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Hermes, a Concerto for Violoncello and Orchestra

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"HERMES"

A CONCERTO FOR VIOLONCELLO AND ORCHESTRA

A thesis submitted in partial fulfillment of the

requirements for the degree of

MASTER OF MUSIC

in

COMPOSITION

By

Tyler Todd Kimmel

2014

To: Dean Brian Schriner,
     College of Arts and Sciences

This thesis, written by Tyler Todd Kimmel, and entitled "Hermes" a Concerto for Violoncello and Orchestra, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

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Joel Galand

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David Dolata

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Orlando Garica, Major Professor

Date of Defense: March 25, 2014

The thesis of Tyler Todd Kimmel is approved.

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Dean Brian Schriner
College of Arts and Sciences

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Florida International University, 2014

ABSTRACT OF THE THESIS

"HERMES"

A CONCERTO FOR VIOLONCELLO AND ORCHESTRA

by

Tyler Todd Kimmel

Florida International University, 2014

Miami, Florida

Professor Orlando Garcia, Major Professor

This thesis consists of a large composition for violoncello and orchestra, together with an analytical paper in which I discuss my compositional techniques and some of their historical antecedents. The composition draws on the genres of imaginary musical theater, the symphonic poem, and the concerto. It was also inspired by the story of Hermes, the messenger god from Greek mythology. While the myth partially informs the compositional structure, the work is ultimately meant to showcase the versatility of the cello, the coloristic range of the orchestra (in some cases emulating the orchestral styles of previous composers), the balance of cello and orchestra together, and the eclectic invocation of many compositional techniques separately and simultaneously. These techniques encompass set theory (the use of unordered pitch collections), polytonality, and serialism. It is composed in a post-romantic style.

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LIST OF EXAMPLES

INTRODUCTION

Drama and music are continually expanded through different genres, especially dance,

oratorio, cantata, opera, ballet, and film. While these genres exemplify collaboration,

other classical music genres such as the symphonic poem are exclusively musical, with

extra-musical sources influencing their construction. Similar genres can give music the

opportunity to take on a much larger role in the dramatization of extra-musical

inspirations. This composition uses an eclectic combination of compositional techniques

and influences to dramatize a story from Greek mythology.

Hermes, a concerto for cello and orchestra, brings the whimsical story of the Greek

messenger god to life through orchestral instruments. The work showcases the versatility

of the cello, the coloristic range of the orchestra (in some cases emulating the orchestral

style of previous composers), the balance of cello and orchestra together, and the eclectic

application of many compositional techniques separately and simultaneously. These

techniques encompass set theory (the use of unordered pitch collections), polytonality,

and serialism. It is composed in a post-romantic style, and its form is through-composed.

CHAPTER I: MUSICAL INFLUENCES

Much of the inspiration for *Hermes* came from a recent European movement, which German composer Matthias Pintscher refers to as "imaginary musical theater."[1] Like a symphonic poem, imaginary musical theater is inspired by extra-musical sources, such as drama, poetry, stories, paintings, and so forth.

Before Pintchser, many composers wrote tone poems for orchestra and solo instruments – Camille Saint-Saën's *Carnival of the Animals* is one example. Another example is Richard Strauss' *Don Quixote,* which is, coincidently, also for cello solo and orchestra. Nevertheless, Pintchser's revisiting the concept of the tone poem, by melding musical theater with the concerto, lends it a new perspective. The theatrical aspect of this new type of concerto "over-dramatizes" the orchestra, in which individual instruments assume the roles of the mythical protagonists.

In addition to dramatic inspiration, there is the concerto aspect. *Hermes* is not a cello concerto in the traditional sense, but rather a concerto for cello and orchestra, in which the cello solo material is juxtaposed with orchestral passages that often feature equally soloistic textures featuring smaller instrumental groups, somewhat in the manner of the Baroque *concerto grosso,* or the eighteenth-century hybrid French genre, the *symphonie concertante.* Concertos by Saint-Saëns and Dvorak set obvious precedents for works featuring cello and orchestra. As orchestras became larger in the nineteenth century, composers became more sensitive to the cello's quiet low register, and more prominent

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[1] In a preconcert lecture on March 30, 2013 at the New World Center in Miami, Florida, Pintscher described this genre as a dramatization of extra-musical elements, similar to the nineteenth century symphonic poem.

middle and high registers, leading them to find a delicate balance between the solo instrument and larger ensembles. Eventually, later romantic and modern composers expanded upon these ideas, creating rich textures, varied instrumentation, and abstract forms.

