

2013

On the Perception of Early Atonal Music: Finding Musical Meaning in the Work of Anton von Webern

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Finding Musical Meaning in the Work of Anton von Webern

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Abbreviations

BWV	Bach Werke Verzeichnis (Trans. Bach Works Catalogue)
CPE	Common Practice Era (ca. 1600-1900)
M.	Measure
Mm.	Plural of measure
Op.	Opus or work
Opp.	Plural of opus

Titles of Works

For the purpose of brevity, all of Webern's catalogued works will be indicated by their opus number. Non-catalogued works will be identified by the title of the piece followed by the year of completion in parentheses. If a single movement of a piece is being referenced, the number of the movement, represented by a roman numeral, will follow the opus number and a slash. For instance, the second movement of opus 20 will be abbreviated Op. 20/ii.

The bodies of work written by W.A. Mozart and J.S. Bach are not catalogued using the opus system. Works by Bach will be identified by their BWV number (ex. Prelude in C minor, BWV 847). Likewise, works by Mozart will be identified by their Köchel cataloguing number (ex. Mozart Quintet in A major for Clarinet and Strings, K581).

Preface

The Second Viennese School created a great controversy among music theorists and critics throughout the twentieth century. Arnold Schönberg's twelve-tone musical system polarized the musical community irrevocably. The works produced by Schönberg and his students, namely Alban Berg and Anton von Webern, have been discarded by many as unemotional music based on a purely mathematical system. Many performers refuse to perform works composed in the twentieth and twenty-first centuries. In fact, it seems as if the trend of unified musical growth and development was stymied during the last century. The influence of the Second Viennese School played a pivotal role in this trend. However, the integrity of tonal music had been deteriorating for nearly a century.

Western music had been controlled by the relationship between two opposing forces: the tonic and the dominant. The dominant almost always led to the tonic, at which arrival the ear had been trained to feel a sense of ease. Tension and release has been at the heart of western music for centuries. The longer the arrival to the tonic is withheld, the greater the tension. The composer had the artistic freedom to manipulate this relationship, creating a series of expectations for the listener. By delaying or deceiving these expectations, great composers of the early CPE were able to hold the listener's attention. Haydn and Mozart were noted masters of this early practice.

As the early nineteenth century arrived, Beethoven began to stretch these harmonic rules yet a little further, while still ending his works with emphatic cadences: dominant to tonic, dominant to tonic, and again. In 1839, Hector Berlioz completed his *Romeo and Juliet*, laying the framework on which Richard Wagner would base his opera *Tristan und Isolde* (completed

1859). The opening of this opera contains no hint of a tonic or dominant for minutes, only to resolve deceptively to a false tonic. This work alone tore away at the fabric of tonality as early as the 1850s.

The late nineteenth century brought about Strauss and Debussy. The latter's work, *Prelude to the Afternoon of a Faun* (1892) introduces an entirely new melodic system, the whole-tone scale. This scale consists of six equidistant tones in each octave, compared to the asymmetric major and minor diatonic scales that nearly all prior Western music had been based on. Strauss's tone poems, including *Death and Transfiguration* (1889) go for great stretches of time before finally resolving to the tonic. In fact, *Death and Transfiguration* does not return to the tonic until the finale of the piece, spanning approximately eighteen minutes of increased tension and expectation.

The careers of Strauss and Debussy span into the twentieth century, at which time the role of the tonic-dominant relationship has been drastically reduced. The leap from this state of tonal music to removing the tonic-dominant relationship from music completely is not unforeseeable. Webern's student works are heavily influenced by Strauss's work. For instance, Webern's *Im Sommerwind* (1904) presents a near-litany of Strauss's early works. Soon, Webern would begin studying under Arnold Schönberg, altering the course of Western music.

The work of the early twelve-tone composers, as well as many other atonal composers in the early twentieth century, caused the musical community to ask serious questions about the role of music. Many were not comfortable with the idea of music being mutually exclusive to other forms of art or even other pieces of music. Does a piece of music need to be supplemented in order to be meaningful? What in music defines meaning? Were atonal composers composing

for the sake of composing, or were they composing as a form of meaningful expression? Is the notion that composers actively seek meaning in their own music a misled assumption held by music enthusiasts? The work created by many composers of this era has been shunned by much of the post-modern world. Perhaps it is time to take a closer look and allow ourselves to listen to serial music with an open mind. For the mind cannot fully process what appears to be entirely new, exposure and understanding are critical to the solution. Given time, the seemingly senseless music will begin to sound coherent. It is both an issue of how to listen as well as of what to listen for.

It is with this open mind that I began to study the work of Anton von Webern. Listening to his Passacaglia, Op. 1 showed immediately that his body of work reflects a cross-section of two musical eras. The first era is of the romantic composers, particularly Brahms and Strauss. The other era is what would come as a product of Webern's generation: serialism and atonality. Webern was able to distinguish himself against many composers of that era, much as Stravinsky and Hindemith did. Curiously, Webern's name is often forgotten in the discussion of early atonal music. This only enhances the misunderstanding surrounding Webern's career.

What is often mistaken is the notion that Webern did not intend to create an entirely new system, but rather draped his own harmonic language over classical forms. Despite lacking a tonal center, he adheres to many characteristics of tonal music. Due to this approach, much of Webern's music comes across as horizontally lyrical. The vertical, or harmonic, writing is where his music departs most significantly from the past.

My piece, *Shadows of our Past* aims to create a sense of journey while adhering to many principles of serialism. The study of how Webern's music reflects both serialism and pre-

twentieth century tonal music unveils under what circumstances a twelve-tone piece can be aesthetically pleasing and musically meaningful. His decisions as a composer have helped guide many of my decisions in the initial conception of my piece. By exploiting some of Webern's ideas fully, I aim to create a twelve-tone piece that invokes a sense of journey that I strive for in my work. It is my goal to bring light to what has been darkened in our post-modern world and to use the past as a tool in creating the future.

Concepts and Terms

The Harmonic Series, Consonance, and Dissonance

Scientific reasoning is able to explain the mechanics of tonal music. The source of the tonic-dominant relationship can be found in the series of overtones produced by a fundamental frequency: the *harmonic series*. In Western music, only the first five overtones are contained within the equal-tempered chromatic scale.

A fundamental frequency produces harmonics located an octave higher. The second harmonic sounds the interval of a fifth above the first harmonic, with the third harmonic sounding two octaves above the fundamental. The fourth harmonic sounds two octaves and a third higher than the fundamental, with the fifth harmonic sounding an octave above the first harmonic. Each harmonic grows weaker and closer together, where the sixth harmonic is somewhere between a minor third and a major second above the fifth harmonic. This tone is not contained in the equal-tempered twelve-note system.

The interval of a fifth is prevalent in the harmonic series, provided the basis for the dominant function in music. The overtones outline a major chord, with the root of the chord being the fundamental frequency. This natural phenomenon creates the basis to our perception of *consonance* and *dissonance*. In general, a *consonant* interval is an interval contained within this lower portion of the harmonic series. The interval sounds even and lacks tension. A *dissonant* interval is not contained within the harmonic series of the root, causing the notes and their overtones to clash. This creates a tension that the listener wants to hear resolved to a consonant interval. The relationship of consonance and dissonance is one of the primary characteristics that provide a sense of direction in music when employed properly.

*Pitch, Pitch Class, Pitch-class Sets, and Pitch-class Set Sizes*¹

The music of the early twentieth century, by nature, forces theorists to create an entirely new system of musical analysis. There was no distinct tonal center to which the rest of a piece could be compared to. In short, relativity in music was based solely on intervals within the chromatic scale. There was no longer any attachment to a diatonic key, scale degrees, or triads built upon scale degrees and their relationships to the scale. Music theorists needed a more absolute system: pitch class.

In this new system, each of the twelve *pitch classes* is assigned a number 0-11, where C is 0, C-sharp is 1, etc. In this way, a pitch class can be referred to specifically without any relationship to outside information. What is lacking, however, is the octave position of a given pitch class. In fact, pitch class refers solely to frequency and has no implications to register. *Pitch* refers to both the frequency and register. Therefore, both pieces of data must be notated.

