STUDY OF SELECTED BACH AND KLENGEL FUGUES

A Thesis

Presented for the

Master of Music

Degree

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Ann K. Holler

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ABSTRACT

This study addresses the possible influence of J. S. Bach upon A. A. Klengel (1783 - 1852), German pianist and composer of *Kanons und Fugen für das Pianoforte.* Two Klengel fugues were selected for comparison with two Bach fugues in the same key. Various melodic, harmonic, contrapuntal, and structural analytical techniques were applied to these two pairs of fugues. Analysis of the Klengel fugues showed his thorough knowledge of Baroque contrapuntal practices. Comparison of data from analysis of the four fugues indicated that Klengel had particular knowledge of Bach's compositional style. Similarities in the styles of the two composers led to the conclusion that Klengel's C Major Fugue, Book I, and G Minor Fugue, Book II, were apparently influenced by Bach in the areas of melody, counterpoint, harmony, and structure.

PREFACE

A survey of the history of keyboard music uncovered the name of August Alexander Klengel, nineteenth-century composer of canons and fugues in all the major and minor keys. Investigation revealed some information about this curious figure, who revered Bach and composed in the Baroque contrapuntal style. Questions arising from the initial investigation motivated this study of two of his compositions.

The German journal *Allgemeine Musikalische Zeitung* contains contemporary accounts of Klengel's life and work. An 1804 article reviewed a two-piano concert given by Klengel and Kalkbrenner ("Lezter Nachtrag. . ." 1804). In 1816 an anonymous author reviewed four new compositions of Klengel: *Rondeau*; *La Gavotte de Vestris variée*; *Dix variat. sur un Andante*; and *La promenade sur mer, interrompue par la tempête.* The four works received a mixed review; however, the reviewer praised Klengel's command of keyboard technique and believed that the compositions had a distinct value ("Recension" 1816).

In 1841 G.W. Fink reviewed *Les Avant-coureurs*, a set of twenty-four canons Klengel had composed as preparatory exercises for his large work, forty-eight *Kanons und Fugen für das Pianoforte.* Fink praised *Les Avant-coureurs* as works of art in double-counterpoint and as character pieces, recommending that every educated musician know them. The exercises were for the accomplished pianist. Fink eagerly anticipated the publication of the main composition, with which he was familiar (Fink 1841).

The January 10, 1877, issue of *Allgemeine Musikalische Zeitung* devoted more than eight columns to a review of Klengel's *Canons und Fugen in neuer Ausgabe.* At this time late in the nineteenth century, Friedrich Chrysander referred to Klengel's

contrapuntal writings as "a curious work of art" (Chrysander 1877). The author took exception to Hauptman's statement, in his foreword to the 1854 edition, that both performer and listener will find the fugues pleasing. In 1877, even Bach's fugues were performed very infrequently, the author stated. Chrysander viewed virtuosos of the time as businessmen, uninterested in delving deeply into music as art. For that reason, the compositions by Klengel were for performance a "lost cause." According to Chrysander, the music schools needed to work for the improvement of music as art and to emphasize the study of counterpoint. For Chrysander, Klengel's works were, in a sense, textbooks, not performance material, because they would never be "popular." He quoted Kant: "Metaphysics can never be popular." Chrysander considered Klengel's compositions indispensable to the music student. Klengel's canons and fugues "should be so important that there should be nobody found who has not been trained by them. . . . It is part of those achievements which are exclusively meant for the artist and art-connoisseur" (Chrysander 1877).

Three twentieth-century German scholars directly address the canons and fugues. First is the 1929 dissertation of Rudolf Jäger, *A. A. Klengel und seine Kanons und Fugen.* Halm's *Von zwei Kulturen der Musik* of 1947 is quoted in Reinhold Sietz's account of Klengel (Sietz 1958). Writing of Klengel's "ingenious counterpoint," Klaus Trapp includes in *Die Fuge in der deutschen Romantik von Schubert bis Reger* a discussion of Klengel's fugues as representative of the transition period between the Classical and Romantic periods (Trapp 1958). More recently, Joel Sachs has labeled the canons and fugues "a fascinating example of neo-Baroque counterpoint" (Sachs 1980).

Articles on Klengel in *Grove's Dictionary of Music and Musicians*, fifth edition, *The New Grove*, sixth edition, and *Die Musik in Geschichte und Gegenwart,* list no studies in English. Bibliographical lists in books concerning counterpoint and fugue reveal scant literature in English directly related to the compositions of Klengel. A

search of periodical literature after the publication date of *The New Grove* has proved fruitless. The compositions receive brief mention by Kent Kennan in his *Counterpoint* (Kennan 1959) and by Imogene Horsley in *Fugue - History and Practice* (Horseley 1966). Percy Goetschius gives Klengel more attention in the 1902 work *Counterpoint Applied, In the Invention, Fugue, Canon, and other Polyphonic Forms*. Goetschius calls Klengel's compositions "distinguished" and "worthy of analysis by every student of counterpoint" (Goetschius 1930).

It is necessary to define certain terms as they will be used in this study. The term "melodic characteristics" is defined as the manner in which the composer organizes pitches to produce thematic material and employs the resulting material in the entire composition. By "contrapuntal characteristics" is meant the manner in which voices are combined horizontally. "Harmonic characteristics" is defined as the manner in which pitches are combined vertically and how these combinations progress to produce chords, cadences, tonal centers, and modulations. The term "structural characteristics" means the manner in which smaller melodic, rhythmic, and harmonic elements join to create larger units, which in turn combine to create the entire composition.

The term "codetta" is used to denote a linking passage within the exposition. The term "bridge" refers to a non-modulatory transitional passage. The term"episode" refers to modulatory transitional material after the exposition.

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I. Introduction

August Alexander Klengel (1783 - 1852) was a virtuoso pianist, church organist, pupil and traveling companion of Clementi, as well as editor and performer of J. S. Bach's *Well-Tempered Clavier*. The son of an esteemed landscape painter and professor, Klengel received a good musical and general education; his musical talent became apparent early in life. About 1804 Clementi accepted the young Klengel as a student, with the provision that Klengel would travel with Clementi and perform the teacher's compositions. In their travels to Italy, Russia, England, France and throughout Germany, Klengel played for or with well-known virtuosos and was introduced in many courts and musical societies. According to Clementi, Klengel could perform certain of Clementi's compositions better than the teacher himself. Klengel was studying and performing Bach's fugues as early as 1814 (Sachs 1980), and he displayed a preference for composing contrapuntal works ("Recension" 1816).

Accounts of Klengel's relationship with Clementi, of his career as a concert pianist, and of his friendships with Mendelssohn (Mendelssohn Bartholdy 1864) and Chopin (Sachs 1980) support the idea that Klengel was esteemed by his colleagues. However, Klengel's association with Mendelssohn and others in the Bach revival is not clear. Curiously, this man, who in his younger days is said to have surpassed Clementi in the Romantic style of composition (Seitz 1958), devoted the last half of his life, nearly thirty years, to the act of composing in the syle of a century earlier. The result of his effort was the set of forty-eight canons and fugues in all the major and minor keys. According to Reinhold Seitz, Klengel's two-volume set was the only such collection of his time and was intended as a counterpart of the *Well-Tempered Clavier* (Seitz 1958). In 1854, two years after Klengel's death, Breitkopf und Härtel published the collection, edited by Moritz Hauptman. In his foreword, Hauptman states, "Almost all significant musicians of the last

decade knew and treasured this work and ardently awaited this edition" (Klengel 1854). Klengel's set of fugues was a valuable legacy of Bach, in the opinion of Hauptman. A second printing was made in 1877. Half a century later, F. G.Thiele edited for Steingräber Verlag a collection of twenty of these canons and fugues, chosen for their musical and pedagogical value (Klengel 1906).

A number of questions arise. Are Klengel's compositions entirely anachronistic, or do they integrate the Baroque contrapuntal style into the Romantic idiom? Are the works original or forward-looking in any sense? How do the compositions of Klengel reflect the style of the *Well-Tempered Clavier* ? In particular, do the fugues incorporate Bach's compositional techniques? If so, how are the fugues similar to those of Bach? Does Klengel adopt the letter or the spirit of Bach's style, and to what extent in each fugue? Do Klengel's fugue subjects show the melodic influence of the Baroque or the Romantic style or both? Is the collection of forty-eight fugues homogeneous? What variety, if any, can be found? What are the particular influences of the Romantic era? What is the pedagogical value of the canons and fugues, either for students of counterpoint or for students of keyboard literature?

Out of these and many other possible avenues of investigation, only one has been chosen as the topic of this study: how do certain of Klengel's fugues reflect the style of Bach? In an initial search for similarities, sets of Bach and Klengel fugues in the same key have been examined. From Klengel's "48," the C Major and G Minor Fugues of Book II were selected for analysis and comparison with Bach's C Major and G Minor Fugues from Book I of the *Well-Tempered Clavier*. (Scores of the four fugues are found in the appendices.) The two Klengel fugues are presented here, not as representative of the entire set of forty-eight, but as two which appear to share certain characteristics with Bach fugues in the same key. Detailed comparison of the two Klengel fugues with two corresponding Bach fugues will reveal any elements of Bach's compositional style adopted by Klengel in

these particular fugues. Because apparent similarity has been the criterion for selection of these two pairs of fugues, the study is perhaps biased in favor of the hypothesis, that the two Klengel fugues incorporate Bach's compositional techniques. Nevertheless, the two pairs of fugues will be analyzed and compared in order to document both similarities and differences in the styles of the two composers. If the hypothesis is proven, then only one query has been dealt with; and many others await the curious student.

No attempt is made to compare the entire body of forty-eight Klengel fugues with the *Well-Tempered Clavier*. Neither will this study attempt to demonstrate influences of the Romantic period upon Klengel's compositional style, except as certain characteristics are manifested in the two specific fugues. Neither Klengel's individuality as a composer nor apparent variety in the fugues will be discussed herein. Knowledge of Klengel's style and appreciation for his unusual dedication to his chosen task can be achieved only by thorough examination of the entire collection of canons and fugues. This study will initiate only one aspect of that examination.

II. Bach's C Major Fugue

Melodic Characteristics

The subject dominates Bach's four-voice C Major Fugue (Book I), appearing twenty-four times in twenty-seven measures. (See Example 1.) Within the range of a major sixth, the subject begins and ends in stepwise motion, with leaps in the middle. Six pulses long in common time, the subject contains each pitch of the C-major scale except the leading tone, which occurs in the dominant answer. Combining the opening tetrachords of the first two statements creates the entire C major scale. The implied ii - V - I harmony of the subject's second half resolves the tonal ambiguity of the opening tetrachord. Rhythmic and melodic factors (metrical position, duration, syncopation, approach by perfect fourth, and upper-neighbor ornamentation) emphasize tonic, subdominant, dominant, and mediant pitches. The subject rises from tonic to submediant and falls to mediant; the final tetrachord, inverted diminution of the first four pitches, condenses the descent. The entire subject outlines perfect fourths around the circle of fifths: c^1 - f^1 - (b^1, missing) - e^1 - a^1 - d^1 -g^1 (-e^1, substituting for tonic). Four different note values, four different intervals, and five changes of direction provide variety within the subject.

Example 1.



Essential melodic material consists of the tetrachord, the upper neighbor figure, the perfect fourth, and the dotted-note rhythmic motive. These motives provide material

for the free counterpoint in the fugue. Combinations of tetrachords produce scales in the accompanying counterpoint. The C-major scale at the end of the fugue carries the soprano to its highest pitch; in measure 20 the bass moves through scalar motion to its lowest pitch.