Pintscher's concerto, as well as Henri Dutilleux's cello concerto *Tout un monde lointain*, inspired the sound-scape for *Hermes*. A large part of these two concertos focus on gestures and "dialogue" between the soloist and the orchestra. Allusions to these instrumental pairings and conversational aspects are found in *Hermes* and will be discussed in Chapter VI, dedicated to orchestration. Additionally, the orchestral techniques of Béla Bartók, Maurice Ravel, Arvo Pärt, and Esa-Pekka Salonen, and the compositional techniques of Arnold Schoenberg, Anton Webern, Igor Stravinsky, and Benjamin Britten play a vital role in shaping the colors and orchestration of this concerto, as discussed in Chapters III and V.

CHAPTER II: GREEK INFLUENCES

Like Matthias Pintscher's *Reflections of Narcissus, Hermes* is inspired by Greek

mythology, and takes its title from the myth of the same name. Ingri and Edgar Parin

D'Aulaire summarize as follows:

> Hermes, the merriest of Olympians, and god of travelers, merchants, thieves, and wits, was mischievous and crafty. He was known for his uncanny ability to outwit anyone. His brother, Apollo, fell prey to the most famous of Hermes' schemes. When Hermes was just a toddler, he crept into Apollo's field, stole fifty of his cows, sacrificed two, and hid the others. Using the guts of the sacrificed cows, he made the first seven-stringed lyre. When his mother scolded him, he used the lyre to lull her to sleep.
> The next morning Apollo discovered his cows were missing and accused Hermes (who, of course, denied everything) and chased him to Mount Olympus. In an audience with Zeus, Apollo demanded Hermes return the cows. Hermes acquiesced and led Apollo to his herd, but when Apollo saw that two were missing he became enraged. To sooth Apollo's anger, Hermes strummed his lyre. Apollo enjoyed the sound of the lyre so much that he agreed to give Hermes his whole herd in exchange for it. Clever Hermes demanded Apollo's magic wand as well. The exchange was made, and from then on the brothers lived in peace.
> Zeus was proud of Hermes and gave him a golden hat with wings, a pair of winged sandals, and a cape for his tricks. He mediated between the gods and mortals, helping people find their way, both as a guide in the physical world but also in the symbolic realm, for he was the god of interpretation (the term *hermeneutics*, of course, derives from his name). It was he who led mortals to the underworld after death.[2]

Since *Hermes* is inspired by dramatic elements, instruments were assigned roles,

providing the opportunity for "dialogue" between characters. The cello solo represents

Hermes, the trombone represents Apollo, the violin represents Maia (Hermes' mother),

and the horns and trumpet (as a unit) represent Zeus. It is important to note that these

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[2] Paraphrased from Edgar Parin D'Aulaires and Ingri D'Aulaires, *Book of Greek Myths*, (New York: Delacorte Press, 1962), 50.

roles are not intelligible to the listener, but the assignment of instruments to specific roles served in the pre-compositional construction.

In addition to the myth, there are elements of Greek music that unite the concerto. The first known composition is the *Epitaph of Seikilos,* discovered on a tomb dating from the first century C.E.

Ex. 2.1. Epitaph of Seikilos*,* as found on the original transcription.

Mark Even Bonds opens his *Anthology for A History of Music in Western Culture* with the *Epitaph of Seikilos,* and refers to it as belonging to the *Ionian tonos.*[3]

Prior to the *Epitaph's* transcription, Greek theorists had established the seven modes within the diatonic octave: Mixolydian, Lydian, Phrygian, Dorian, Hypolydian, Hypophrygian, Locrian (or Hypodorian), and Ionian. Since the range of the *Epitaph* lies between octave E's, the pitches can be arranged in succession with the relationships: whole-tone (T), semi-tone (S), T, T, T, S, and T. This scale suggests a transposition of

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[3] Mark Evan Bonds, *Anthology of Scores for A History of Music in Western Civilization,* (New Jersey: Prentice Hall 2010), 1.

the medieval Hypomixolydian mode (it is important to remember that although medieval and Renaissance theorists took on the names of the Greek modes, their intervallic structure differs from those of Ancient Greece). However, this does not mean that the *Epitaph's* tonic is "E," or that it is Hypomixolydian.