Both the old and new systems revolve the pitch class *c*. This being the case, the C two octaves below bass clef is notated with a capital C and subscript 1: C₁. An octave above that is notated C, the next octave is notated with a lower-case *c* and no subscript. Middle *c*, located between bass and treble clef, is notated as a lower-case *c* with the superscript 1: *c*¹. The superscripts continue numerically with each progressive octave. All pitches between, for example, *c*¹ and *c*² will be followed by the superscript 1. Therefore, the C in any given octave will begin the new superscript designation.

A *pitch-class set* is, much as in a numerical set, a group of two or more distinct pitch classes. For instance, a set of notes including D, G, G-sharp, and B can be notated as [2, 7, 8,

¹ For a full explanation of these concepts, view the "Concepts and Terms" section of Allen Forte's *The Atonal Music of Anton Webern*, pp. 5-7.

11] or as [D, G, G-sharp, B]. The *set name*, a term not used in the purposes of this paper, refers to both the number of pitches in the set and to a number indexed in a comprehensive list of mathematically possible pitch-class sets using that number of pitch classes. The term *prime form* refers to the form that a pitch-class set is represented in the list of set names.

The terminology attached to pitch-class set sizes is important in the understanding of rudimentary twentieth-century analysis. A *dyad* refers to a two-note set. A three-note set is referred to not as a triad, but as a *trichord*. A four-note set is a *tetrachord*, and so forth. The largest set dealt with in this study will be a tetrachord. The distinction between the terms “triad” and “trichord” is important, as the term “triad” has specific implications to the tonal system, whereas the term “trichord” has no such correlations.

Musical Form and Structure

Form will be a major component of my analysis of the music of Anton Webern. It is important for the reader to have a basic understanding of a number of traditional forms: the sonata, binary, ternary, theme and variations, rondo, and passacaglia. Of these, ternary form, theme and variations, and the passacaglia will be discussed in detail.

Ternary form is among the simplest musical forms. It has often been associated with the minuet. This form follows an ABA or ABA' structure, depending on the exact nature of the recapitulation. The B contrasts greatly with the A section in this structure. It is not uncommon for the B section to be referred to as the “trio”, where in many cases there is a modulation marking the change.

A *Theme and Variations* is another common form. As the name implies, the movement begins with the statement of a theme or basic musical idea. Throughout the course of the movement, the theme is varied rhythmically, modally, harmonically, or in other fashions to create the musical effect the composer desires. Music of this form is often identified by a clear delineation of the start of one variation and the beginning of another as well as the equality or proportion in length of each of the sections.

The *passacaglia* is a musical form as well as compositional technique. Much like the chaconne, it is built on a ground bass or ostinato. This ground bass provides the foundation for subsequent variations of melodic, rhythmic, or harmonic ideas. Traditionally, the passacaglia is in 3/4 time. That idiom is often subject to neglect.

Smaller Musical Forms and Motivic Treatment

Any short musical phrase can be used as a motive, or motif. It is often only a few notes in length. Motives can be rhythmic, melodic, harmonic, or any combination of the three. These musical ideas are the building blocks of longer melodies and, eventually, themes. The composer often varies these motives in order to create a specific effect that is desired.

Among the many motivic treatments are diminution and augmentation. *Diminution* is the shortening of each note and rest length by the same proportion. Likewise, *augmentation* is the lengthening of each note and rest by the same proportion. The composer may also vary the articulation. A shortened, *staccato* note may be used instead of a long *tenuto* note or *tenuto* phrase, or vice-versa. String instruments may be plucked, *pizzicato*, instead of bowed. The pitch-class of the motive may be changed, where the notes are all *transposed* up or down by a set

number of *semi-tones*, the distance between one pitch class and an adjacent pitch class. The pitch may go down major third (or any other interval) where it had previously risen a major third. If the same concept is applied to each interval in a motive, the process is called *inversion*. If the notes of a motive appear in the reverse order, a *retrograde* has been used.

One:
On the Music of Anton von Webern

Introduction

Anton Webern did not seek to reinvent music entirely. Many of his twelve-tone works can be formally analyzed with regards to tonal music. Webern's early education had much to do with his decisions as a composer later in life. Both he and Schönberg were educated in the Austrian tradition, with a strong emphasis on the works of Mozart, Haydn, and Beethoven. In this education, three central disciplines were equal components of musical composition: *Harmonielehre*, *Kontrapunkt* and *Formenlehre* (Harmony, Counterpoint, and Form)¹. Webern's schooling treated the three disciplines as separate entities, where one could wane while the others would not be disturbed². These pillars were corroded by the turn of the twentieth century.

The principles of pure counterpoint outlined by Johann Fux in his *Gradus ad Parnassum*, a guide to contrapuntal writing still used by many growing composers, had been diminished by nineteenth century music. Beethoven, who had studied and mastered the principles outlined in *Gradus*, broke many of the same rules of part-writing. Form is used as a guideline rather than a rule for composers in the mid- to late-nineteenth century. Revered forms, such as the sonata and variations were often replaced by such free forms as the nocturne and rhapsody. Harmonic idioms used by Mozart and Haydn were certainly disregarded as well, where the like of Wagner would often remain on one chord for over five minutes in the overture to *Der Ring des*

¹Bailey, Kathryn. *The Twelve-Tone Music of Anton Webern: Old Forms in a New Language*, p. 147

² *Ibid.*

Nibelungen or Tchaikovsky's common usage of fully-diminished seventh chords as a device for musical meandering.

With each of these examples, composers favored one central discipline over the others. There is a willingness to sacrifice one for the integrity of the other two. Webern and Schönberg took a new direction: restoring the principles of counterpoint and form, while reinventing the discipline of harmony. This reestablishment of two of the principles allows Webern to experiment with the third principle. Despite using a new, unfamiliar harmonic language, his use of counterpoint and form unite his work.

Form

The structure of music is, as with other forms of art, film, or even architecture, is form. Familiar forms allow the listener to make sense of what they are hearing. Without form in music, the listener can often become lost and unable to find their way back into the piece. Webern was, at least in hindsight, conscious of the newfound importance of form in atonal music.

So let there be no mistake: we haven't departed from the forms of the classical composers. What has happened since is only alteration, extension, abbreviation...but the forms remain the same³.

As with many early atonal composers, Webern discarded the old forms in naiveté, only to return to them later in his career. In this generation, only the Viennese composers were

³ Anton Webern, *Der Weg zur neuen Musik*, ed. Willi Reich (Vienna: Universal Edition, 1960) trans. Bailey.

successful in projecting their harmonic language onto the old forms⁴. When Webern adopted the twelve-tone system, his work regained formal similarities to the CPE. The sonata form pervades opp. 20/ii, 21/i, 22/i, 24/i, and 27/i while opp. 21/ii, 24/iii, and 27/iii are theme and variation forms. The rondo form is used in op. 20/i and more loosely in op. 22/ii. Opp. 24/ii, 28/ii and 28/iii are all ternary forms⁵. This encompasses the majority of Webern's twelve-tone instrumental music.

Following his first twelve-tone works, Webern began to explore the potential for smaller units contained within a row (score is located in Appendix 1A). He started to use six- and three-note sets as the foundation for multiple complimentary pitch class sets within a row. In Op. 24/iii, the central motive of the entire movement is contained within the intervals of a major seventh and a minor sixth, as well as their inversions: the minor second and major third. This sequence is derived from the first three notes of the prime form of the tone row used for the entire work. This three note melodic motive is split into two rhythmic motives, as outlined by Kathryn Bailey (see Appendix 1B)⁶.

The end of each variation is marked by a ritardando followed by an a tempo or a change of tempo. The first such instance is in m. 13. Each ritardando is located fourteen bars after the previous tempo alteration. This demarcates five distinct sections, each fourteen measures long with the exception of the first being thirteen measures and the last being fifteen measures in length. This structure is indicative of either a rondo or a variation form, where a rondo is in its own right a variation form.

⁴ Bailey 149

⁵ Ibid.

⁶ Ibid.

In the initial statement of the theme, mm. 1-4, each motive appears twice and begins on the downbeat of each measure. This short theme is itself more easily likened to a motive. For that reason, this movement may be redefined as a motive and variations. However, that definition is far too vague and lacks formal implications. The motivic idea begins to develop on m. 4 beat 3, when the motives begin on the secondary beat of each measure. Motive B also appears four times between statements of A, before A returns on beat 1 of m. 9. Motive B is stated four more times on the strong beats of mm. 11 and 12 and on the anacrusis to m. 14, where a *ritardando* signifies the start of the first variation.