The small melodic structure of the subject expands into the larger melodic plan of entrance pitches. The perfect fourth outlined by the subject's first tetrachord provides the entering pitches for the last two statements, with the last tonic statement an octave lower than its corresponding initial subject pitch. (The c^1 entrance occurs at measure 14). The second and third pitches of this same tetrachord provide entering pitches for the overlapping alto and tenor statments of measures 10 - 12, entering consecutively on d^1 and e (an octave low). Pitches of the subject's e^1 - a^1 leap give the entrances pitches of measure 19. The subject's perfect-fifth leap supplies pitches for the octave-lower entrances of measure 17. The dominant-tonic perfect fourth of the subject represents the subject-answer relationship of statements.

Contrapuntal Characteristics

Fourteen of the first sixteen statements are either dominant or tonic. In the exposition, the composer places the two real dominant answers between two tonic statements, instead of alternating tonic and dominant. The tonic-dominant-dominant order prevails in the three entries of the first counterexposition (m. 7-10). The second counterexposition (at m. 14) presents two tonic and four dominant statements in stretto as the harmony begins to change.

The remaining ten entries begin on each pitch of the C-major scale. Alto and tenor statements have the greatest variety of starting pitches, together accounting for all pitches of the scale. Soprano entrances are only tonic or dominant. All tonic and dominant statements are real, along with the final subdominant statement. Others are tonal.

Stretto is the significant contrapuntal feature of this fugue. The first of seven stretto passages is in the initial counterexposition, with soprano and tenor overlapping statements, followed by the only single entrance outside the exposition.

In the second two-voice stretto (m. 10 - 12), alto answers the dominant bass at the fifth. Entering before the end of the bass statement and imitating alto at the second, the tenor entrance on e is the dominant answer of a missing relative-minor statement.

In the second counterexposition (m. 14 - 15), statements in alto, tenor (incomplete), and bass form a stretto. The incomplete soprano statement enters with the second half of the bass statement. This succession of three- and two-voice strettos involves all four voices.

The grand stretto of measures 16 - 18 continues the overlapping series as the four voices enter in descending order. Both upper voices are near the height of their ranges when alto answers the tonic soprano statement. The tenor and bass entrances represent dominant and tonic statements in D minor.

Three two-voice strettos complete the fugue. In measure 19, tenor on the dominant of D minor is answered at the fifth by alto. In measure 21, tenor on the leading tone of C Major answers the dominant soprano, imitating at the third. Here the tenor voice is at its highest point; it descends to its lowest point for its final entrance (m. 24), which the alto imitates in stretto on the subdominant. Between measures 20 and 22, the bass ascends from its lowest point to its second-highest point, from which it descends to the end. (Only at measure 9 is the bass higher.)

Pairs of statements in stretto demonstrate five possible metrical relationships. Five pairs occur at the interval of one beat, three with the upper voice leading and two with the lower voice leading. Four pairs of statements enter two beats apart. The upper and lower voices each lead in two pairs. The upper voice leads the three pairs entering three beats apart and the two pairs entering four beats apart. Three pairs enter five beats

apart in invertible positions. Thus, invertible counterpoint is possible in three of the five metrical positions.

When three or four voices occur in stretto, they enter in descending order. All stretto passages, except at measure 21, illustrate imitation at the fifth. Other intervals of imitation are the second, third and octave.

The subject's sixteenth-note tetrachord motive provides material for counterpoint. Contrary-motion sequential repetitions of the tetrachord accompany the first two soprano entrances and the bass entrance of measure 10, demonstrating invertible counterpoint. The same sequential accompaniment is parallel to the third and fourth entrances. A combination of the tetrachord and its inversion accompanies the alto statement of measure 9; an inverted version accompanies the beginning of the tenor statement of measure 12. In the second half of the fugue, the extended tetrachord appears in the free counterpoint. In measure 20, the end of the alto statement and its extension imitate the bass scalar stretto accompaniment. In measure 21, the alto accompaniment imitates the tenor. In measure 23, the bass inverts the soprano of measure 22. In the last three bars, the extended tetrachord motive appears over the bass pedal, creating contrary motion between voices. The soprano rises through a minor seventh, implying dominant, and then ascends in an octave scale to its highest point.

Harmonic Characteristics

All key areas in this fugue are closely related to C major. The composer employs primarily diatonic and secondary chords, along with chords borrowed from the minor mode.

In the first half of the fugue, the main tonal areas are tonic, dominant, and relative minor. The exposition and the subsequent counterexposition are in the tonic key. The alto statement of measure 9 continues the counterexposition at the dominant.

Continuing a series of descending tetrachords, the soprano of measure 11 descends through a diminished fourth to introduce the leading tone of A minor. Accompanied above by dissonant tetrachords, the tenor entrance of measure 12 enters on the dominant of A minor, concluding in the perfect cadence (m. 13-14).

At measure 14, the subject enters at its original pitch, reinstating the home key. Entrances on tonic and dominant persist through measures 15-17, even though the area is harmonically unsettled. In measures 17 and 19, the lower voices enter on the dominant and tonic of that key. The cadential Picardy third in measure 19 helps to transform the tonic of D minor to the dominant of G major, with the home key as the ultimate goal. Imitating the tenor at the fifth, the alto entrance on e^1 introduces the leading tone of G major. The tenor entrance on the leading tone of c (m. 21) is in the transitional area between G major and C major.

Four elements confirm the return to tonic: the cadence in measures 23-24, the final tonic entrance, the tonic bass pedal, and the C-major scale in the final measure. Emphasis on the subdominant interrupts the final tonic portion, over the tonic pedal.

Principal cadences are those in measures 13-14 on A minor and in measures 23-24 on C major. Intermediate cadences in the first half of the fugue are on C major (m. 6-7) and on G major (m. 10). In the second half, intermediate cadences are on D major (m. 19), and on G major (m. 21). In the final cadence, the leading-tone-seventh chord substitutes for the dominant seventh.

In the second half of the fugue, the A minor, D major, G major, and C major cadences progress around the circle of fifths, continuing to F major (over the tonic pedal) before returning to C major. Entrances in the second half conform to the fifths relationship. Measures 14-16 contain the group of entrances on c^1, c^2, g, G, and g^1, followed by entrances on d and a, in measure 17. The progression continues with the entrances on e^1 (m. 19), on b (m. 21), and on f^1 (m. 24). The final entrance on c is out

of sequence. This order of entrances is opposite to the fifths progression of pitches in the subject. In the grand stretto (m. 16 and 17), entrances begin on c^1/g^1 and a/d, providing a fifths relationship at the point of greatest contrapuntal intensity. Present in the small and large structures, these fifths relationships unify the fugue.

Structural Characteristics

The contrapuntal structure of the fugue may be summarized thus:

Section	Measures	Entrances	Key Area
Exposition	1-6	1-4	Tonic
Stretto 1, C-expos.	7-9	5 - 7	Tonic
Stretto 2	10-13	8 - 10	Dominant and relative minor
Stretto 3, C-expos.	14-16	11 - 14	Tonic
Stretto 4	16-18	15 - 18	To dominant of dominant
Stretto 5	19-20	19, 20	Dominant
Stretto 6	21-22	21, 22	Dominant to tonic
Stretto 7, Close	23-27	23, 24	Tonic, subdominant, tonic

There are no episodes to mark contrapuntal sections; however, bridges lead to two important cadences, in measures 13 and 23. Measure 17 is a contrapuntal high point because of the four-voice stretto. The entire area of measures 14 - 18 involves intense three- and four-voice stretto activity. Two-voice stretto passages frame this area.

The harmonic division is at the midpoint of the fugue. The A-minor cadence of measures 13-14 indicates the end of the first half. This perfect authentic cadence, along with those in C major (m.6-7) and in G major (m. 10) mark the ends of sections in the first half. In the second half, authentic cadences in D major (m. 19), G major (m. 21), and C major (m. 24 and 27) mark the ends of sections. In measure 19, the soprano and bass cadence melodically and harmonically, even as the inner voices initiate the fifth stretto, demonstrating the composer's ability to fuse seamlessly the melodic, contrapuntal, and harmonic sections.

Measures 16 - 18, at or near the Golden Mean,[1] contain not only concentrated stretto activity but also harmonic instability. Melodically, the soprano, alto, and tenor voices are at or near their peaks in measure 18. Lesser means occur at measure 10, the beginning of Stretto 2, and at measure 6, the end of the exposition. Voices in stretto occur in sixteen measures, very nearly a Golden Proportion of the total 27 measures.

[1] The Golden Mean is the point on a line segment dividing the segment into two unequal portions, such that the ratio of the smaller to the larger is equal to the ratio of the larger to the whole. This ratio is approximately .618. To find the Golden Mean of a twenty-seven-bar composition, multiply 27 by .618.

III. Klengel's C Major Fugue

Melodic Characteristics

Klengel's three-voice C Major Fugue has thirty statements of the subject in thirty-eight measures. Containing each pitch of the C-Major scale, the eleven-note conjunct subject outlines tonic, dominant, supertonic, and dominant prior to the cadence on the mediant. Example 2 shows the first statement of the subject. The tonic pitch initiates the scalar descent. Ascending and descending tetrachords approach the two dominant pitches; the first dominant is emphasized by its position on the strong beat and its duration. Three factors emphasize the supertonic: the approach by thirty-seconds, the change of direction, and the position as the lowest pitch. Increasing rhythmic activity and directional reversals within the over-all downward thrust provide interest.

Example 2



As if to compensate for the predictable nature of the subject, the composer varies statements of the subject within the fugue. The subject cadences on the mediant in six of its appearances; alterations cause some statements to end on tonic, dominant, or other pitches. The initial descending interval becomes a major second in about half the non-inverted statements, in both major and minor key areas. Six statements are inverted.

Motives in the subject are the ascending and descending tetrachords, the minor third skip, and the dotted-note rhythmic motive. Much of the free counterpoint in the

fugue comprises these motives or their extensions. A prominent motive in the free counterpoint is an inversion of the first eight pitches of the subject, in which sixteenth notes rise through a seventh, then descend one step, hereafter referred to as the seventh motive.

Reflecting the strong scalar quality of the subject, octave ascents or descents occur within the accompanying material. These instances of stepwise motion through an octave are largely diatonic within their respective key areas. Although these scales do not threaten the aural impression of tonality, their presence seems to imply a conscious attempt to represent the six modes, Ionian, Dorian, Phrygian, Lydian, Mixolydian, and Aeolian, beginning on various scale degrees. Bach employed a similar plan in his C-Major Sinfonia, perhaps as a pedagogical device (Hawthorne 1980). Klengel's soprano voice includes six of these scales, the latter three overlapping in the final long ascent (m. 35 - 37). Two scales are in alto, and nine are in the bass.

Contrapuntal Characteristics

In the exposition, the three voices enter in ascending order: tonic, dominant, tonic. The initial dominant pitch of tonal statement [2] answers the tonic of the subject, and its first tonic pitch answers the dominant. The redundant tonic entrance [4] extends the exposition.

Half of the remaining 26 statements occur in five stretto passages, concentrated in two areas of the fugue. In the five strettos, pairs of voices enter one, two, or three beats apart, imitating at the octave, major second, perfect fourth, augmented fourth, and major seventh.

Single entries [5] and [14] frame the first succession of two- and three-voice strettos. In the cadential Stretto 1, alto and soprano dominant entries in G major answer the real, soprano statement [5] on g^2. The next two stretto passages follow immediately.

In measures 11-12, the voices enter in ascending order at one-beat intervals, on the tonic and subdominant of G major, followed by an inverted statement on the leading tone. Stretto 3 repeats Stretto 2 sequentially, a major sixth higher, in E minor. Strettos 2 and 3 demonstrate imitation at the perfect fourth and augmented fourth.