The Greeks defined their "modes" by ethnic group and region; the Ionian tonos, for example, was associated with southwestern Greece. The term *Ionian* was later introduced by the Renaissance theorist Glarean to refer to the diatonic intervallic succession described by an octave ranging from C to C—but this has nothing to do with the Greek Ionian *tonos*.[4]

The exploration of a collection's context is necessary before coming to modal conclusions. The *Epitaph* clearly exists between octave E's, and Bonds relays that A "constitutes the *mese* ('mean') of the range."[5] The concept of *mese* will be applied later to a variation of the *Epitaph* in Chapter IV. It is important to note the origins of the *Epitaph* because this concerto does not use its original form as seen in Example 2.1. Rather, the only element adopted from the Greek piece is the diatonic set itself, independent of any specific modal ordering. The pitch material of *Epitaph* is adapted to a different compositional system discussed in Chapter IV, which focuses on pitch organization.

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[4] Mark Evan Bonds, *A History of Music in Western Culture,* (New Jersey: Prentice Hall 2010), 8.

[5] Bonds, *History of Music,* 8.

CHAPTER III: FORMAL STRUCTURE

Since the concerto relies heavily on a story for its construction, the events of the myth have been broken down into eight scenes that guide the form and direction of the piece. The eight scenes create sections within the concerto. The scenes are as follows:

Scene I: The Birth of Hermes
Scene II: Hermes steels the cows
Scene III: Hermes Sacrifices the cows
Scene IV: Hermes' Lyre
Scene V: Apollo and Hermes/The Chase
Scene VI: Hermes and Apollo before Zeus
Scene VII: Hermes' tricks Apollo again
Scene VIII: Hermes receives his wings

Furthermore, each scene is connected to a pitch in the *Epitaph* series, meaning that the succession of the eight pitches (including C–sharp twice) corresponds to the eight scenes, i.e., Scene I begins with C–sharp (the first pitch in the *Epitaph* collection used for this concerto), Scene II begins with D, Scene III with E, and so forth. Though each pitch is prominent in its particular scene, it does not function as a tonic within diatonicism. Béla Bartók uses this "connecting" model in his one-act opera *Bluebeard's Castle* in which each scene is connected by tri-tone relationships. Additionally, the eight scenes in *Hermes* can be distinguished according to their pitch organization.

An explanation of the graphic analysis is as follows:

Scene I: C–sharp (*Epitaph* collection and 5-35 collection and transpositions)
Scene II: D (Collection 6-31, and Bartok Gesture)
Scene III: E (Z-relations: 7-Z38 and 7-Z36, 5-35 fragments, Bartók fragments)
Scene IV: F-sharp (*Epitaph* transpositions, bitonality creating minor and major-
        second relationships)
Scene V: G (Serial techniques, rotations, chromaticism)
Scene VI: A (Polytonality: A–major and F–sharp major, combinations and
        References to 5-35 and Bartók fragments, ostinato *Epitaph* in F–sharp (A
        is still salient), Tri-tonality variations of *Epitaph*: in F–sharp, F, and E,
        chromaticism).
Scene VII: B (Chromaticism, *Epitaph* quotes from Scene IV, serial techniques,
        Bartók fragment).
Scene VIII: C–sharp (Combination of Bitonality C–sharp and B, 5-35, and
        Epitaph)

A complete graphic analysis is shown on the following page.

Ex. 3.0. Graphic Analysis

GRAPHIC ANALYSIS

CHAPTER IV: PITCH ORGANIZATION

This section elaborates on the horizontal and vertical relationships by defining

compositional techniques and their combination with each other. The treatment of pitch

in *Hermes* is based on extensions of tonality (represented by unordered pitch class sets),

chromaticism, polytonality, and serialism.