The first variation introduces two new treatments of motive A. The first instance is noted as A², where the second and third notes are slurred rather than staccato. Webern also introduces the diminution of motive A from half notes to quarter notes in m. 19. He also begins to use a quasi-retrograde form of A² in m. 21. This form uses the staccato quarter note followed by a quarter rest, beginning as a standard retrograde form. Webern then rhythmically reverses the order of the second and third notes, where the slur and staccato notes are in their original place. The second occurrence of this quasi-retrograde form of A² leads into the final statement of motive B before the second variation begins.

This middle variation is left undefined in Bailey's study. She claims that the motivic material in this variation do not "emanate from the motives that generate the rest of the piece. Rows are elided here, and two-rather than three-note groups are emphasized." Although at first it does appear that two-note groups are emphasized, the third note of each set is included in another voice, without exception. Webern introduces four new treatments of the original motives, which I will refer to as A^{legato}, B^{legato} (which I will refer to as A¹ and B¹, respectively), B², and B³ (see Appendix 1B). Bailey also claims that "the rhythmic motives that are essential

elements of the rest of this movement are abandoned here”⁷, though many of the rhythmic ideas used in this section bear resemblances to the rhythmic motives Bailey herself has outlined. Webern uses virtual fragmentation and a deeper level of variation to obscure the original motives.

In this variation, two or more notes from the same trichord may sound simultaneously. The left hand of the piano contains the first set, where the E-flat rises an enharmonic minor sixth to B. The major seventh, B-flat, is sounded simultaneously with the B. The right hand of the piano sounds a G and an F-sharp on beat four of the same measure (m. 28). This dyad contains a major seventh, with the minor sixth above the F-sharp sounding in the trumpet on beat one of the following measure. The F-sharp also completes the retrograde form of the main motive in the trumpet, which sounds the D and C-sharp, the major seventh with the piano’s F-sharp representing the minor sixth. The piano’s initial statement, beginning with the E-flat, also introduces a form of the B¹ motivic variation. This variation manifests fully in the clarinet in oboe, mm. 30-31, also a retrograde of the original melodic material.

The A¹ motive is first heard in the flute, mm. 32-33 where the flute plays all three notes of the set. The next virtual fragment is contained in the violin, mm. 31-32. The sequence here truly originates with the B-natural in the right hand of the piano. Rhythmically, this is similar to motive A², with the first note truncated. Webern continues to use this hoquet treatment of the melodic material for the remainder of this section, using major seventh dyads in the piano as both accompaniment and in order to complete pitch class sets sounded by the other voices. Bailey also notes that “Major seventh dyads predominate in the piano part, and the other instruments play melodic fragments in which notes that are not adjacent in the row are frequently heard in

⁷Ibid. p 206

succession”⁸. This merely outlines Bailey’s prior observation of Webern’s shifted focus from a full tone row to smaller fragments of three or six notes. I find it advantageous to analyze this movement not from a full twelve-tone row, but from the sequence of intervals used: the major seventh and minor sixth. Motivic analysis unveils precisely how each fragment interacts with fragments in the other voices.

The use of major seventh dyads in the piano also exemplifies a key technique in Webern’s style. He uses segments of the row, or basic motivic materials, to create an accompanimental figure from the same ideas that the melody is derived from. This middle variation ends with a variant on motive B, mainly in the piano. I have labeled this variant B³, where the occurrences in mm. 39-41 are the rhythmic retrograde of this idea. Harmonically, the three-note motive is linked between each pair of dyads. In m. 40, the G-sharp in the left hand of the piano completes both the set started by the violin on the anacrusis to the measure and begins the set leading into the right hand of the piano on beat three of the measure. The G-sharp is a minor sixth below the final A in the violin and an enharmonic minor sixth above the C in the right hand of the piano in beat three. The C is also the minor sixth above the E in the left hand of the piano on beat four, while the C-sharp is the minor sixth above the F sounded with the E in the left hand. Webern interwove the trichords intricately in this variation, setting up a new idea for the following variation.

The piano figure shifts in the third variation (mm. 42-55). The trichords are no longer interwoven between beats. Webern instead writes each trichord as a block chord in the piano. This new accompaniment motive is derived from Bailey’s motive A⁴, which is also introduced in this variation and will take precedent in the final variation. As in the second variation, Webern

⁸ *ibid.*

uses a hocket treatment of the original motive. Variant A³ first sounds between the horn and trombone in mm. 42-43 and again in the same voices a measure later. Variant A⁴ is fully articulated by the trumpet in mm. 45-46.

The final variation is, formally, rather simplistic. Variant A⁴ is articulated twice in the mm. 56-58, followed by motive B. Motive A⁴ is articulated once more, followed by another statement of motive B. This pattern is repeated again from mm. 61-65. The final iteration of this idea begins again with two instances of A⁴ and is again followed by motive B, which repeats rather than return to motive A⁴. The piece concludes with motive B in retrograde, much as the opening thematic section concluded with motive B in its prime form.

Much as Webern divided the row into three-note pitch class sets in Op. 24/iii, he uses six-note sets in his String Quartet, Op. 28/ii. In addition to this structural nuance, the movement is also contained within a simple classical form: the ternary form. The use of six-note pitch class sets in this movement gives the opening a sense that it is in three-four, rather than the marked two-four meter. The canonic treatment of the tone row is devised such that the cello sounds on the strong beat of what would be a triple meter (see Appendix 1C). In addition, the cello also plays the anacrusis to each measure of virtual triple meter, adding extra weight to the hypothetical beat three, which would also have weight in a minuet. This trend continues until m. 7, where this illusion is skewed. The feeling of three is again emphasized with the slurs in the upper strings that, when alternating with the cello's pickup and downbeat, give the illusion of taking metric place on beats two and three. This lasts until m. 10, where the slurs are unmistakably in two. The sense of the written meter is maintained through the *ritardandi* in mm. 9-16, where the section repeats. It is also characteristic of a ternary form to repeat a phrase or the entirety of the A section, as Webern does in this movement.

The character of section B contrasts with the previous section greatly. The tempo change is significant and the initial dynamic is apparent in the first violin's sforzando, the forte in both the cello and viola, and the sforzando in the second violin in m. 20. Where the first section was predominantly pizzicato, the strings are nearly always bowed in the B section. The use of pizzicato is intended as an accent or color change, rather than as the norm. This contrast of articulations gives the B section a much more languid and sustained character, compared to the upbeat and light A sections.

The A section returns sounding familiar, though the harmonic structure is slightly different than the initial statement of the section. The character of the A' section is identical to the A section, allowing it to sound virtually the same to the ear. In terms of early twentieth-century music, this movement is as close to a pure ternary form as may be possible. Given that this is one of Webern's last works, this faithful adherence to the old form speaks to his high regard to the musical tradition.

Development of Musical Ideas

All of these forms, the sonata, ternary, rondo, and variation forms are long forms. They form the structure of a larger work. Pieces can also be broken up into shorter forms, namely the canon and fugue. Both of these small forms are derived from the basic musical device of imitation. The listener will not remember a music event with one hearing. Therefore, in order to establish a sense of familiarity with a central musical theme or idea, this idea must be repeated. Imitation is a central component in contrapuntal writing.

In many of his pieces, Webern employs imitation in order to establish both a sense of familiarity and to develop motivic ideas. Often, the second iteration adds slightly to the previous musical idea. This creates a sense of organic growth in a piece of music. Both fugues and passacaglias are important compositional devices for creating a sense of growth from a basic idea, or subject, and new ideas branching off of this subject: countersubjects. Webern's Op. 1, "Passacaglia for Orchestra" uses the passacaglia form to grow an initial musical idea organically. In fact, the work as a whole pays homage to the finale of Brahms' Fourth Symphony⁹.