Single entries [24] and [30] enclose the second stretto group. Like Stretto 2, the two-voice stretto 4 is cadential. Both involve soprano and alto in the same metrical, but different intervallic, relationships. Their succeeding three-voice strettos are also similar. The first two voices of Stretto 5 show imitation at the same metrical and pitch intervals as the first two voices of Strettos 2 and 3. The inverted third voice of stretto 5 is below the other two, demonstrating invertible counterpoint in comparison with Strettos 2 and 3; however its interval of imitation is not a tritone. Tonic strettos 4 and 5 both contain pairs of voices starting on the pitch classes f and g, with the positions exchanged. Disguised by the long chromatic ascending soprano line, the last entry of the fugue begins not on tonic, as might be expected, but on $c\#^2$, the leading tone of d^2.

Between the two stretto areas are two groups of single entries, set off by three episodes. In measures 20-21, soprano statements [15] and [16] enter sequentially on the dominants of C major and A minor respectively. The next two sequential bass statements change key in mid-course. Its altered second half causes the D-minor statement [17] to end in B-flat major. Likewise, entrance [18] begins in E-flat major and ends in C minor. In measure 25-26, statements [19] and the real [20] enter on the dominant and tonic of F major. Bass [21] and the two inverted soprano statements enter on the dominant, tonic and dominant of D minor, as F major returns.

Statements begin on all pitch classes except b and b-flat. The soprano voice contains nine of the ten beginning pitch classes, five of the six inverted statements, and 15 of the total 30 entrances.

Free counterpoint contains conjunct sixteenth- and eighth-note accompaniments of statements of the subject. The contrary-motion sixteenths below and above statements [2] and [4] demonstrate invertible counterpoint. In measure 2, the bass inverts its first eight pitches to create the rising seventh motive, reversing the descent of the subject, as it accompanies dominant answer [2]. The alto counterpoint with tonic statement [4] initiates a G-major scale, which is completed by the soprano, and extended (an octave lower) by the alto ascent a to d^1.

Parallel descending lower voices accompany entrances [3], [5] and [20] as they progress to melodic and harmonic cadences in C, G, and F major respectively.

Ascending to its highest point, the alto crosses the soprano in measure 8 to approach the starting pitch of entrance [5]. The soprano imitates a fifth higher in its approach to entrance [7], which begins on the soprano's highest pitch.

Scalar ascents or descents accompany alto statements [6] and [25], as well as soprano statements [14], [15], and [16], in various configurations of parallel and contrary motion. Upper voices alternating in the seventh motive accompany entrances [17] and [18] in a manner similar to the episodes of measures 6-8 and 18-19.

Chromatic bass parts underlie statements [19] and the inverted [22], [23] and [30]. At measure 25, the bass is at its highest point and descends three octaves to the end. Syncopated voices accompany the three statements [21] - [23].

Episodes, bridges, and codettas separate the entry and stretto passages. In the exposition's codetta, between [2] and [3], the upper voice ascends in the seventh motive and the major scale, exchanging the voice arrangement of measure 2.

This codetta provides the material for three episodes and one entry area. In modulating toward G major, the three-bar episode of measures 6-8 contains sequential upper voices alternating the seventh motive. The tied soprano a^1 and b^1 provide the

octave completion of the alto ascending seventh motives. The bass descends in tetrachords, through complete octaves.

The shorter episode of measures 18 and 19 is similar, moving from E minor to C major. Its bass eighth notes create scalar descents, underneath the upper-voice alternating ascending sevenths. In these two episodes (m. 6-8 and 18-19), the seventh motives begin on the dominant of the key, with key changes twice a measure.

Measures 22-23 contain similar material. The altered bass statements [17] and [18] descend in a scalar manner. As in the episodes, the tied note in one upper voice is the goal of the ascent in the other voice. The one-bar episode of measure 24 continues the motion. In moving from C minor to F major, the upper voices ascend over the bass tetrachords.

Extensions of the subject provide material for two non-modulatory bridges. The bridge of measures 14 - 16 moves toward the cadence in E minor, in transition between Stretto 3 and statement [14]. The sequential extension of the soprano statement [13] sounds above the bass descending scale. In the next measure, all voices are parallel, as the alto, in sequential 7-6 suspensions, alternates with the soprano dotted motive. Measures 30-31 are a bridge in F major. The soprano extends the tail, or second half, of inverted statement [23], over the tonic bass pedal.

Measure 35 has a short chromatic bridge in tonic. The alto makes a wide leap from its lowest pitch to the augmented sixth chord. In another chromatic touch, the closing soprano C-major scale in measure 37 imitates the beginning of [30] in diminution a minor second lower.

Harmonic Characteristics

In the exposition, the subject itself initially establishes tonic, by implying a V^7 - I progression. After a brief tonicization of G major for the dominant answer, a codetta

returns to C major. The imperfect authentic cadences in measures 4-5 and 5-6 confirm the key of C major.

The modulatory episode in measures 6 - 8 moves sequentially through F major, D minor, G major, E minor, and A minor on the way to G major. The contrary-motion upper voices and the bass voice approach each cadence in tetrachords, the upper tetrachord in the rising sixteenths and the lower tetrachord in the descending eighth notes. Completing the alto scales, the soprano tied half notes serve as both mediants of the major keys and dominants of the minor keys.

Entrances [5] - [7] on tonic and dominant of G major, along with the perfect authentic cadence in measure 11, confirm the key of the dominant, G major. The Stretto 2 statements are on tonic, subdominant, and leading tone of G major. Even though the inverted statement [10] sounds a tritone above [9], the leading tone strengthens, rather than weakens, the key. This statement cadences in A minor in order to move toward E minor, the next tonal area.

The mediant, or relative minor of the dominant, is the key for measures 13 - 17, with entrances on its tonic, subdominant, and leading tone. As in the previous stretto, the leading-tone entrance strengthens the key. In a bridge to statement [14], all voices descend toward the two E-minor cadences in measures 16-18, then shift upward in measure 17 for the single entrance [14]. Patterned after measures 6 - 8, the episode of measures 18 - 19 modulates by fifths from E minor to C major. Contrary-motion tetrachords point to the keys of A minor, D minor, G major, and C major.

At measure 19, the tonic key returns, with an entry on its dominant. A deceptive cadence in measure 20-21 leads to the key of A minor and its dominant statement.

Measures 22-23 modulate in a manner similar to the previous episodes, with cadences twice each bar. Here the bass consists of two sequential statements altered so that each descends and changes key. Again, the contrary motion tetrachords point to

each new key; the tied half notes provide transitions in the progression of keys. This section modulates sequentially from A minor through D minor, B-flat major, and E-flat major to C minor. The movement B-flat major to E-flat major to C minor is a mirror image of the movement C major to A minor to D minor. The tonic notes of D minor and B-flat major are equidistant from the tonic of C major; the tonics of A minor and and E-flat major are equidistant from C. Similarly, the dominant and subdominant key areas are equidistant from the tonic. In addition, the key movements show third relations, in the pairing of C major and A minor, D minor and B-flat major, E-flat major and C minor. The episode of measure 24 moves to F major through C minor, its minor dominant. Statements [19] and [20] enter on the dominant and the tonic of F major; and the imperfect cadence of measure 26-27 confirms the key.

D minor interrupts the key of the subdominant, with entrances on its dominant and tonic. The $f\#^1$ of statement [22] briefly tonicizes G minor. Similarly, the $c\#^2$ of entrance [23] suggests D minor. The subdominant returns in the sequential bridge of measures 30-31. Statement [24] and Stretto 4 lead to authentic cadences confirming the final return of tonic. The five entrances of the last two strettos begin on the subdominant, dominant and tonic of C major. Embedded in the long soprano ascent, the unexpected final entrance on $c\#^2$ fulfills Klengel's plan of beginning pitches . The augmented-sixth chord, the secondary-leading-tone chords, the soprano ascending line, and the final statement contribute to the chromaticism of the closing measures. This chromaticism is consistent with the plan of initiating statements on various chromatic pitches, but it contrasts with the inherently diatonic nature of the subject. A rising soprano C-major scale and the perfect authentic cadence re-establish the home key, which the final statement has denied.

The most important cadences outline the C-major triad: G major in measure 11, E minor in measures 16-17, and C major in measures 33-34. These cadences reflect the

important key areas in the fugue. In the first half, the key movement is around keys whose tonic pitches are in the C-major triad. In the second half, C major is the anchor. After the E-minor cadence of measure 18, the key progression by fifths ends at the tonic. The sequential key movement (m. 19 - 24) from A minor to E-flat major pivots around C major and C minor. These two keys frame the subdominant area, which lacks a perfect authentic cadence. D minor and the tonic pedal interrupt the subdominant area.

Klengel's apparent experimentation attempts to extend the standard Baroque contrapuntal and harmonic vocabularies. The mirror image key relationships, the tritone as interval of imitation, the chromatic initial notes of statements, and the chromatic collection of beginning pitches of statements all point toward the twentieth-century.

Structural Characteristics

The following list summarizes the contrapuntal sections of the fugue.

Section	Measures	Entries	Key Area
Exposition	1 - 5	[1] - [4]	tonic
Episode	6 - 8		to dominant
Entry, Stretto 1	9 - 11	[5] - [7]	dominant
Stretto 2	11 - 12	[8] - [10]	to relative minor
Stretto 3	13 - 14	[11] - [13]	mediant
Bridge†	14 - 16		mediant
Entry•	17	[14]	mediant
Episode+	18 - 19		to tonic
Entries*	20 - 23	[15] - [18]	tonic to tonic minor
Episode+	24		to subdominant
Entries•	25 - 29	[19] - [23]	subdominant
Bridge†	30 - 31		subdominant
Entry, Stretto 4	31 - 33	[24] - [26]	tonic
Stretto 5	34 - 35	[27] - [29]	tonic
Bridge, Entry, Close	36 - 38	[30]	tonic

The entries (*) of measures 20 - 23 are central between preceding and succeeding pairs of episodes (+), entry sections (•), bridges (†), and strettos.

Two areas containing stretto (measures 10 - 14 and 33- 35) frame a middle section half as long as the fugue. If the return of tonic is considered a dividing point (m. 20),

then the two stretto areas create intensity near and after the midpoint of the first half and near the end of the second half.

In the first half, the perfect authentic cadences in measures 5-6, 11, and 17-18 mark the ends of periods, with their respective half cadences at measures 2-3, 8, and 12-13. In the second half, these cadences mark the ends of periods or phrase groups: measure 19-20, imperfect authentic cadence on C major; measure 24-25, imperfect authentic cadence on F major; measure 33-34, perfect authentic cadence on C major; and the final cadence of measures 37-38.

On the basis of the harmonic progression, the E-minor cadence of measure 17-18 is close to the midpoint. However, the return of tonic at measure 20 is at the midpoint. The tonic triad is the skeleton for the harmonic progression of the first half, and the tonic key is the anchor for the second half.

The Golden Mean is at measure 23 at the E-flat cadence, in an area of harmonic unrest. Other means are at measure 14 (the two-voice stretto) and at measure 9 (the beginning of the dominant entries).

IV. Comparison of C Major Fugues

Comparing the Bach and Klengel C Major Fugues reveals both differences and similarities.

Both subjects begin on the tonic pitch, preceded by eighth rests in common time. Bach's subject is disjunct in the center; Klengel's disjunct at the end. In both subjects the tetrachord motive is essential, appearing first in eighth notes, then inverted in sixteenths. Klengel's subject inverts Bach's initial ascending tetrachord, stressing the dominant instead of the subdominant. Both subjects outline perfect fourths. The contour of each subject is different; Klengel inverts Bach's arched shape. Bach's first entrances in upper- and lower-voice pairs contrast with Klengel's three ascending entrances. Bach's order of voice entry is tonic, dominant, dominant, tonic; including the redundant entry, Klengel's order is tonic, dominant, tonic, tonic. In Bach's exposition, the dominant answers [2] and [3] are real; in Klengel's exposition, the dominant answer [2] is tonal. Bach's exposition requires no codetta, but Klengel does include a codetta linking statements [2] and [3]. Klengel extends his exposition with a redundant entry, then modulates to the dominant. Bach extends his initial tonic area with a counterexposition. While Bach's twenty-four entries include two incomplete ones, Klengel alters the tail, or second half, of many of his thirty statements. In Bach the tenor has the most entries; in Klengel, the soprano. Bach's entrance [21] on the leading tone of C may have inspired Klengel to begin statements [10] and [13] on the leading tones of their keys. Bach's statements of the subject begin on each pitch of the C-major scale; Klengel manages to initiate statements on each chromatic pitch except b and b-flat.