IV–a. Tonality and Diatonicism

Tonality, in the words of David Cope, is defined by key— music specifically centered

on scales, establishing a tonic, or central note. The pitches in a key are diatonic, and

those outside a key are chromatic.[6] Common-practice tonality employs major and minor

scales, triads, functional harmonies centered around the tonic, and voice-leading

principles following traditional norms from the time of Bach to the time of Brahms. If a

composition is neither diatonic nor based on common-practice tonality, it may still be

centric, though its consonances and dissonances are defined by other standards (indeed,

the very terms *consonance* and *dissonance,* are used metaphorically in such contexts);

these standards may be determined by the use of unordered pitch class sets, and their

combinations with other collections. In *Hermes* there are no diatonic functions, but

rather instances of consonance created by pitch class sets. *Hermes* also exploits

referential pitch collections in the manner of Stravinsky, whose non-traditional harmonies

often arise as subsets of the octatonic and diatonic collections. Stravinsky often used the

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[6] David Cope, *New Directions in Music,* (Long Grove: Waveland Press, 2007), 1.

octatonic collection, countering diatonicism with chromaticism to create an atmosphere in which traditional harmonic progressions were unstable and their "closure" uncertain.[7]

IV–b. Chromaticism

The term chromatic is given to any note existing outside of a diatonic series. Chromaticism is the application of these pitches to diatonicism, adding color to sonorities and highlighting dissonances. During the nineteenth century, there was a wide acceptance of chromaticism. By the turn of the twentieth century, it had become so pervasive that some composers abandoned the distinction between diatoncism and chromaticism, consonance and dissonance altogether, thereby abandoning tonality. In *Hermes,* chromaticism is used for obscuring sonorities in order to transition from one compositional technique to the next. Some primary examples of this technique are heard in Benjamin Britten's opera *Peter Grimes,* specifically in the last eight measures of the second Sea Interlude. Example 4.1 shows a reduction for two pianos. Beginning in the fifth measure of the example, Britten combines two chromatic scales, set a whole tone apart (beginning on G-flat and F-flat), creating a bitonal cluster (defined in the next section).

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[7] Arnold Whittall, *Musical Composition in the Twentieth Century,* (New York: Oxford University Press, 1999), 118.

Ex. 4.1. Britten's "Peter Grimes," Sea Interlude 2.

Similarly in *Hermes*, examples of chromatic transitions can be found between many scenes. Example 4.2 shows the chromatic runs out of Scene V, a serial-dominant section. The gradual increase of chromaticism aids in transitioning this material into the next scene, which is polytonal. Groups of eighths, triplet-eighths, and sixteenths seen in the winds, brass, and strings respectively, obscure the sense of pulse and produce polytonal clusters.

Ex. 4.2. Transition from Scene V into Scene VI

By the end of the nineteenth century, the practice of chromaticism created such ambiguity that composers began to question traditional ways of analyzing music. They eventually developed new terminology to explain the expansion of chromaticism by means of new analytical (and compositional) models.

IV–c. Polytonality

Though the examples above demonstrate how chromaticism is used in transitions, they also present brief moments of *polytonality,* the combination of two or more keys simultaneously. This style yields rich textures, and can unite music through dissonance. For example, a composer writing in two different keys can still maintain tonal functions and therefore maintain consonant relationships within each individual key. However, tension occurs when the dissonance created by the two tonal centers disallows consonant relations between the two keys. Igor Stravinsky, Béla Bartók, Charles Ives, Benjamin Britten, and many other composers are well known for their pioneering and mastering of polytonality.[8] The following excerpt from Act III of Benjamin Britten's opera, *Peter Grimes,* demonstrates an example of bitonality between E–major and F–minor.

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[8] Cope, *New Directions,* 7.

Ex. 4.3. Britten's "Peter Grimes," Act III, Bitonality.
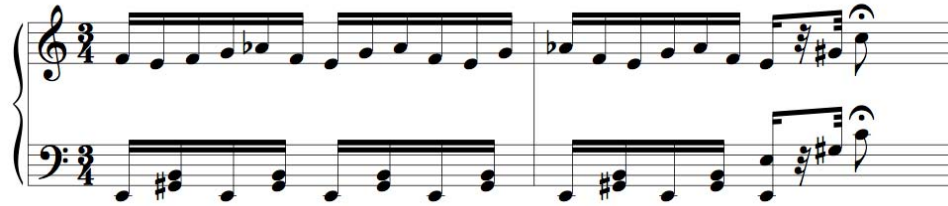
As mentioned before, the extensive instances of polytonality throughout *Hermes* are a consequence of manipulation; these sonorities are ever changing and are therefore not concrete sections of polytonality. However, the truly concrete sections— like the Britten example above—represent unstable vertical harmonies.