The opening set of variations to Webern's "Passacaglia" bears stylistic resemblance to J.S. Bach's "Passacaglia and Fugue in C minor" BWV 582 (see appendix 1D). As with most passacaglias, the opening passacaglia subject is stated alone. A set of harmonies is then added to the theme in the second variation. In Webern's passacaglia, first flute and first trumpet supply this harmony and countersubject, while in Bach's work, the countersubject is in the right hand of the organist. In doing so, Webern has adhered to a formal and musical idiom that had been established two centuries prior.

⁹ Walter Kolneder, *Anton Webern: Einführung in Werk und Stil* (Rodenkirchen am Rhein: P.J. Tonger, 1961).

The melodic structure of Webern's passacaglia also contains remnants of the old tonal system. The opening D can be considered the first scale degree. The D falls to a C-sharp, or scale degree seven. The C-sharp leaps to a B-flat, which in the key of D minor would be scale degree six. It is here that Webern departs from the diatonic center of D minor. The B-flat falls to an A-flat, a diminished fifth above the root. This interval is also referred to as a tri-tone. This interval will become significant in the new twelve-tone system, as it splits the octave evenly. The A-flat will then fall to an F, the third degree of D minor, and descend down the scale to an E, degree two. The E then rises to an A, scale degree five. This leap is significant in that it outlines a common cadential motion used in tonal music. Degrees two and five are native to the dominant chord of a key. When the ear hears this diatonic leap, it is naturally inclined to anticipate the tonic to follow. This is precisely how Webern's passacaglia theme returns to the original D.

This work also contains many characteristics of what will come later in his career as well as stylistic features that resemble music from the mid- to late-nineteenth century. Variations three through six of the passacaglia contain a melodic motive outlining the interval of a sixth (both major and minor). Starting in the seventh variation, this interval is widened to a seventh (both major and minor). This intervallic augmentation was common in Wagner's treatment of themes over the course of an opera. The prelude to *Tristan und Isolde* contains one character's leitmotif, that when stretched from a perfect fifth to a minor sixth, outlines the *Liebestod* motive that results in the tragic climax of the entire opera. Additionally, leaps of a seventh are a defining component of Webern's style, particularly when he adopts the twelve-tone system.

Another of Webern's early works, the String Quartet (1905) displays motivic usage parallel to that of Mozart in Symphony No. 40 in G minor, K. 550. The exposition of both

pieces includes a three note motif that is used to develop a theme. Mozart begins this motif in the violins on beat four of the first measure (see Appendix 1E). He uses an eighth note falling second as the anacrusis where the lower pitch is repeated on following strong beat. Webern's string quartet is based on an equally simple motive. The original pitch descends a semitone then ascends a major third. Both motives are used to create the opening theme of the piece.

The structure of the Mozart theme is clearly defined. The first basic idea is stated in mm. 1-5 using tonic harmony. The melody is formed almost entirely by the three-note motif outlined above. This basic idea is then repeated within the context of subdominant and then dominant harmonies. In m. 10 the theme is extended by a new idea, again starting with the same basic motif. This continuation leads into a cadence that is extended for two measures to reinforce the relationship between the tonic (g minor) and dominant (d major).

Similar harmonic and thematic structure is found in Webern's String Quartet (1905). The basic motif is stated and repeated by the first violin (see Appendix 1E). The cello responds with the same motif, placed a fifth higher, implying a dominant function. The sustained harmonies in m. 9 form a contrasting idea, while still using the same basic motif. The harmonies seem to be moving back towards the initial tonal center of C, but cadence deceptively and ambiguously. However, comparable thematic structures are used in both excerpts.

Webern uses this thematic structure to establish a familiar motif before exposing the listener to a countertheme. The initial motif returns during points of stasis later in the piece, giving a sense of arrival despite the lack of a tonal center. His decision to use a traditional theme structure in a new way adds to that emotional effect. Despite being an early work, Webern is able to apply past idioms to new music in order to establish a sense of continuity.

Melody and Harmony

Webern and his colleagues made one definitive innovation in music. This innovation is the new harmonic language: serialism or the twelve-tone system. Harmonies between voices were incidental based on the tone row used in the piece. The row could be manipulated through retrograde, inversion, and transposition to create virtually any harmony the composer desired at a given time. However, as Webern himself noted, there are some rules of nature that cannot be revised:

...Exactly following natural law in its material...one ...uses the possibilities offered by the nature of sound in a different way, namely on the basis of a system that does “relate only to each other”... the twelve different notes customary in Western music up to now, but doesn’t on that account...ignore the rules of order provided by the nature of sound – namely the relationship of the overtones to a fundamental. Anyway it’s impossible to ignore them, if there is still to be *meaningful* expression in sound!¹⁰

The notion of consonance and dissonance is derived directly from the harmonic series. Aesthetically pleasing harmonies are comprised of tones found in the harmonic series of the root. Likewise, dissonant harmonies create disorganized interference between the overtones. Webern understood these laws of nature. His use of dissonance creates mood and texture, where the harmonies as a whole are intended to be heard homogeneously at times.

Webern often used clashing overtones to create moods and textures within his music. Many composers before him used the same principles to a less extreme degree to achieve this effect. He contrasts moments of relative consonance with moments of dissonance, as composers

¹⁰ Anton Webern, *Der Weg zur neuen Musik*, ed. Willi Reich (Vienna: Universal Edition, 1960) Trans. Leo Black, 61.

have done for centuries. Webern also alters the conception of consonance. The entire scale has been shifted towards the dissonant end of the spectrum. Often, a moment of relative consonance occurs when only one voice is sounding. Although two voices are not simultaneously sounding, consonance in this case refers not necessarily to chord quality, but to a state of stasis. Open intervals, such as perfect fifths and minor sixths, are often used as consonant intervals as well.

Another striking aesthetic feature is the perceived lack of melody. However, this observation can be viewed from another angle: each voice is a form of the melody. Because the basic motive (the tone row or otherwise) is so absolutely pervasive within the music, it is possible to analyze each voice in terms of its horizontal, or melodic, implications. For instance, the three-note motive that comprises Webern's Op. 24/iii can be regarded as the melody. Specifically, variant A is the melody and variant B is the countermelody. In a sense, the melody creates the entire harmonic structure of the piece in addition to the thematic structure.

In other instances, Webern's treatment of the pitch-class series creates stark contrasts in texture and mood. His String Trio, Op. 20/ii shifts between short segments of relaxed harmonies before shifting again into a loud, tense dissonant section. In a sense, the mood of the piece changes rapidly (see Appendix 1F). The aggressive opening is contrasted against the much more lyrical second section at m. 10. Such extreme changes of character are common throughout this piece.

Webern did not attempt to redefine the role of relative harmonies in music. He merely shifted the center, treating relative dissonance and consonance as tools for musical expression. The role of counterpoint and part-writing were still important in his compositions. Parts were written for instruments such that the timbre added to the quality of the music and the musical

ideas he was conveying. Webern used organized dissonance in order to create moods and textures within his music. This technique can often be interpreted as disorganized sound to an unfamiliar ear. However, as with any new musical language, proper time must be allowed for the mind to make connections between what is known and what is unknown.

Conclusion

Many similarities can be found between Webern and his predecessors. Given the vast array of decisions a composer makes during the writing process, his ability and willingness to adhere to many of the old paradigms provides a valuable insight into his reverence and respect to those who came before him. It is this ability that has been overlooked by many musicians, composers, and theorists throughout the twentieth century. Proper attention has not been given to the work of Anton Webern, and particularly not to the similarities to pre-twentieth century music that his music displays.

The work of a handful of theorists has sought to make amends with the inherent neglect of Webern's work. As Allen Forte notes, "Webern's more clearly delineated universe incorporated as its basic resource the total chromatic of twelve equal-tempered pitches, but extended to include new interpretations of the traditional syntax of rhythm and form...". With regards to the general study of Webern's work, he also notes that "...among music theorists and analysts his music has had a checkered career"¹¹. Many have either shunned, neglected, or have been generally reluctant to commit study to Webern's music. It was only in 1998 that Allen Forte published *The Atonal Music of Anton Webern*, after decades of an analytical paradigm where Webern's works served as "occasions for testing theories of structure, with concern for its attributes as a cohesive repertoire usually relegated to a very secondary level of consideration."¹².