Bach has seven stretto passages in 27 measures; Klengel has five stretto passages in 38 measures, with more bridges and episodes. Klengel's final stretto includes all three voices, one more than in Bach's last stretto. In Klengel's strettos, the overlapping voices

enter in predominantly ascending order; in Bach's strettos, they enter in both ascending and descending order. Bach's stretto voice pairs demonstrate imitation one, two, three, four, or five beats apart. Klengel's intervals of imitation are one or two beats. Bach's stretto voice pairs exhibit imitation at the fifth, second, third, and octave. Klengel's voice pairs illustrate imitation at the octave, perfect fourth, augmented fourth, and minor second.

In both fugues, free counterpoint employs material from the subject. Klengel's seventh motive appears in measures 22 and 23 of Bach's fugue. Octave scales, occurring twice in Bach's fugue (m. 20 and 27), are prevalent in Klengel's free counterpoint. By including scales in each of the modes, Klengel borrows not only from Bach's C-major Fugue, but also from his C-major Sinfonia. Klengel's alto material in measure 3 is similar to Bach's final soprano ascent.

In the first half of his fugue, Bach moves through tonic, dominant, and relative minor key areas. Klengel's first half features tonic, dominant and mediant. Bach's second half moves through tonic, supertonic, dominant, then tonic again, with the subdominant. In Klengel's second half, the most important key areas are tonic, subdominant, and tonic. In Bach's first half, the relative minor is significant, as opposed to the relative minor of the dominant in Klengel's first half. Both fugues return to the tonic in the middle and during much of the second half. Harmonic instability occurs just after the midpoint of both fugues. Both have short passages in D minor. Bass tonic pedals occur in the two fugues. Bach has no modulatory episodes, in contrast to those of Klengel. Klengel expands upon Bach's harmonic vocabulary by including a chromatic augmented-sixth chord. Unlike Bach, Klengel tonicizes keys not closely related to tonic. Bach's pairing of C major and A minor show third relations. Klengel's third relations are more extensive: C - g - e in the first half, F and d, A and C, d and B-flat, E-flat and c in the second half.

Both composers exploit fifth relationships; Bach's are more pervasive than Klengel's. Both subjects provide bases for the harmonic progressions of their working out.

Both fugues have clear divisions at the midpoint. Bach's three- and four-voice stretto passages increase intensity in the second half of his fugue; Klengel's stretto passages effect intensity in both halves. Bach places his most intense contrapuntal event, the four-voice stretto, at his Golden Mean; Klengel arranges the cadence in E-flat, a key foreign to tonic, at his Golden Mean. In both fugues, lesser means occur at stretto sections.

Melodically and rhythmically, Klengel's subject is clearly derived from that of Bach. Leading-tone entrances, starting pitches, stretto, and scalar counterpoint, all indicate the contrapuntal influence of Bach upon Klengel. The harmonic similarities also suggest that Klengel modeled his composition upon Bach's to some extent, although Klengel's third relations and chromatic harmonies place him in the Romantic age. The use of stretto, the binary design of both fugues, and the significance of the Golden Mean are structural similarities. Evidence indicates that Klengel did borrow from Bach, even attempting to surpass him by including chromatic beginning pitches, foreign keys, and an extra statement in the final stretto.

V. Bach's G Minor Fugue

Melodic Characteristics

The subject, six pulses long in common time, has two distinct halves, each preceded by an eighth rest. (See Example 3.) Internal syncopation creates rhythmic interest while interrupting the conjunct melodic motion. Spanning the subject's entire diminished-seventh range, the head establishes dominant and tonic. Dominant and submediant pitches launch the upper tetrachord of G harmonic minor. The minor-sixth leap, the only disjunct interval in the subject, leads to an inversion of the initial minor second. This juxtaposition of melodic minor seconds is a striking feature of the subject. The rhythmically-strong leading tone between the two tonic pitches unequivocally defines the key. (Nine subsequent statements preserve the initial minor second; all retain the melodic relationship of tonic to its leading tone, helping to confirm each key area.)

Example 3.



The melodic goal of the tail is mediant. Continuing the conjunct motion of the head, pairs of sixteenth notes approach subdominant and mediant, both in strong rhythmic positions. The final mediant completes the trio of tonic-triad pitches, all embellished by minor-second neighbors. Within the tonic-triad framework, the undulating subject contains all the pitches of the G harmonic-minor scale. Both halves of

the subject comprise initial ascending patterns and final lower-neighbor figures. As rhythmic activity increases, the range decreases, making the tail a diminished version of the head.

A countersubject joins the dominant answer, entering after the first quarter-note leading tone of that statement. (See example 4.) Although more disjunct, the countersubject is close to a literal retograde inversion of the subject. It begins by inverting the subject's tail. It ends by reversing and inverting the subject's first two pitches, implying vii^{o} - i in D minor, and imitating the fourth and fifth pitches of the concurrent answer. The tail of the answer has the effect of imitating in inversion the head of the countersubject.

Example 4.



The subject's tail motive and the lower-neighbor figure supply material for accompanying free counterpoint. Even though the subject's interior eighth rest interrupts the lower tetrachord of the G minor scale, this tetrachord is also a significant melodic motive, occurring often in the counterpoint.

Contrapuntal Characteristics

Within the exposition, the four voices enter in tonic-dominant pairs. Two other four-voice fugues in the *Well-Tempered Clavier* have the same order of entry (Kennan 1959). In the lowest part of its range where tenor would normally sound, the alto voice first exposes the subject. The subject and its immediate answer create a three-bar pair of

statements which cadence on the downbeat of measure 4. Pitches at the juncture of the subject and its tonal, dominant answer outline the tonic triad; but the answer's downbeat leading tone quickly establishes the dominant key. The seven-bar exposition contains two subject-answer pairs, linked by a one-bar codetta. The second voice pair (bass and tenor) imitates the original subject and answer an octave lower. The tenor enters as the upper voice, so that its entrance is clearly heard. When soprano and bass join in, the tenor reverts to the inner part of the texture. Kennan calls its soprano accompaniment a false entry (Kennan 1959); it approximates the subject rhythmically more than melodically.

The countersubject emerges in measure 3, almost as an extension of the alto subject, below the soprano answer. The beginning of each countersubject not only inverts the subject's second half, but also anticipates the tail of its coexistent statement. Following the alto voice through the first three measures and the bass voice through measures 5-7 reveals that the countersubject returns those voices to their initial dominant pitches. A tonic quarter note links the subject's tail motive with its countersubject inversion; this area of gentle conjunct motion is flanked by more dramatic leaps and more dissonant minor seconds. The first two statement-countersubject combinations demonstrate invertible counterpoint.

In the remainder of the fugue, the countersubject accompanies seven single statements of the subject and two stretto passages. The countersubject appears with each of the single entries and with the first statement of each stretto in the same relative position as before, that is, beginning after the leading-tone quarter note of the statement.

Invertible tenor and bass countersubjects accompany the tonal, relative-major entrance and its two answers (m. 12 - 16). The first melodic interval of the B-flat-major statement moderates the sharpness of the original subject's two minor seconds, diminishing the subject's poignancy. The first tonal answer and second real answer of the

relative-major entrance follow without an intervening tonic statement. Both answers contain the leading tone of F major, the low bass E-natural of measure 14 being the most prominent rhythmically and melodically. The countersubject of this bass answer emerges not out of the alto statement, but out of its tenor countersubject. The soprano answer (m. 15) provides four-voice texture for the first time, as the intertwining alto anticipates the tail of the concurrent soprano statement. Throughout this relative-major section, the tenor has countersubjects but no statement of its own. An episode leads back to the relative major with its tonic bass statement, joined by an alto answer in stretto. A single countersubject begins in the normal metrical relationship with the bass statement but simultaneously with its alto answer. The tail of the bass statement functions as the beginning of a countersubject for the alto statement. The four-voice texture and the stretto maintain contrapuntal intensity to the imperfect cadence of measure 18, which takes soprano to its highest melodic point. As it overlaps the succeeding episode, the tail of the alto answer cadences in E-flat major, its a-flat^1 contrasting with the preceding soprano a-natural^2.

Measures 20-24 contain three real entries in subdominant and tonic; each is associated with a countersubject above or below. The outer voices state the subject two octaves apart in the subdominant key, the soprano statement of measure 21 being the highest in the entire fugue. Accompanying the soprano statement, the alto ascends through an octave, preparing to answer the subdominant statements midway between them. This scale-like combination of tetrachords (m. 22) with the first two pitches of the subject's head and the rhythmic motive from its tail. The same rhythmic motive initiates the alto statement, with the c^2 expected in a tonal answer in the subdominant key as well as the d^2 of a G-minor tonic statement. Thus, the rhythmic motive allows the melodic freedom to create a transition statement which serves two purposes: answering the

subdominant statements; and providing the first tonic statement in the final portion of the fugue, at the same pitch level as the first stretto entrance of measure 28.

In the three-voice tonic stretto (m. 28 - 30), real soprano and tenor statements and an incomplete bass statement enter in descending voice order. The altered alto countersubject begins in the usual rhythmic association with the soprano subject, as it shares the same melodic range. The bass begins its incomplete statement in the place of the tenor's countersubject. The tail of the soprano statement serves as a countersubject for the tenor; likewise, the tail of the tenor subject approximates a countersubject for the bass. With these three stretto statements and the single countersubject, four-voice texture returns, implying contrapuntal intensity. Actual four-voice texture is reserved for only three areas of the fugue: measures 15-18, leading up to, and including, the two-voice stretto; measures 29 - 31, the three-voice stretto with the next episode; and the final two bars, which also include a fifth voice.

As the penultimate tonic statement (m. 31-32) begins, the bass accompanies it in an inversion of its tail, then drops to the low D, echoing the perfect fifth downward leap two bars earlier. As the bass countersubject begins, the soprano ascends in the rhythm of the tail motive, in contrary or parallel motion with the same motive in the countersubject and the tail of the statment. The final tenor entrance restates the subject at the same pitch level as the alto in measure 1; like its earlier alto counterpart, it has no countersubject. The final statement, however, is accompanied by parallel, imitative bass and soprano natural minor scales, in which the soprano descends through nearly three-fourths of its range. Surprisingly, measure 33 does not contain the propelling sixteenth-note rhythmic motive, one of only two such bars in the fugue. The strict eighth-note rhythm emphasizes the descending voices; *Freistimmigkeit* enriches the texture, enhancing the intense drive to the final cadence.

Episodes and bridges consist of material from the subject, chiefly, the tail motive and the tetrachord motive. The codetta within the exposition combines the sequential soprano tail motive with the alto tetrachord. This codetta returns to tonic from the tonicization of D minor, for the second pair of statements.

Measures 8 - 11 separate the end of the exposition and the relative major area, restoring tonic after the second dominant answer, then cadencing on B-flat major. In this episode, the soprano outlines a series of fourths (diminished and perfect) and perfect fifths, by leap or in stepwise tetrachord. Alto continues to rest, having withdrawn from the texture in measure 6. In measure 8, the tenor employs the tail motive sequentially, taking its material from the soprano of measure 4. The bass continues with the same motive, first inverted, then displaced downward. (Except for the leap, the bass motion f# to B-flat imitates the soprano in the previous measure.) As the tail motive occurs in tenor and bass, it has the effect of outlining perfect fourths when not inverted. The tenor takes the motive in measure 10, parallel to the same motive in the soprano, as the bass approaches the two cadences with perfect fifths, perfect fourths, and an octave drop. Within this episode, the subject's tail motive creates a powerful rhythmic drive to the cadences, as it occurs complete six times and truncated three times. The cumulative effect of the outlined fourths and fifths is to emphasize certain pitches, especially tonic and dominant, approaching the cadences. The bass perfect fifth drop at the tonic cadence answers the soprano dominant to tonic tetrachord one bar earlier. Immediately after the tonic cadence, soprano leaps point out dominant and tonic of the relative major, answered by the bass cadential movement. The soprano's B-flat-major cadential pitches anticipate the same pitches an octave lower in the first relative-major statement.