It is my hope that this analysis has shed additional light on the unique qualities of Webern's work and that we may listen to his works not as a jumbled mess, due to our brain's

¹¹ Allen Forte, *The Atonal Music of Anton Webern* Preface, p. X

¹² Ibid.

inability to process so much new data, but as a piece of balanced, ordered music. Classical music itself is not classical, but neo-classical: based on the structures built by the Romans. The concept of balance and equality were essential characteristics in music. It is this idea of balance on which many formal paradigms were created. This idea of balance was not disregarded by the likes of Webern, but was instead held in a newly rediscovered reverence. The free forms of the late nineteenth century reflected a general disregard to form, which had become secondary to musical melodrama.

Non-formal characteristics in Webern's music were not greatly distant from the work of his immediate predecessors and colleagues. The work of Debussy stretched the bounds of the tonal system to levels which allowed the atonal composers of the early twentieth century to experiment freely. His use of counterpoint and motivic treatment were innovative at times, but also not unfamiliar to composers of the era. What makes these musical ideas appear so alien is the harmonic language. Even within the twelve-tone system, Webern exploited smaller motivic fragments. This technique creates a sense of unity in his work, despite the abstract harmonic language.

Webern's career shows clearly where atonal, and specifically twelve-tone music, does and does not work. By containing his music within well-known forms, using familiar compositional techniques of motivic development and variation, and breaking down the twelve-note series into smaller melodic and rhythmic ideas, Webern is able to create a sense of cohesiveness in his music. This is where many atonal composers have failed, and continue to fail. Anton Webern has many valuable lessons to teach modern composers, for those who choose to listen closely.

Two:

Shadows of our Past: A Compositional Analysis

Although many of his generation chose to ignore all the rules and create their own, Webern chose to adhere to many Western music traditions. By doing so, his atonal works have a uniquely resonant quality that other composers from this era lack. His decision to use classical form and compositional techniques, including imitation and motivic development, allow his works to speak expressively where his colleagues failed. It has been my intention to amplify these qualities of Webern's music and immerse the concept of serial music more deeply into tonal paradigms. In this way, I intend to create a work that, although twelve-tone by nature, speaks as freely and intelligibly to a common audience as a pre-twentieth century work would.

All twelve-tone works must begin with the composition of the tone row. This is not a random string of notes. It must, by necessity, be well planned out such that its inversions, retrogrades, and transpositions make musical sense when layered over the prime form. The interval of a third dominates much musical repertoire. The sequence of falling thirds present in the first two tetrachords¹³ provides a lyrical quality to the series. When inverted, a rising third pattern occurs. The rising and falling third patterns are the central motif of the entire piece. After the first two tetrachords, the sequence must be broken by necessity: the note E would be the next in the pattern, despite already being present in the row. Much as Webern did in his "Passacaglia", though not a twelve-tone piece in its own right, the passacaglia subject can be considered a sequence, the interval of a fifth becomes a possibility. The F at the end of the second tetrachord leaps a fifth up to a C, from which point the falling third motif is continued,

¹³ Tetrachord: A set of four consecutive notes in a series, namely a tone row.

with the interval of a second instead. The final A leads chromatically back to the initial G# (see Appendix 1).

Schönberg's teachings emphasized the idea that the tone row is not a theme on its own. However, even he broke his own rules while leaving this one sacred. In order to create a sense of unity, I have chosen to use the tone row as a theme. The first two tetrachords comprise the primary theme of the piece, with notes 2, 4, 6 and 8 of the row underneath the melody (see Appendix 2B, mm. 25-30). This motif outlines the falling third harmonies, which can be inverted later to create a rising third. These harmonies are consonant relative to pre-twentieth century music. In fact, the row as a whole allows the work to remain relatively consonant throughout. From standard motivic analysis, the falling third motif is present in the clarinet, flute, and oboe at the beginning. This idea then spreads to the tremolo figure as well as the bassoon triplet figure in m. 9. The tremolo idea outlines the entire row and progresses to the sixteenth note figure in the clarinet from mm. 19-22, where the tremolo fades again. The falling third then becomes a melody in m. 25. The oboe is accompanied by the clarinet, followed by the flute being accompanied by the horn. The tremolo figure returns, accompanied by the original two-note figure. All three ideas compete until m. 48, where the complete theme is finally stated in the flute. The tremolo and two-note figure are used as accompaniment and texture underneath the theme.

In m. 67, the row is inverted to form a countertheme accompanied by a sixteenth note variation on the tremolo figure. This countertheme is carried through m. 81, where the main theme is restated at a faster tempo. The rhythm of the theme is altered to allow more notes of the row to be included in each measure. The chromatically rising or falling eighth note accompaniment as well as the introduction of countermelodies, i.e. clarinet mm. 86-88, and the

use of a rising chromatic scale adds forward momentum to the section. The inversion of the row also generates a new motivic idea that originates with the oboe in m. 90. It also sets up the broken sixteenth note figures to follow in m. 93 and the opening of the harmonies leading into m. 99.

The middle section of the piece, mm. 99 to 146, contains a technique not used by Webern. Two ostinatos are used throughout the section, with the addition of a third in m. 124. The first is derived from a transposed inversion of the row. This is the triplet figure originating in the clarinet. The other is a transposed prime. Both accompaniment figures use one tetrachord at a time in order to simulate key areas. The melody, found first in the horn in m. 99 beat 4, begins using only a segment of the row. Each iteration of the melody grows closer to completely the row. The key center shifts again in m. 113, where the triplet figure starts the same row permutation on the third note instead of the first. This places the triplet figure two semitones higher. The accompanimental figure and melody are transposed up a whole step as well. This rising harmonic idea is used twice more in this section. The figures shift up a semitone in m. 123 and two semitones in m. 139. The section arrives at the largo section at m. 147.

The recapitulation begins at this arrival. The original theme is restated at a drastically slower tempo in m. 149 in the flute. A new countermelody is introduced by the clarinet in m. 152 and then imitated by the bassoon a measure later. The horn uses this countermelody as a lead into a final statement of the theme's inversion from mm. 158 to 161. The tempo increases at m. 163, where the entire theme is restated at a similar tempo to the animato section earlier in the piece. The row is then fragmented among the instruments, much as it was at the beginning of the piece. The tremolo figure returns briefly in m. 178 to return to the original tempo. Slowly, the motivic fragments used to develop the theme are broken back down into their components. The

two-note motif returns in a slower form. It appears as staccato eighth notes rather than a slurred sixteenth into an eighth. This figure is slowed to staccato quarter notes, outlining the final statement of the row a semitone below its original form. The use of the row a semitone lower amplifies a feeling of settling and arrival at the conclusion of the piece.

Three:

The Recording Process

Selecting a Studio and Ensemble

Being new to recording projects, selecting a studio was one of the first questions I wanted to answer. My decision to record at Mechanics Hall was based almost entirely on faculty recommendations, as well as listening to past recordings done at the hall. Mechanics Hall was geographically feasible as well, as it is located not far off of I-90 in Massachusetts. This made it accessible and easy to find for the ensemble and myself.

Because I had never been to Mechanics Hall, I was unsure of what exactly to expect when I arrived on the recording date. Although everyone I had discussed the hall with had high recommendations, it is another thing entirely to experience it yourself. Not only was the hall beautiful, complete with a world-class organ, the sound was magnificent. Both aspects were beneficial in unforeseeable ways during the session.

Due to the excellent acoustics and visual appeal of the hall, the ensemble was enthusiastic about playing there. This added an unconscious level of performance to the recording itself. In addition to this immeasurable aspect, the hall also provided a wonderful environment to produce a quality recording.

Finding an ensemble was the next challenge. Chamber ensembles tend not to be as publicly open as many other groups and can be relatively elusive. I had two main options and a backup option for an ensemble. The first was to contact other colleges in New England in order to find an ensemble of interested graduate students. The second, preferred option was to find an

established professional quintet in the area. If that did not turn out, my backup would be to ask the professors here at the University of Connecticut to perform for the recording. This last option would be logistically more challenging. In addition, performing a piece of new music with four musicians you have no played with in a chamber music setting can be difficult, especially without a conductor.

Pursuing the first two options, I contacted a couple professors and graduate students at the University to find out if they had any colleagues that were in or might know about a woodwind quintet in the area. It turns out that the horn professor here was in a quintet. I have found both a recording hall and an ensemble. The next step is to establish a date.

Booking a Recording Session

The process of scheduling a recording session is lengthy and, at times, frustrating. The most difficult step is establishing a recording date. This is a time consuming, multi-step process that revolves around finding an open date in (my case) eight schedules, including the studio's. This is the most difficult part of the process. The ensemble cannot commit to a project until the date is confirmed, but I cannot book the studio until I know the ensemble is available on that date. The process of finding dates that work for the ensemble, calling the studio and finding open dates, and going between the two took roughly two weeks to complete. Finally, the session date had been confirmed and put into everyone's calendars. At this point, most of my stress had been relieved and I could sit down and write the piece.

Recording, Editing, and Mastering

The first major step in a recording session is finding a good sound. This is comprised mostly of microphone placement. The ensemble is playing the piece on stage while I sit in the listening room next to the recording booth upstairs. The listening room includes a live microphone feed of the stage as well as a video feed. I also have a microphone to communicate with the musicians and call the takes of the session. After a few takes, the sound had been perfected and we were ready to begin recording.

The session itself lasted three hours. By the end, we had recording nearly fifty takes. Two of these takes were of the entire piece, while the rest were of sections of the piece. My role at this point was to sit in the listening room and announce the take number as well as what section of the piece would be played. After a take, there would be a short discussion of that take via my microphone and feed of the stage and correct any mistakes made on the take. After a good take was made, we would move on to the next one. The entire process was democratic amongst me, the engineer, and the ensemble. Once we all felt a take was good, we would move on to the next take.

This process repeated until takes of each section of the piece had been completed. The first and last takes were of the entire piece. In addition, the ensemble was invited to the listening room to listen to both of these full takes. This allowed them to hear how they sounded and to determine what they wanted to improve.

The next step is to compile an edit list. The list is comprised of the take number on the reference cd and what section of the take to use. This involved listening to every take again and making decisions between two or more takes. In many ways, this was one of the most difficult

parts of the project. Often, we had two or three quality recordings of the same part of the piece. My decisions were made based on minute details and flaws, some of which would not be caught after one or even five hearings. The complete edit list contained about twenty-five edits to be made.

This is where Toby Mountain comes into the project. About two weeks after the session, I traveled to his studio to make all of the edits and splices for the recording. The editing process took about two hours in total. Another key part of this step is having someone hear the piece who is completely unfamiliar with it. Often, because a composer, conductor, or performer is so familiar with a piece, his or her ear will hear the music as it should be rather than as it really is. Someone who is not as familiar with the piece will not be susceptible to this phenomenon. Toby Mountain was able to hear some details of the recording, such as chair noise or minor intonation issues, which I had completely overlooked.

This was beneficial during the brief mastering process as well. The concept of mastering is essentially fine-tuning a recording so that it sounds as good as possible on any medium. In the case of a collection of works or an album, the mastering process also consists of smoothing playback differences between the tracks on the disc. Only a few minor changes were made for this recording. One major change was to reduce the volume of the right channel, where the clarinet was often too prevalent in the recording. Before leaving his studio, I had a copy of the final recording of *Shadows of Our Past*

Final Conclusions

As a composer, the in-depth study of a single past composer has proven to be enlightening. From the start, I had a basic understanding of serial music and of Anton Webern's work. However, I was in the same position as many theorists and musicologists have been in for the last century. I knew very little about how his music functioned as it did: as music. My goal was to discover how and why Anton Webern's music worked, and how it fit in to my broader ideas of what music is and should be. Many of these questions were raised in my preface. It is my hope that I have come closer to answering the questions and criticism related to serial music.

Admittedly, many questions have remained unanswered. We will continue to ask ourselves what in music creates meaning. Is the answer even objective at all? Many have tried to view the arts through an objective lens, with the intentions of understanding it more methodically. Some have found more success than others. However, it is evident through the work of composers like Webern, Hindemith, Stravinsky, Berg, Schonberg, and the countless others of this era, that music, and the arts as a whole, rely greatly on the world it is conceived in. Let us look no further than Paris's reaction to the debut of *Le Sacre du Printemps* as evidence.

My personal motive in choosing Webern for this project was simple: to dispel the notion that serial music cannot speak as lyrically as other styles. I believe that I have been successful in creating a piece of music that represents that notion. The musicians that I collaborated with whole-heartedly agreed with me, to where one even remarked that *Shadows of our Past* allowed her to like modern music.

The experiences of this project were also significant in my growth as a composer and professional. I had never worked directly with a group of professional musicians before.

Suddenly, I had to be the one in charge of the musical ideas and how to execute them within the rehearsal. . It was absolutely incredible to work with the Harmonia V quintet. They had the quality of the recording in their best interest and committed the time they needed to do so.

The project also allowed me to make connections in the professional world. These connections are with the staff at Mechanics Hall, specifically their recording engineer, Joe Chilorio, and with the people I worked with directly, namely the Harmonia V quintet and Toby Mountain. These connections are essential for any professional to bring publicity to their name. After all, what good will music do if no one is there to hear it?

As a composer specifically, I have explored sounds that I may never have explored without studying Webern's music. This project has opened my horizons to new techniques that I will base future pieces off of. Although the full tone row may be rather cumbersome, the use of smaller pitch-class sets, as Webern hinted at in his later works, may be a much more expressive direction to take in the future. As my horizons expand, I find new tools under my belt to create a journey for those who will listen to my music. This sense of a journey is my primary goal in every piece I write.

Perhaps, in time, the world will rediscover Anton Webern and his colleagues in much the same way that I have. As a composer, I must embrace my heritage and learn to appreciate the work of those before me. We are tasked with the continuation of an age-old tradition. Though we may not find all music to our liking, we must first respect before we may criticize. It is of great importance to understand the processes and techniques used by our predecessors, for although the composers before us may seem like shadows, it is the shadows of our past that define the music of the future.

Appendix One:

Score Examples

A: Op. 24/iii Concerto for Nine Instruments

Musical score for Trp., Pos., Gge, and Klav. The score is in 4/4 time and features dynamic markings such as *pp*, *p*, and *mit Dmpf.* The Trp. part begins with a *pp* dynamic. The Pos. part has a *p* dynamic. The Gge part has a *pp* dynamic. The Klav. part has a *pp* dynamic. The score is marked with a large Roman numeral **III** at the end.

Sehr rasch $\text{♩} = \text{ca } 120$

1

Musical score for Ob., Kl., Hr., Trp., Pos., and Klav. The score is in 4/4 time and features dynamic markings such as *f*, *mit Dmpf.*, and *immer mit Dmpf.* The Ob. part begins with a *f* dynamic. The Kl. part has a *f* dynamic. The Hr. part has a *f* dynamic. The Trp. part has a *f* dynamic. The Pos. part has a *f* dynamic. The Klav. part has a *f* dynamic. The score is marked with a large Roman numeral **III** at the end.

12

7

poco rit. - -

Fl.
Ob.
Kl.
Trp.
Gge.
Br.
Klav.

etwas mäßiger

14

G - Saite

G - Saite

Fl.
Ob.
Kl.
Pos.
Gge.
Br.
Klav.

21

Fl. *f sf sf*

Ob. *f sf*

Kl. *f sf sf*

Trp. *f f*

Pos. *f sf sf*

Gge. *f*

Br. *f*

Klav. *sf*

Detailed description: This block contains the musical score for measures 21 through 26. It features seven staves: Flute (Fl.), Oboe (Ob.), Clarinet (Kl.), Trumpet (Trp.), Trombone (Pos.), Horn (Gge.), and Bassoon (Br.), plus a grand staff for the Piano (Klav.). The music is in a key with one sharp (F#) and a common time signature. Dynamics include *f* (forte) and *sf* (sforzando). The piano part has a complex accompaniment with many accidentals.

poco rit. - - - tempo I.

27

Fl. *f sf*

Ob. *f sf*

Kl. *f*

Trp. *f*

Gge. *sf*

Br. *f*

Klav. *sf*

Detailed description: This block contains the musical score for measures 27 through 32. It features the same seven staves as the previous block. The tempo marking is *poco rit. - - - tempo I.* Dynamics include *f* (forte) and *sf* (sforzando). The piano part continues with its complex accompaniment.