Shorter than, but analogous to, the similar codetta within the exposition, a one-half bar episode in the relative major portion (m. 16) moves from V to I of that key. This

episode comprises the same motives mentioned above, maintaining the four-voice texture into the stretto passage.

In measure 19, the tail motive and its inversion appear in contrary motion in only two voices at first, imitating the tail of the previous alto statement and its accompaniment. Here, alto and soprano are at their highest points, providing melodic intensity, even as contrapuntal intensity decreases. In the second half of bar 19, the alto joins the outer voices, parallel to the soprano. This episode moves from B-flat major through E-flat major to C minor.

The episode in measures 24^3 - 27 moves from tonic, through E-flat major and C minor, to V^7 of G minor, as it elaborates upon the material in a previous episode (m. 8 - 9). The soprano tetrachords in measures 8 and 9 are adopted here by both upper voices, in ascending and descending sequential alternation. Three times the soprano and alto tetrachords combine to produce full octave descents, from dominant to dominant of the episode's three keys. The tenor rests in this area, preparatory to its tonic stretto entrance. The bass originates in the subject's tail motive. (Like the soprano of measure 4 and the tenor of measure 8, the motive begins on the pitch class g, following a cadence.) On the third beats of measures 25 and 26, the bass drops a seventh (similar to measure 9), causing alternating high and low bass pitches on beats one and three, almost two octaves apart. The bass pitches D, E-flat, C, e-flat, and d, are the dominant and its upper and lower neighbors; they recall the opening of the subject and prepare for the Phrygian cadence to come. At the low bass C (m. 26), that voice has descended from its highest pitch one bar earlier.

Delaying the final tonic resolution, the highly dissonant episode in measures 30-31 consists of the tail motive in contrary-motion pairs of voices. All voices participate in this episode, having entered in the three-voice stretto. In measure 31, the bass drops a seventh, as in measure 9, displacing the entire voice. As the voice continues, in

accompaniment to the penultimate statement, it drops an octave, as in measures 25 and 26, not displacing the motive, but providing a recurring dominant pedal tone (m. 30, 32, 34).

Harmonic Characteristics

The main tonal areas in the first half of the fugue are tonic and relative major with their dominants; their subdominants appear in the second half, both introducing and interrupting the return to tonic.

In the exposition, the leading tone within each subject defines tonic; and each dominant answer tonicizes the key of D minor. The imperfect cadence in measure 6 confirms G minor at the close of the third statement, whose answer cadences in D minor. The ensuing episode returns to tonic in the perfect authentic cadence (m. 10) before moving rather suddenly to the relative major and its perfect authentic cadence (m. 11-12). The outlined perfect fourths create a strong melodic and harmonic drive toward each cadence, and the recurring motives create a strong rhythmic drive. Throughout this episode, soprano and tenor suspensions delay harmonic resolution, thereby moderating the melodic force of the definitive perfect-fourths in all voices and the rhythmic power of the sixteenth-note motive. The suggested augmented-mediant harmony and the submediant chord of measure 9 foreshadow the harmonic progression of measure 30.

Relative major and its dominant are the key areas for the next section. The bass and soprano statements (m. 13 - 16) answer the alto relative-major statement of measure 12. The strong leading-tone-tonic melodic relationship within these three statements strengthens and defines their key areas. An imperfect authentic cadence in measure 16 affirms the key of F major, before a short episode returns to B-flat major. The two statements in stretto have the same subject-answer relationship, although the alto statement cadences in E-flat major, having substituted e-flat[1] for the leading tone of f.

The next episode (m. 19) moves from E-flat major through F minor to the Phrygian cadence in C minor. The bass and soprano statements of measures 20 - 22 tonicize C minor. The confirmation of the subdominant key is the imperfect authentic cadence of measure 22-23. The iv - V progression at the end of measure 21 recalls the Phrygian cadence two bars earlier. Within this progression, the combined soprano statement and chromatic bass part suggest an augmented-sixth chord, although the pitches of the augmented-sixth sound separately. (In measure 5, an augmented-sixth chord is similarly suggested in the tonic key.) Nevertheless, this chord movement anticipates, at least to some degree, the important Phrygian cadence at measures 27- 28, which contains a definite augmented-sixth chord, but which is independent of any statement of the subject.

Tonic returns with the transitional alto statement of measure 23 and a perfect authentic cadence in measure 24, strengthened by the low bass D. The next episode moves through E-flat major and C minor to the Phrygian cadence on the dominant of G minor. The pitches of the augmented-sixth resolve to dominant as expected ($c\#^1$, lower leading tone, and e-flat, upper leading tone of dominant). The first two pitches of the original subject and the two quarter notes of the first dominant answer have foreshadowed the unmistakable emphasis upon the dominant at this point. The low bass pitches (D, E-flat, and C) also reinforce the approach to this cadence by turning around dominant, and by anticipating not only the bass cadential e-flat but also the cadential submediant and subdominant chords. Throughout measures 24^3 - 27, the constant motion of the alternating upper-voice tetrachords and the bass motive create a powerful rhythmic drive to the cadence. As in the episode of measures 8 - 11, upper-voice suspensions add dissonance and delay harmonic resolution, in the context of the slower harmonic rhythm.

In the final tonic portion, the three-voice stretto and the subsequent episode sustain the intensity of the cadence. All stretto entrances are tonic. The incomplete bass

stretto statement progresses by perfect fifth to the low D, necessary as part of the dominant-functioning augmented-mediant-seventh sonority. Even though the root of this chord is in a dominant relationship with E-flat major, the low bass D is in a dominant relationship with tonic. The progression to E-flat major, therefore, seems deceptive, to be resolved finally at the very end of the fugue. The bass D and e-flat reverse the bass of the preceding Phrygian cadence. In measure 30, the three half notes outline the submediant triad. Again, the upper leading tone of dominant is significant in the harmonic scheme. Three sources of dissonance in this measure are the augmented-mediant-seventh chords, the sevenths created by voice pairs on beats two and four, and bass e-flat half note. This pitch acts as a pedal; above it are the leading tone and the dominant of C minor. Another augmented sonority is the result on the third beat; on the fourth beat, the soprano and bass are dissonant. The low bass D's of measures 24, 30, 32, and 34 function as dominant pedals, along with the higher-pitched bass d in measure 28. Even though voices momentarily drop out, the dissonance of this episode continues the intensity of the stretto, in which all four voices are involved.[2]

The final resolution to tonic, attended by two additional tonic statements, comes in the last measures. The bass descends through measure 31, leaping down to the F# and the D; all voices effectively ascend in measure 32, in preparation for the imitative parallel scalar descent of the outer voices in measure 33. A number of factors create an immense build-up to the final resolution: the dominant pedals and the emphasis on the dominant pitch throughout the fugue; the Phrygian/augmented-sixth cadence on dominant; the intensity of the three-voice stretto; the dissonant episode with its the deceptive resolution to E-flat major; the chromaticism of measure 33; and the added voices. In addition, the accumulation of five tonic statements in the last seven bars functions two ways: to enhance the return to the home key; and to balance the earlier emphasis upon

[2]An interesting question is the effect of equal temperament upon the dissonance. How different would this episode have sounded in mean-tone tuning?

subdominant and mediant. The strength of this closing section represents a gradual build-up of intensity throughout the fugue, contrapuntally, melodically, and harmonically.

The most important cadences are the perfect authentic cadence in the relative major (m. 11-12) and the Phrygian cadence (m. 27-28). Strong tonic cadences exist in measures 10 and 24. In measure 10, the bass dominant pitch, approached from its upper leading tone in the previous measure, drops to the tonic G, marking the end of the initial tonic area. In measure 24, the bass cadential pattern moves to the low dominant D and up to tonic, in a ii^7 - V - I cadence. The imperfect authentic cadence on relative major in measure 18 is a transposition of the tonic cadence of measure 6.

In this fugue, the composer exploits the modality and chromaticism of the minor key. Natural-minor scales appear at the end in parallel voices (m. 33), as well as in the combined upper-voice tetrachords of measures 26^4 - 27^1. The raised seventh degree of the minor scale figures prominently in the subject, which also contains the chromatic upper leading tone of dominant. Throughout the fugue, both its upper and lower leading tones converge on dominant. Tonicizations of E-flat major in measures 18 - 19 and 25 - 26 carry this relationship into the larger, as well as the smaller, harmonic rhythm. The augmented-sixth chord of measures 26 adds to the chromaticism even as it strengthens the dominant-tonic relationship.

The subject is a microcosm of the entire fugue. The subject's final mediant pitch, b-flat, is the goal of the first modulation. The subdominant pitch represents the second-half key area. The pitches g-f#-g define tonic and represent the tonic-dominant relationship. The first two pitches introduce the melodic and harmonic relationship of dominant and its upper leading tone, manifested in the augmented-sixth chord and the tonicizations of E-flat. The subject provides motivic material for the countersubject, the episodes, and other free counterpoint. As the small structure expands to the large structure, the fugue is unified.

Structural Characteristics

On the basis of on the counterpoint, five episodes separate the six entry sections.

Section	Measures	Entries	Tonality
Exposition	1-7	1-4	tonic and dominant
Episode	8-12[1]		to relative major
Middle entry	12-16	5-7	relative major and its V
Episode	16		to relative major
Stretto 1	17-19[1]	8-9	relative major to its IV
Episode	19-20[1]		to subdominant
Middle Entry	20-24	10-12	subdominant and tonic
Episode	24[3]-28[1]		to V
Stretto 2	28-30	13-15	tonic
Episode	30-31		delays tonic
Final Entries	31-34	16-17	tonic

The episode of measure 19 divides the fugue into two parts: the first with exposition, middle entries, and Stretto 1; the second with middle entries, Stretto 2 and the final tonic portion.

On the basis of on the harmonic progressions and cadences, three large sections exist: measures 1 - 11 (tonic to relative major); measures 12 - 24[2] (modulatory section); measures 24[3] - 34 (tonic). Phrase structure may be described this way: (Numbers refer to measures.)

Tonic: (1-3) $_{HC}$ (4-6) $_{IAC/g}$ (6-7) $_{HC}$ (8-10) $_{PAC/g}$ (10-11) $_{PAC/Bb}$

Modulatory: (12-16)$_{HC}$(16-18)$_{IAC/Bb}$ (18-19)$_{HC}$(20-22)$_{PAC/c}$(23-24)$_{PAC/g}$

Tonic: (24-27) $_{HC}$ (28-32) $_{PAC/g}$.

In this scheme, clear similarities appear in the first two sections. Each has a two-phrase period, followed by a three-phrase group. The resemblance of the cadence in measure 6 to the cadence in measure 18 is more than simply melodic; it is also structural.

The seven-bar exposition is proportional to the final tonic portion (m. 28 - 34). The episode of measures 8 - 12[1] is nearly the same length as the episode of measures 24[3]

- 28[1]. The B-flat/F entries of measures 11 - 16 are proportional to the c/g entries of measures 20 - 24. The short linking episode of measure 16 corresponds with the episode of measure 19, not so much harmonically, but because the two episodes set off the stretto. Dividing the fugue in this manner places Stretto 1 in the center, at the halfway point (Kennan 1959).