14

34

Fl.

Ob.

Kl.

Gge

Klav.

f

ff

sf

ff

f

f

ff

f

40

poco rit. - - wieder etwas mäßiger

Kl.

Hr.

Trp.

Pos.

Gge

Klav.

sf

mit Dmpf.

sf

sf

ff

ff

sf

16

59

Hr.

Trp.

Pos.

Br.

Klav.

mit Dmpf.

ff

ff

ff

pizz.

ff

ff

65

Fl.

Ob.

Kl.

Hr.

Trp.

Pos.

Gge

Klav.

ff

ff

ff

ff

ff

ff

ff

pizz.

ff

B: Table 5.1 and 5.1-Supplementary

Table 5.1.













a		sections 1 and 2
b		sections 1, 2 and 5
a¹		section 1 (in diminution, section 4)
a²		section 2
(ab)¹		section 2
(ab)²		section 4
a³		section 4
a⁴		sections 4 and 5

Table 5.1-Supplementary
Motive Variants in Section Three

A^{legato} 

B^{legato} 

B² 

B³ 

C: String Quartet, Op. 28/ii

5b

II

Gemächlich $\text{♩} = \text{ca } 56$

1 *pizz.* *pp* 2 *pizz.* *pp* 3 *pizz.* *pp* 4 5 6 *pp* *p*

7 8 *arco* *pp* 9 *poco rit.* *pizz.* *pp* 10 11 *arco* *f* 12 *arco* *f*

13 *poco rit.* *pizz.* *p* 14 *pizz.* *pp* 15 *pizz.* *pp* 16 *pizz.* *pp* 17 *morendo* *arco* *pp* 18 *pizz.* *pp* *morendo*

6

Bewegt ♩ = ca 112

19 *arco* *sfz* 20 *f* 21 *p* 22 *poco rit.* *p* 23 *f* 24

25 *p* 26 *pizz.* 27 *f* 28 *pizz.* 29 *pizz.* 30 *f*

31 *f* 32 *sfz* 33 *pizz.* 34 *poco rit.* *pp* 35 *pp*

tempo *wieder gemächlich* $\text{♩} = \text{ca } 56$

36 *pizz.* 37 *pp* 38 *arco* *sf* 39 *pizz.* *pp* 40 *pizz.* *pp* 41 *pizz.* *pp*

poco rit. ----- *tempo, etwas fließender* ----- *poco rit.*

42 *arco* *pp* 43 *arco* *pp* 44 *arco* *pp* 45 *arco* *pp* 46 *arco* *f* 47 *arco* *f* 48 *arco* *f*

----- *wieder gemächlich* ----- *sehr rasch* $\text{♩} = \text{ca } 112$

50a *pizz.* *pp* 51a *pizz.* *pp* 50b *pizz.* *pp* 51b *pizz.* *pp* 52 *pizz.* *pp* 53 *pizz.* *pp*

2

1

1. Fl. *poco rit. - - - - - molto*

1. Trp. (B) *ppp*

m. Dpf. *ppp*

Hrf.

Br. *poco rit. - - - - - molto*

m. Dpf.

Veil. *ppp*

m. Dpf.

1

Mäßig bewegt, Tempo II (♩ = 66) 2

1. Klar. (B) *espress. pp*

1. Hr. (F) *pp*

o. Dpf. *pp*

1. Trp. (B) *pp* *mit Dämpfer* *pp*

m. Dpf. *pp*

Hrf. *mf*

1.

Mäßig bewegt, Tempo II (♩ = 66) 2

1. *arco*

Gge. *ppp*

m. Dpf. *ppp*

2. *ppp*

Br. *ppp*

m. Dpf. *ppp*

Veil. *pp* *get.* *p* *get.*

m. Dpf.

Mo. *pp*

m. Dpf.

J.S. Bach BWV 582, theme and first variation

289

PASSACAGLIA.

Cembalo
ossia Organo.

Pedale.

E: Phrase Structure Analysis

Webern String Quartet (1905) exposition

Düster und schwer
mit Dämpfer

Violin I
Violin II
Viola
Cello

ppp mit Dämpfer

ppp mit Dämpfer

ppp mit Dämpfer

ppp mit Dämpfer

ppp

schneller
pizz. arco

leise

leise

leise

leise

anschwellend

anschwellend

anschwellend

anschwellend

1

ohne Dämpfer

pizz. ohne Dämpfer

arco ohne Dämpfer

ohne Dämpfer

ohne Dämpfer

pp *cresc.* *steigernd*

pp *cresc.* *steigernd*

pp *steigernd*

pp *cresc.* *steigernd*

Sc 25
N 4575

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Mozart Symphony No. 40 in G Minor, mvt. 1 exposition

Herrn FRIEDRICH WILHELM KEITEL in Freundschaft gewidmet.

3

SYMPHONIE (G moll)

für Orchester
von

W. A. MOZART.

Aufführungsrecht
vorbehalten.

Für Piano forte zu zwei Händen
bearbeitet von
August Stradal.

Allegro molto. Viol.

PIANO.

Br.

Celli o Bassi.

Ossia.

Br.

4

Fl. Ob. Fag. Str.
Str. Fl. Ob. Fag.

f

* * * * *

Viol.

f *p*

Fag. Br.

Ossia. Br.

* * * * *

Fl. Ob. Viol.

f

Fag. Br. Celli e Bassi.

* * * * *

Hr. Hr. Hr.

senza Pedal.

senza Pedal.

F: Harmony and Mood

Op. 20/ii String Trio

II

Sehr getragen und ausdrucksvoll ($\text{♩} = \text{ca } 66$)

1 (b_2) f p ff p f (\sharp_2)

2 pizz. p ff p p f

3 arco 3 p p f f

4 pizz. f p f f

5 pizz. p f p f sf p sf

6 zart pizz. p p f sf p sf

7 pizz. p f sf p sf

8 accel. arco f sf sf sf sf ff ff

9 pizz. p f sf sf sf ff ff

C-Saite f

10 Zart bewegt ($\text{♩} = \text{ca } 66$)

---mäßiger ($\text{♩} = \text{ca } 112$)

Appendix Two:*Shadows of our Past*

A. Tone Row (Prime Form)



B. Full Score (Transposed)

Bound Copy of Score Attached

Appendix Three:

Composers and Works Referenced

Eighteenth Century

Johann Sebastian Bach

Passacaglia and Fugue in C minor, BWV 582

Franz Joseph Haydn

Wolfgang Amadeus Mozart

Symphony No. 40 in G minor, K. 550 *movement 1***Early Nineteenth Century**

Ludwig van Beethoven

Hector Berlioz

Romeo and Juliet

Mid-Late Nineteenth Century

Johannes Brahms

Symphony No. 4, Op. 98 *movement 4*

Claude Debussy

Prelude to the Afternoon of a Faun

Richard Strauss

Death and Transfiguration

Richard Wagner

Der Ring des Nibelungen

Tristan und Isolde (prelude)

Early Twentieth Century

Alban Berg

Arnold Schönberg

Anton Webern

Im Sommerwind (1904)

String Quartet (1905)

Passacaglia for Orchestra, Op. 1

String Trio, Op 20.

Symphony, Op. 21

Appendix Four:

Who I Worked With

A: The Harmonia V Woodwind Quintet

Kim Collins, *Flute*

Janet Rosen, *Oboe*

Thomas Labadorf, *Clarinet*

Robert Hoyle, *Horn*

Sue Zoellner-Cross, *Bassoon*

Harmonia V is an innovative newly formed professional Woodwind Quintet from Connecticut. This group of accomplished musicians is dedicated to performing the best standard literature, seldom heard treasures, and the freshest contemporary music available today. Each member draws upon over 20 years of chamber music experience and believes that the audience should be entertained as well as enlightened. Audiences of all ages will enjoy Harmonia V's refreshing approach to virtuosity and nuance, exposing them to a new world of sound, color and emotion.

Collectively, Harmonia V boasts a musical resume including some of the most prestigious music schools in the nation, including The Curtis Institute, Eastman School of Music, Yale University and the Hartt School of Music. In addition, members have performed or currently perform with most of the musical ensembles in CT including New Haven, Hartford, Bridgeport and Waterbury Symphonies, Orchestra New England, and the United States Coast Guard Band, as well as the Vermont Symphony, Springfield (MA) Symphony, Broadway Theaters, and the Bermuda Symphony Orchestra. As music educators, they hold positions at universities and schools in Connecticut, including the University of Connecticut- Storrs, Connecticut College, Wesleyan University, Central Connecticut State University, Sacred Heart University, Southern Connecticut State University, The Hartt School of Music, University of Hartford, and The Neighborhood Music School in New Haven.

- Harmonia V

B: Joseph Chilorio and Mechanics Hall

Mechanics Hall - an acoustical masterpiece - is internationally regarded as one of the world's great concert halls for its superb acoustics and inspirational beauty. It is regarded regionally as Worcester's finest meeting place.

19th century elegance, modern amenities, superior acoustics and red carpet service combine to make Mechanics Hall a superb rental venue for performances, recording sessions, weddings and galas, business events and more.

Mechanics Hall is ideally located in the heart of New England - Worcester, Massachusetts. Worcester is 40 minutes from Boston and Providence; an hour from Hartford and 3 hours from New York City.¹

Mechanics Hall is a major recording venue - a favorite among leading recording engineers, producers and record companies worldwide. The Great Hall sound has been captured electronically and is used through sampling by recording engineers who need the Hall's unique and nearly perfect acoustic qualities in their recordings. Recordings made in the Great Hall have been honored with four Grammy awards and nine nominations!

Past Recording Clients:

Sony Classical
Telarc International
Nonesuch Records
Harmonia Mundi
Gloria Dei Cantores
BMG Classics
Cleveland String Quartet
Yo Yo Ma
Midori
Miliken Archives
Boston Modern Orchestra
Providence Singers
Hartford Symphony Orchestra.²

¹ <http://www.mechanicshall.org/about/about.html>

² <http://www.mechanicshall.org/recording.html>

C: Toby Mountain's Northeastern Digital Recording

Toby Mountain

In 1985, Dr. Toby Mountain founded Northeastern Digital Recording, Inc., the first digital mastering facility in New England. Toby's mastering credits include a wide variety of artists such as The Beach Boys, Boston, David Bowie, Frank Zappa, Richard Thompson, Morphine, Joan Jett, Jimmy Sturr, Jay Geils, Arlo Guthrie, and Alison Krauss. He has earned several gold and platinum albums and dozens of Grammy awards and nominations. He is also a member of the Audio Engineering Society, and has published many articles in professional audio journals including "Mix" and "Electronic Musician."

Toby is also very active in music education. As a former member of the University of Connecticut music department, he now teaches and lectures half time at The College of the Holy Cross in Worcester, MA. He frequently gives guest lectures on Music and Digital Media at various colleges and secondary schools around the country.

Toby has music degrees from Princeton University (BA, 1972) and the University of California at Berkeley (MA, 1978 PhD, 1981). He also spent several years working at the Stanford University Center for Computer Research in Music and Acoustics (CCRMA) and the MIT Experimental Music Studio, two facilities which have pioneered research in computer music.

Northeastern Digital

As the first digital mastering facility in New England, Northeastern Digital has always been a technological leader in the industry. Featuring a famous and diverse clientele, we have enjoyed a distinguished reputation for excellence and customer satisfaction.

When you first walk into our offices, you will immediately notice a clean, natural environment with a warm and friendly atmosphere. This is a place where you can work effectively.

Our approach has always been to focus on our clients' wishes and needs. Since mastering is an artistic endeavor, understanding the client's individual and personal goals is tantamount to the project's success. We encourage all of our clients to be present at the mastering session. We strive to get the sound that the client wants. Ultimately, we measure our success not by Gold records or Grammy nominations, but by our high rate of repeat customers.

Northeastern Digital was founded in 1985 by Toby Mountain at the inception of the compact disc. Initially, the company specialized in providing digital editing for classical and acoustic projects, but soon expanded into a full-fledged mastering facility. By 1990 Northeastern Digital had added CD-ROM mastering and computer driven audio. In 2000 the company added a studio dedicated to video editing and the authoring of DVD-Video and Enhanced CD.

Supplemental Recordings

With the intentions of enhancing the understanding of many concepts described in this paper, I have included a list of recommended recordings. I have listed the recordings in the order in which the pieces or concepts are presented in the paper.

Symphony No. 40 in G minor – W.A. Mozart
Tristan und Isolde, prelude and Liebestod – Richard Wagner
Prelude to the Afternoon of a Faun – Claude Debussy
Concerto for Nine Instruments, Op. 24 – Anton Webern
String Quartet, Op. 28 – Anton Webern
Passacaglia for Orchestra, Op. 1 – Anton Webern
Symphony No. 4, Op. 98, mvt. 4 – Johannes Brahms
Passacaglia and Fugue in C minor, BWV 582 – J.S. Bach
String Quartet (1905) – Anton Webern
String Trio, Op. 20 – Anton Webern
Symphonie, Op. 21 – Anton Webern

Glossary

Diatonic Scale. Until the late nineteenth century, the seven modes of the diatonic scale had been the standard harmonic system. The first mode, known as the Ionian or major scale, contains the series of two whole steps, a half step, three whole steps, and a half step. This pattern is, unlike the whole-tone scale, an asymmetric pattern. Twelve distinct transpositions of each diatonic mode exist.

Second Viennese School. Refers to Arnold Schönberg and his students in Austria during the early twentieth century.

Sentence. A phrase structure comprised of a basic idea, the repetition of the basic idea in some form, and a contrasting idea ending with a cadential passage. This structure was used frequently during the Classical era, but saw a decline as the Romantic era developed.

Serialism. A musical style in which a set series of pitch classes are used to compose a work. The original series can be transposed or inverted, and can also be found in a retrograde form. Any combination of these alterations can be used simultaneously.

Whole-Tone Scale. One of a small set of symmetrical scale patterns. It is comprised of six pitch classes, each with two semi-tones, or whole steps, separating them. One key characteristic of the whole-tone scale is the interval of a tritone from the root and the fourth degree. The whole-tone scale is also a scale of limited transposition, much like its other symmetrical counterparts. There are only two distinct whole-tone scales.

Bibliography and Works Cited

- Austin, William W. "Webern and the Tradition of the Symphony." *Anton Webern Perspectives* (1966).
- Bailey, Kathryn. *The Twelve-Tone Music of Anton Webern: Old Forms in a New Language*, edited by Whittall, Arnold. Cambridge: Cambridge University Press, 1991.
- Phipps, Graham H. "Harmony as a Determinant of Structure in Webern's Variations for Orchestra." *Music Theory and the Exploration of the Past* (1993): 473.
- Forte, Allen. *The Atonal Music of Anton Webern*. New Haven: Yale University Press, 1998.
- Johnson, Julian. *Webern and the Transformation of Nature*. Cambridge: Cambridge University Press, 1999.
- Kolneder, Walter. *Anton Webern: Einführung in Werk und Stil*. Rodenkirchen am Rhein: P.J. Tonger, 1961.
- Persichetti, Vincent. *Twentieth Century Harmony* 1961.
- Polnauer, Josef, ed. *Letters to Hildegard Jone and Josef Humplik*. Translated by Cardew, Cornelius. Bryn Mawr, Pennsylvania: Theodore Presser Company, 1967.
- Webern, Anton. *Der Weg zur neuen Musik*, ed. Willi Reich. Vienna: Universal Edition, 1960.

Musical Works

- Webern, Anton. *Concerto for Nine Instruments, Op. 24* [Konzert für Flöte, Oboe, Klarinette, Horn, Trompete, Posaune, Geige, Bratsche und Klavier]. London: Universal Edition, 1948.
- . *Passacaglia, Op. 1*. London: Universal Edition, 1922.
- . *Streichtrio, Op. 20*. London: Universal Edition, 1927.
- . *String Quartet, Op. 28*. London: Universal Edition, 1955.
- . *String Quartet (1905)*. New York: Carl Fischer, Inc., 1951.
- . *Symphony, Op. 21* [Symphonie für Klarinette, Baßklarinetten, zwei Hörner, Harfe, 1. und 2. Geige, Bratsche und Violoncell]. London: Universal Edition, 1929.