The exposition is proportional not only to the final tonic portion but also to the entire relative major section. These three sections account for about 21 of the 34 measures, a Golden Proportion. Of the remaining 13 bars, episodes account for slightly more than eight measures; and the subdominant/tonic entries (m. 20 - 24) almost five measures. The total number of measures is a Fibonacci number.[3] At the Golden Mean, measures 21-22, a chromatic bass part and the alto scalar ascent accompany the highest-pitched statement. Although only three voices occur ar this point, the area of the Golden Mean is melodically and harmonically intense. This spot also divides the collection of statements into a Golden Proportion. The B-flat-major cadence (m. 12) and the end of the exposition lie near the other means.

The synthesis of melodic, contrapuntal, and harmonic strength creates a structure so complex and profound that it can hardly be described in these few words. Continued aural and theoretical study would reveal more of the composer's skill, art, and genius.

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[3]In 1202 Fibonacci, or Leonardo da Pisa, was the first to describe the following series of integers: For every $n > 2$, $u_n = u_{n-1} + u_{n-2}$, if $u_1 = 1$ and $u_2 = 1$. In other words, if the first two numbers are 1 and 1, each subsequent number is the sum of the two preceding numbers. Contiguous line segments whose lengths are consecutive Fibonacci numbers (after the third) are divided by the Golden Mean.

VI. Klengel's G Minor Fugue

Melodic Characteristics

The two-bar subject of Klengel's G-Minor Fugue outlines the tonic triad. (See example 5.) Dominant opens the subject; and mediant is the goal of the melodic cadence. Approached and left by leap, the central, syncopated, tonic has the longest duration. In the first half, the movement is from dominant to tonic; in the second half, the subject moves through supertonic and dominant to mediant. Tonic, mediant, subdominant, and dominant pitches occur on the beat. The leaps provide melodic interest, and the syncopation creates rhythmic interest.

Example 5.



Ornamental figures and leaps constitute the subject. Minor-second upper neighbors and major-second lower neighbors combine into turn and trill embellishments of dominant. The turn shortens into a changing-tone figure to ornament the final mediant. The gentle conjunct motion of these figures at the beginning and end of the statement frames the more unpredictable disjunct middle portion.

The subject contains each pitch of the G natural minor scale except the seventh degree, which occurs in the dominant answer. Absence of the leading tone is one factor in the tonal ambiguity of the subject. The first four notes sound the dominant twice;

neighbor tones revolve around dominant and provide its upper leading tone. At the end of the subject, the lower leading tone of the mediant tonicizes b-flat.

Essential melodic motives in the subject are the trio of stepwise ascending pitches, the leaps, and the ornamental figures. Accompanying counterpoint varies, extends, combines, inverts, or reverses these motives. Material from the subject governs most of the free counterpoint.

Melodically, the soprano dominates the three-voice fugue, introducing more than half of the total 25 entries and two-thirds of the twelve complete statements. The soprano entrances represent all the starting pitch classes found in the fugue, that is, each pitch of the G natural minor scale, except the second degree. Only two of the complete soprano statements are real, and one is extended in the middle. By contrast, the alto presents four tonal entries, with only two being complete. The bass offers eight statements, of which only the initial entrance and one inverted statement are complete.

Contrapuntal Characteristics

Five tonic and dominant statements in the exposition and counterexposition open the fugue. The three voices first enter in ascending order. The dominant answer has several roles. Its tonic and dominant pitches answer the subject tonally. By starting on the tonic pitch and providing its leading tone, its first half defines the key of G minor, a role necessary because of the tonal ambiguity of the subject. Its second half, with its accompaniment, tonicizes the key of the dominant, D minor. Continuing the alternating dominant and tonic of the exposition, the fourth and fifth statements alter the downward leap. Dropping to its lowest pitch in the fugue, bass statement [4] changes the minor-seventh to a major ninth, creating the lowered-supertonic chord on the first beat of measure 14. Alto statement [5] alters the leap to a perfect fifth as it moves to the key of the relative major.

Such modification is one of the ways in which the composer treats the subject. As the fugue continues, he employs the devices of inversion and stretto. He also exploits the paradoxical character of the dominant answer and utilizes internal extension of the subject, imitation at various intervals, and sequential repetition of incomplete statements.

In the relative major section, measures 17 and 18 have identical parts, with the voices exchanged. On the third attempt, a complete statement of the subject emerges. Two possible reasons exist for the repetitive statements: to create a 4-bar phrase; to emphasize the key of the relative major with the repeated b-flats. If the exposition is a guide, statement [8] is the dominant answer of a phantom relative-major statement; like statement [2], statement [8] cadences melodically on the mediant of the dominant (in relative major).

Statement [10] in F major has three functions: to serve as the missing tonic entry of the relative major; to tonicize F major; and to modulate to D minor by introducing the $c\#^1$. (Its minor-seventh leap becomes a diminished seventh.) At the same time, statement [10] sequentially imitates, at the second, the incomplete statement [9]. This half-statement begins with the opening pitches of dominant answer [2] but is little more than a continuation of the bridge between statements [8] and [10].

The incomplete entries of measures 27 - 28 return to tonic through D minor. Statement [11] defines the key of D minor. The half-statement [12] fulfills two roles of the dominant answer by tonally imitating statement [11] and by defining the key of G minor.

Incomplete statement [13] repeats [12], with one alteration. In this case, two minor-second neighbors turn around the g^1, suggesting an augmented-sixth chord in C minor. Implying the key of F major, the incomplete statement [14] follows sequentially, imitating at the second. Continuing the sequential series of entrances, statement [15] defines the key of E-flat major and returns to its relative minor through an augmented-

sixth chord. Statement [16] joins [15] in stretto, imitating at the third. In stretto at the octave with [16], the inverted statement [17] maintains the a-flat of the augmented-sixth chord.

The three-voice C-minor stretto (m. 40 - 42) demonstrates imitation at the third and invertible counterpoint, when compared with statements [15] and [16]. In this stretto, only statement [18] is complete. Its downward leap becomes a ninth, and its subsequent sixteenth-note ascent anticipates the same ascent in statement [19]. In the entire C-minor section, not one entry begins on the pitch class c. Statements [16], [17], [18], and[20] emphasize the dominant pitch of C minor. As the only three-voice stretto, this area is a contrapuntal and melodic high point. Alto and bass are at their highest pitches, and soprano at its second highest point. All voices descend from this stretto to the end.

The entries of measures 45 - 53 are in the tonic key. Stating the first half of the subject, entrance [21] sequentially precedes statement [22] a second higher. Their identical accompaniment is a dominant pedal. By a series of augmented- and perfect-fourth leaps, statement [22] is extended in the middle to end in the deceptive resolution. The half-statement [23] shows imitation at the third with entrances [22] and [24]. A two-voice stretto of dominant and tonic statements closes the fugue. The five ascending sixteenth notes of statement [25] imitate the alto accompaniment immediately preceding.

Subject-derived sequential sixteenth-note passages accompany many entrances. A descending bass scale accompanies statement [3]. Alternating upper-voice accompaniment of statement [4] provide the a-flat as the upper leading tone of g in the lowered supertonic chord. The bass arpeggios underneath statement [18] contribute to the melodic intensity by carrying the bass to its highest point. The bass arpeggios of measures 45 - 46 initiate the dominant pedal which extends through measure 47. The d^1 - $c\#^1$ - d^1 bass figure (m. 45 - 46) echoes the soprano in the cadential augmented-sixth chord and causes cross-relations with the soprano of statement [22].

Episodes and bridges employ subject material. Two voices outline parallel ascending thirds in the exposition's codetta, which returns to tonic for the third entrance.

Three bridges maintain or confirm their respective keys. Soprano and alto voices alternate in the F-major bridge of measure 21. In measures 25 - 26, the motive from the end of the subject occurs in sequential voice pairs, extending the key of D minor. The cadential C-minor bridge (m. 39) foreshadows the upcoming Phrygian cadence.

Three modulatory episodes contain ornamental motives from the subject and additional non-harmonic-tone figures. In the episode of measures 9 - 12, upper voices alternate in a series of retardations over bass cadential patterns. Although this episode moves through several keys, it returns to its origin, G minor. In moving from G minor to C minor, the episode in measures 29-30 contains soprano appoggiatura figures and suspensions as that voice approaches and leaves its highest point. This episode introduces the a-flat to be heard in the augmented-sixth chord of measure 33. Soprano suspensions are prominent in the cadential episode of measure 42 - 44. Lower-neighbor figures contribute to the chromaticism inherent in the Phrygian cadence, enhanced by the augmented-sixth chord.

Measures 53 - 55 close the fugue with dominant and tonic pedals. The soprano repeats the opening of the dominant answer [2], so that the tonic pitch is ornamented by its lower leading tone and its supertonic. The alto points out mediant and submediant, recalling the tail of the subject. The low-pitched upper voices are gently rolling, creating the final repose.

Harmonic Characteristics

Even though the subject itself is tonally ambiguous, the first half of the dominant answer defines the tonic key, G minor. The second half of the answer and its accompaniment tonicize the dominant key, D minor. After G minor returns in the codetta, a perfect authentic cadence at the end of statement [3] confirms the tonic key, which continues through the counterexposition. The episode moves around the circle of fifths (m. 9 - 10), in two cadences per measure; but it returns to G minor, which is established by another, stronger, perfect authentic cadence. The lowered supertonic chord of measure 14 presents the upper leading tones of both tonic and dominant over the lowest bass pitch of the fugue. A double suspension delays the outer pitches of this chord.

Measures 17 - 27 contain the relative-major key. Its dominant moves to D minor, which is related both to F major and G minor. These keys are confirmed by the cadences on B-flat major (m. 17), F major (m. 21), and D minor (m. 26).

Tonic returns at the midpoint of the fugue (m. 27) for the half-statement and the episode leading to the subdominant key. In measure 33, the soprano's diminished-third outline points strongly to C minor, but F major and E-flat major interrupt with sequential half-statements and a stretto before C minor returns. Two augmented-sixth chords (m. 36, 39) precede its dominant, and the key is confirmed by the perfect authentic cadence of measures 39- 40. The chord progression of the last half of measure 36 foreshadows the same progression eight bars later in tonic. Earlier events, in measures 14 and 33, predict its prominent a-flat. The C-minor section is the longest non-tonic portion of the fugue; it contains the two augmented-sixth chords not in tonic. These chords are significant, not only because they resolve to the dominant of C minor, but because that dominant is the parallel major of the tonic key, G minor.

To announce the return of tonic, a third augmented-sixth chord enhances the Phrygian cadence of measure 45. The focus upon the dominant intensifies with a three-bar bass dominant pedal. The prolonged dominant area resolves deceptively to E-flat major.

Tonic finally returns in a perfect authentic cadence (m. 50-51). The bass pitches G and D are prominent in this final tonic portion.

The composer employs third relations by juxtaposing the key pairs G minor and B-flat major, F major and D minor, E-flat major and C minor, E-flat major and G minor. The initial pitches of certain entry groups outline the tonic, mediant and subdominant triads: [4], [5], and [8] (tonic); [8], [10], and [12] (mediant); [22], [23], and [24] (subdominant). Imitation at the third is evident in Strettos 1 and 2, and among statements [22], [23], and [24].

Non-harmonic tones are frequent in this fugue. Besides the neighbor, turn, trill and changing-tone figures in the subject itself, other non-chord tones occur in the counterpoint; a series of 7-8 retardations (m. 9 - 11); double suspensions delaying the lowered-supertonic chord; soprano appoggiatura figures (m. 29 - 30); more suspensions and retardations (m. 21, 39, 42, 43).

The pairing of the dominant pitch with its upper leading tone in the subject's opening manifests itself elsewhere in the fugue. Nine out of 25 entries have the minor-second turn around the opening pitch. In measure 14, the lowered-supertonic chord contains the upper leading tones of both tonic and dominant, expanding upon the first half of the subject and introducing the a-flat which will be important in the second half of the fugue. The augmented-sixth chords contain both upper and lower leading tones of their respective dominants. The e-flat to d and a-flat to g relationships appear throughout the fugue, especially in the cadences of measures 39 and 44-45, and in the tonicization of E-flat major in measures 11, 25, and 49.

Out of the small melodic structure of the subject develop elements of the larger harmonic structure. Pitches of the tonic triad, skeleton of the subject, represent the tonic, dominant and mediant tonal areas in the fugue. The subdominant pitch occurs in a strong rhythmic position in the subject, and subdominant is the main tonal area of the second half of the fugue. The minor-second upper neighbor of dominant grows into the tonicizations of E-flat major, the chromatic chords, and the Phrygian cadence. The series of three pitches in the subject, c^1 - d^1 - e-flat^1, enlarges into the harmonic progression of the subdominant key to V^7, which resolves deceptively to E-flat major. This opening of the subject anticipates appearances of the upper leading tone of dominant throughout the fugue. Non-harmonic tones are frequent in the subject, and present in the counterpoint, as well. The conjunct nature of the subject permeates the free counterpoint derived from it.

Structural Characteristics

On the basis of on the counterpoint, these sections may be described:

Section	Measures	Entries	Key area
Exposition	1 - 9	1 - 3	tonic, dominant
Episode	9 - 12		Fifths progression to tonic
Counterexposition	13 - 16	4, 5	tonic to relative major
Middle Entry	17 - 25	6 - 10	rel. major, its dom.;dom.
Episode	25 - 26		dominant
Entries	27 - 28	11, 12	dominant and tonic
Episode	29 - 32		tonic to subdominant
Entries/Stretto 1	33 - 39	13 - 17	subdom., F and E-flat major
Stretto 2	40 - 42	18 - 20	subdominant
Episode	42 - 44		to cadence on V^7
Entries	45 - 50	21 - 23	Dom.pedal, $V^7$to E-flat major
Stretto 3, close	50 - 55	24 - 25	tonic

The stretto passages occur only in the second half; the three-voice Stretto 2 is the only area of the fugue in which all three voices overlap their statements.

Harmonically, the return of tonic at measure 28 divides the fugue into halves. In the first half the main tonal areas are tonic, dominant, relative minor, and its dominant. In the second half, the main tonal areas are subdominant, with its relative major, and tonic.

The most important cadences are at measures 12-13 (perfect authentic cadence in tonic), measures 44-45 (Phrygian cadence on V^7), and measures 50-51 (final perfect-authentic cadence). On the basis of on these cadences, three large sections may be described: measures 1 - 13, tonic; 13 - 44, modulatory section; 45 - 55, tonic.

Many of the phrases are in four or eight bars, perhaps a result of the sequentially repetitive half-statements preceding full statements.[4] A diagram of the phrases and cadences follows:

(1- 4) HC (5 - 8) IAC/g (9 - 12) PAC/g

(13-16) IAC/Bb (21-24) HC (25-27) IAC/g (28-32) IAC/c (32-36) HC/c (36-39) IAC/c

(40 - 44) HC/g (44 - 48) DC (49 - 50) PAC/g (50 - 55) IAC/g

On the basis of on proportion, these relationships may be described. The exposition (m. 1-9) is proportional to the final section (m. 45 - 55). The episode (m. 9 - 13) corresponds to the episode in m. 42 - 45. The entries of m. 13 - 25 correspond to the entries of m. 35 - 45. The episode of m. 25 - 26 is shorter that the episode of m. 29 - 33. This scheme leaves in the center measures 27 - 29, where tonic returns at the midpoint of the fugue.

The total number of measures, 55, is a Fibonacci number. The Golden Mean, measure 34, is near the beginning of Stretto 1, in an area of changing tonality. Lesser means are at measure 21 (the cadence on F major) and at measure 13 (where the counterexposition begins).

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[4]Albrectsberger describes *Abkürzung* as the technique of sequential repetition of part or all of a subject (Bullivant 1980).

VII. Comparison of G Minor Fugues

In spite of the obvious differences between these two fugues, there are a number of similarities. Both the four-voice Bach fugue and the three-voice Klengel fugue are in quadruple meter; Klengel's compound division of the beat is in a 3:2 proportion with the duple subdivision of Bach. Rhythmic motives of both composers reflect the same proportion.

The two subjects have certain melodic characteristics in common. They are similar in length and contour. Both outline the tonic triad, beginning on the dominant and ending on mediant, with their internal tonics approached by leap. Conjunct motion encloses the downward leaps within both subjects, although the leaps are different sizes in different locations. Both subjects open with a strong relationship between the dominant and submediant pitches. In Bach, ten statements retain the minor second as the first interval. Klengel retains the minor second in nine entries.

Syncopation occurs in the middle of both subjects, effected either by a rest or by a tied note, in each case followed by consistent rhythmic activity. Both subjects contain lower-neighbor and turn figures. Each subject provides material for free counterpoint and a basis for the structure of its entire fugue. Although Klengel adopts elements from Bach's subject, the charater of the two subjects is very different.

One of the most significant difference between the two subjects is the harmonic implication of each. In Bach's subject, there is a strong leading tone-tonic relationship, defining the key; however, Klengel's tonally ambiguous subject contains no leading tone at all. Bach's subject has more rhythmic variety than Klengel's.

Bach's fugue has 17 entries in 34 measures, a ratio of 1:2, with only one incomplete statement. Klengel has 25 entries in 55 measures, a ratio of 1:2.2; but thirteen

statements are incomplete. The soprano dominates Klengel's fugue after the exposition, having more than half the total entries, while Bach gives the soprano four of seventeen statements. Bach's alto and bass each have five entries.

The two expositions have differing order of voice entry. Only Bach's fugue has a countersubject. Individual features of Klengel's fugue are the inverted statement, the counterexposition, and the coda. The tonal dominant answers and the expected imitation at the fifth are shared contrapuntal characteristics, although Klengel also employs imitation at the third. Both fugues contain stretto in the second half. Bach's three-voice stretto is in the final portion; Klengel's is prior to the return of tonic. In both instances, the voices enter in descending order. Klengel's last tonic and dominant statements are in stretto; Bach's final statements are consecutive tonic entries. In each fugue, the initial and final entries occur at the same pitch level, but in different voices. Bach's fugue contains five episodes or bridges, including a codetta in the exposition, as opposed to Klengel's seven after the exposition. Both final portions contain five entries; Bach's all are tonic. Klengel's five enter on different pitches; the single tonic entry is the only one not shortened or extended. Octave scales occur in both fugues, in Klengel's exposition and in Bach's second half. Perhaps Klengel's alternation of upper voices in measures 13-14 is based upon Bach's voice treatment in measures 25 - 27. Klengel maintains consistent use of his three voices. Bach controls contrapuntal intensity by selective inclusion of all four voices.

In their first modulatory sections, both fugues move to relative minor and its dominant. Bach's perfect relative-major cadence ends the episode; Klengel's imperfect cadence follows his counterexposition. Instead of returning to B-flat major after the F-major area as does Bach, Klengel modulates to D minor. Unlike Bach, Klengel returns to tonic at the midpoint of his fugue. Klengel's second appearance of C minor (m. 36 - 43) is about the same proportion of total fugue length as Bach's C-minor area. The second

halves of both fugues contain the key of E-flat major, but arranged differently in and around subdominant and tonic. Bach's Phrygian cadence is undoubtedly the model for Klengel's very similar cadence. In both fugues, low bass pitches announce important chord progressions or cadences. Both final portions contain dominant pedals. The two composers delay the final resolution to tonic, Bach by an episode in the submediant, Klengel with a deceptive resolution to and statement in the submediant. Both fugues demonstrate third relationships, in the relationship of G minor to B-flat major, and of E-flat major to subdominant and to tonic. Only Bach's ends with a Picardy third.

Tonic, relative major, and subdominant are significant pitches in both subjects as well as important tonal areas in both fugues. Outgrowths of the subject's dominant-submediant pitch relationship are found in both fugues, in the Phrygian cadences and in the tonicizations of E-flat major. A unifying factor shared by the two fugues is the relationship of each subject's small structure to the larger structure of its respective fugue.

The two fugues contain three large harmonic sections: tonic, modulatory area, tonic. However, other contrapuntal and harmonic criteria point to subdivisions of both fugues at the midpoint. Because Klengel employs *Abkürzung* extensively, his mostly regular four- and eight-bar phrases contrast with Bach's more irregular lengths.

The total number of measures of both fugues is a Fibonacci number. The Golden Mean and lesser means are significant in both fugues.

At first glance, the Klengel subject looks very different from Bach's subject. However, analysis has uncovered significant similarities. Stretto is an important common contrapuntal characteristic, as is the adaptation of rhythmic motives from the subject for free counterpoint. Harmonically, tonal areas are similar in the larger sense. Bach's augmented-sixth chord and Phrygian cadence seem to be the model for Klengel, as well as the dominant pedal and the role of the mediant key. Structurally, both fugues have three large sections; and both rely upon Fibonacci and Golden Mean proportions.

VIII. Conclusion

The melodic, harmonic, contrapuntal, and structural characteristics shared by the two pairs of Bach and Klengel fugues provide ample evidence that Klengel had carefully studied the fugues of Bach. Klengel's dedication of decades of his life to his canons and fugues shows a great degree of absorption in this style of composition. His appreciation for the works of Bach and knowledge of them were not superficial. Analysis of the C-major and G-minor fugues has shown that Klengel did model certain features of his fugues after Bach's work. Certain resemblances are so close that it is difficult to avoid the conclusion that Klengel was consciously adopting elements of Bach's style. Comparison of these two pairs of fugue seem to indicate that Klengel absorbed and employed Bach's compositional techniques in a literal sense. This observation is not meant to imply that the other forty-six fugues also are literal re-interpretations of Bach. To the contrary, preliminary investigation suggests a variety of styles within the forty-eight fugues. Continued study will be necessary to refute or establish that hypothesis. In the case of the fugues discussed in this study, perhaps Bach's C-Major stretto fugue was an especially challenging model. (Initial perusal of the entire set of fugues suggests that Klengel was skilled in the employment of the contrapuntal devices; this aspect awaits further study.) Perhaps Klengel was compelled to imitate Bach's powerful G-Minor Fugue, even though part of its strength lies in its transcendence of the mere act of combining contrapuntal devices and compositional techniques.

On the other hand, apparently Klengel could not totally escape the nineteenth-century style. Although the existence of Romantic features is not an aspect to be investigated in this study, his use of certain pianistic, melodic, and harmonic idioms places him in that era. Dynamic indications, arpeggiation, increased range, dominance of the soprano voice, chromaticism, foreign keys, and third relations have been apparent in

these two fugues. Certain features of Klengel's chromaticism seem to be experimental, namely imitation at the tritone and chromatic entrance pitches. The degree to which Klengel achieves the integration of Baroque contrapuntal style and Romantic idioms is a subject for another study.

Klengel's compositions demonstrate a certain skill and competence. Even though the artist and the craftsman work with the same materials and tools, their results demonstrate different levels of skill, intellect, and artistry. In the case of the fugues compared in this study, the evidence is strongly in favor of Bach as the artist and Klengel as the skilled craftsman. As the introduction stated, the limitations of this study do not allow for investigation of the individuality and originality of Klengel's compositional style. That and other topics remain for future inquiries.

For the curious student who wishes to investigate the remaining forty-six fugues of Klengel, the following avenues of inquiry are possible. To continue the comparison of similarities with Bach, analysis of these pairs of fugues is suggested: Klengel's D-flat Major Fugue of Book II and Bach's E-flat Major Fugue of Book II; Klengel's A Major Fugue of Book II and Bach's A-flat Major Fugue of Book II; the five-voice fugues, Klengel's B-flat Major of Book II and Bach's B-flat minor of Book I; Klengel's F# Major Fugue of Book II and Bach's F# Major Fugue of Book II. To study the pianistic features of Klengel's writing, his B Major Fugue of Book I and D Minor Fughetta of Book II are recommended. The G Minor Fugue of Book I is an octave etude full of contrapuntal devices, as well as rhythmic complexities. A study of the Romantic fugue as character piece be incomplete without a look at Klengel's D-flat Major and E Major Fugues of Book I.

Klengel's thorough knowledge of Bach's style is admirable and serves as an example for each student of counterpoint. His manner of paying homage to the eighteenth-century of counterpoint is perhaps unique. Although other composers have

written sets of preludes and/or fugues in all keys, Klengel's attempt represents, to some degree, a curious historical anomaly. In this study, two fugues of the forty-eight have been examined. The extent to which Klengel's other fugues are modelled on Bach is yet to be determined. Additional questions remain. Only by continuing evaluation can the significance of his work be accurately determined.

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APPENDICES

Finale® notation software, published by Coda Music Software, has been used to prepare scores of the four fugues, all of which are in the public domain.

Appendix A

Fugue No. 1 in C Major

Book I, Well-Tempered Clavier

J. S. Bach

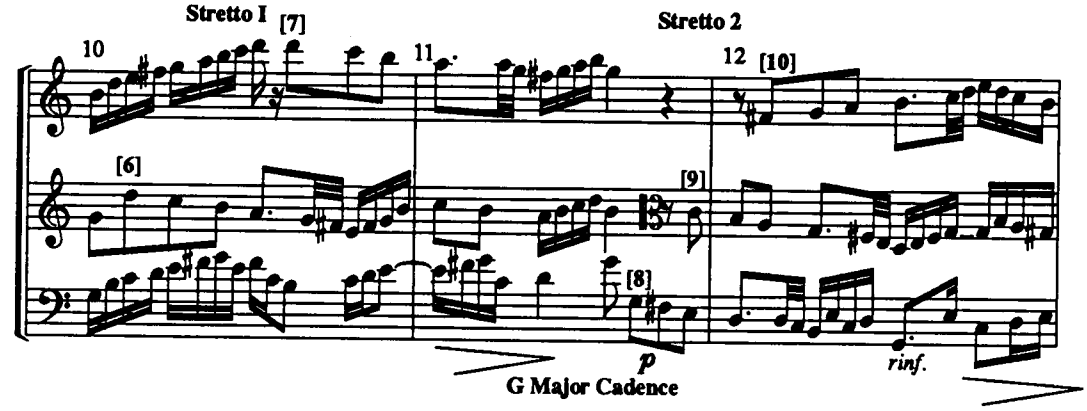


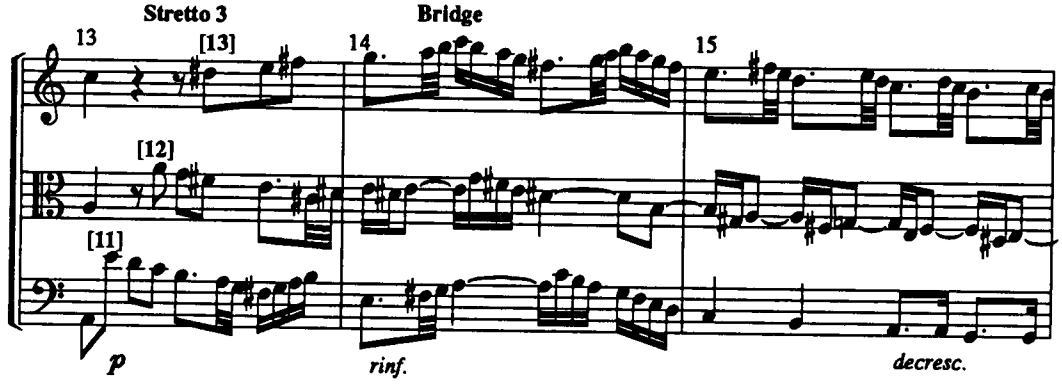

13
Bridge
14
Stretto 3
15
[14]
16
[15]
[11]
[16]
[12]
[13]
A Minor Cadence
17
Stretto 4
18
19
Stretto 5
20
[21]
[20]
[17]
[19]
[18]
D Major Cadence
21
Stretto 6
22
23 Bridge
24
Final Portion
Stretto 7
[24]
[22]
[23]
G Major Cadence
C Major Cadence
25
26
27

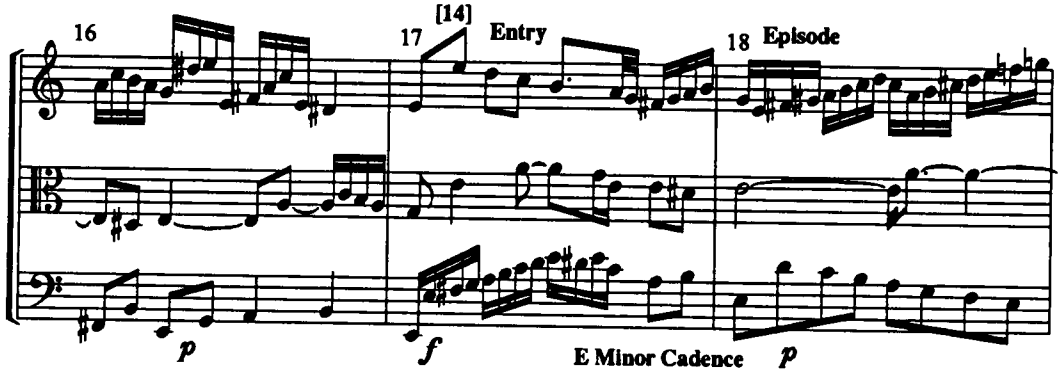
Appendix B

Fugue in C Major




Stretto I
[7]
Stretto 2
10
11
12
[10]
[6]
[9]
[8]
p
rinf.
G Major Cadence


Stretto 3
Bridge
13
[13]
14
15
[12]
[11]
p
rinf.
decresc.


[14]
16
17
Entry
18
Episode
p
f
E Minor Cadence
p


Middle Entry
19
20 [15]
21 [16]
cresc.
f
22
23
24 Episode
[17]
[18]
p
cresc.
f
[19] Middle Entry
25
26 [20]
27
[21]
pp


28 [22]
29 [23]
30 Bridge
f
31
32 Stretto 4
33 [26]
[25]
[24]
p
34
[28]
Stretto 5
35
Bridge
[27]
[29]
p
cresc.
36 [30]
Entry
37 Close
38
f
rallent.

Appendix C

Fugue No. 16 in G Minor

Book I, Well-Tempered Clavier




13
14
15
[7]
CS
[6]
CS
Middle Entry
16
Episode
17
Stretto 1
CS
18
[9]
[8]
Episode
19
20
Middle Entry
21
[11]
CS
[10]
22
23
CS
24
Episode
[12]
CS
C Minor Cadence
G Minor Cadence

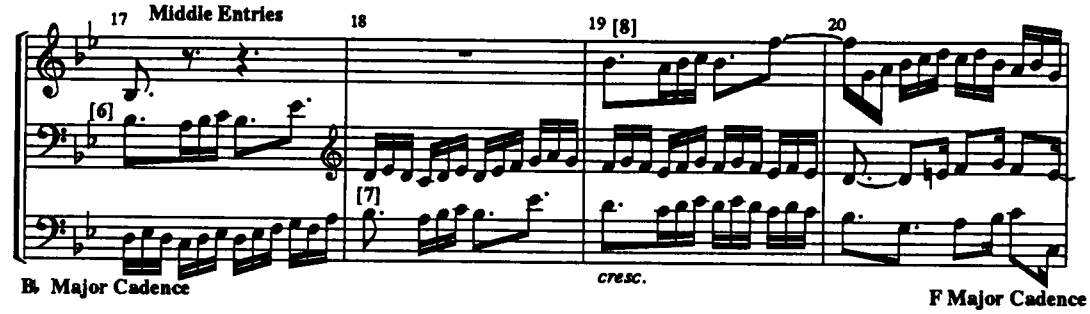

25
26
27
Phrygian Cadence
28 Final Portion
[13]
Stretto 2 29
30 Episode
CS
[14]
[15]
31
32
[16]
CS
33
34
[17]
G Minor Cadence

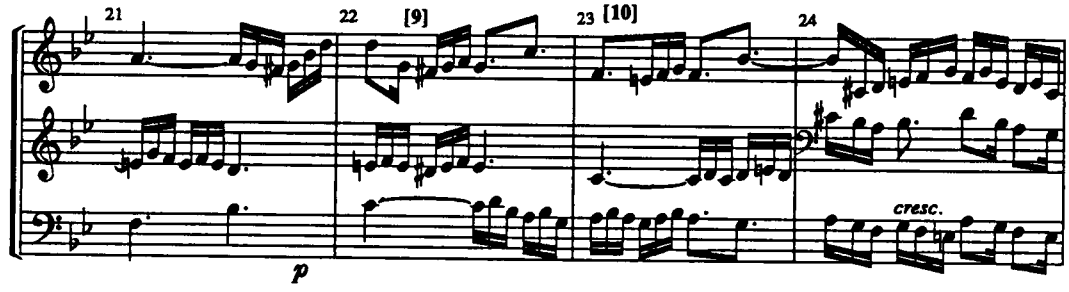
Appendix D

Fugue in G Minor

A. A. Klengel




17 Middle Entries
18
19 [8]
20
[6]
[7]
cresc.
B♭ Major Cadence
F Major Cadence


21
22 [9]
23 [10]
24
cresc.
p


25 Episode
26
27 Entries
[11]
decresc.
cresc.
G Minor Cadence


28 [12]
29 Episode
30
f


Middle Entries
31
32
33 [13]
pp
C Minor Cadence
34 [14]
35 [15]
Stretto 1
36
[16]
rinf.
f
37
38
39
[17]
C Minor Cadence
40 [18]
Stretto 2
41
42
Episode
[19]
[20]
f


Entries
43
44
45 [21]
p
Phrygian Cadence
46 [22]
47
48
cresc.
f
49
50
51
Stretto 3
[25]
[23]
p
[24]
rinf.
G Minor Cadence
52
53
54
55
decresc.
pp

VITA

Ann Marie Kelley was born in Wythe County, Virginia, on September 22, 1946. She began piano study at age six, and was educated in the Wythe County schools, graduating from George Wythe High School in 1964. After completing four years at King College, she graduated summa cum lauda in 1968, receiving the Bachelor of Arts degree in mathematics. At King College she studied voice and organ with C. C. Loomis. In 1968 she married Peter David Holler. She taught high school mathematics in Columbus, Georgia, and in Bristol, Tennessee. After two daughters, Elizabeth and Janet, were born, Ann resumed music study with Dr. Loomis. She entered Virginia Intermont college; and in 1983, she received the Bachelor of Arts degree in piano performance, graduating summa cum lauda, having studied piano with Kenneth Huber.

In 1990, Ann entered the University of Tennessee, Knoxville, and in May 1992, will receive the Master of Music degree, with a concentration in music theory. She is a member of Pi Kappa Lambda national honor society.

Since 1974, Ann has taught piano privately in Bristol, Tennessee, as well as in the Virginia Intermont College Preparatory Music Department and at Sullins Academy. She has studied voice with Tzvetanka Radev and Dolly Hough, and has also taught voice privately. Ann is member of the National Federation of Music Clubs, the American Matthay Society, and the National Guild of Piano Teachers. Since 1979 she has been a member of the Appalachian Music Teachers Association, having served as treasurer. This state- and nationally-affiliated local chapter chose her as Teacher of the Year in 1991. Ann is certified through the Tennessee Music Teachers Association. She currently resides in Bristol, Tennessee and maintains her private studio.