In *Hermes,* these polytonal vertical models are best understood as "tone clusters." Clusters use at least three adjacent pitches, obfuscating the harmony so it is not recognized as major or minor. Two explicit instances of polytonal harmonies occur in Scenes VI and VIII. Scene VI begins with a striking bitonal juxtaposition between F– sharp (in the winds and strings) and A–major (a triplet fanfare stated by the brass). This F–sharp and A–major combination yields octatonic subset 5-32, though this scene is not centered on this collection.

Ex. 4.4. Scene VI, Bitonality.

The measures following this fanfare introduce a tritonal texture between the horns and the trumpet, over an ostinato. The resulting vertical sonority is a "prototypical" cluster, meaning only semi-tone relationships are used: F–sharp (Horn 1), E (Trumpet), and F–natural (Horn 2).   In the opening measures of Esa-Pekka Salonen's *Nyx* for orchestra, the brass plays a fanfare with overlapping entrances, creating a pulsating cluster. Similar to *Nyx*, the irregular brass entrances in Scene VI of *Hermes* form fragmented entrances of the *Epitaph*, resembling that of a canon, passing the melody between the three lines in measures 319–327.

Ex. 4.5. Scene VI, Tritonality.

Scene VIII combines the previous dominant pitch, "B," and recapitulates material from Scene I with a C-sharp tonic, creating a bi-tonal relationship throughout the final segments of the piece.

IV–d. Post-Tonal Techniques: Set Theory

Hermes primarily features the diatonic collection drawn from the *Epitaph of Seikilos* (described previously as a Greek mode) and three other set-class collections. The use of these collections is best understood through set theory analysis. *Set theory*, as elaborated principally by theorists Howard Hanson, Allen Forte, David Lewin, and Milton Babbit, describes music by organizing pitches into collections called *sets*. It is used to explain compositions that treat intervals as potentially equal in hierarchy, as opposed to their hierarchical distinction in diatonicism and functional tonality. Accordingly, composing

with this system can yield austere melodies and dissonant harmonies.[9] They can also

yield diatonic elements, if desired.

Sets are groups of pitches created for specific sonorous purposes, and are defined by

their use within a composition. Composers Claude Debussy, Maurice Ravel, and

Alexander Scriabin focused on exotic scales, and even devised their own sets to unify

their compositions. Scriabin's Piano Concerto No. 7 is based on a seven-note collection:

D, D–flat, E, F–sharp, G, A, and B–flat.   Another example is his *mystic chord,*

introduced in his tone poem *Prometheus.* The *mystic chord* may be interpreted as a

hexachord centered on fourth relationships: an augmented-fourth, a diminished-fourth,

and a perfect fourth. It can also be parsed as one of three possible "almost whole tone"

hexachords (a whole-tone pentad plus a semitonally related pitch class).

Though this chord is not defined using specific pitches, the fourth relationships help

define its sorority, and its explicit use within the work lends itself as structural material.

One such instance of the chord is represented by the following pitches: C– sharp, F–

sharp, B–flat, E, A, and D (6-34 in Allen Forte's 1974 listing of set classes). By diatonic

standards, this collection can be used for an abundance of sonorities, both consonant and

dissonant. The numbers associated with collections represent pitch class set, and identify

the relationships between pitches, also expressing their coherence with other collections.

The *diatonic collection* (Forte's set class 7-35) [013568T], primarily used in *Hermes,*

corresponds, in one of its transpositions, to the seven white notes of the piano. All major

scales, minor scales, and church modes are members of the diatonic collection, as it is the

pentatonic collection. Much twentieth-century music is rooted in this collection, used by

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[9] Cope, *New Directions,* 17.

Stravinsky, Bartok, Britten and many others, but not necessarily in a traditional tonal or modal fashion.[10]

As mentioned before, the *Epitaph of Seikilos* is centered on A, but ranging between octave E's. The use of this collection in *Hermes* is not in its original form, but rather rearranged into its normal order. The normal order of a collection arranges pitches so the smallest distances (measured in semi-tones) are on the left most side of the collection. In order for the *Epitaph* to appear in normal order, the distance between each pitch must be measured. We find that the smallest distance exists between C–sharp and D and F–sharp and G (both one semi-tone apart). The decision to make C–sharp the starting pitch class of this collection is arrived when we analyze the distances further. From C–sharp to F–sharp (the pitches at which semi-tone relationships occur) is a smaller distance than F–sharp to C–sharp. Therefore, the final collection of the *Epitaph* in its normal order is shown below in Example 4.6. This is the arrangement that governs the succession of pitches connecting each scene, as shown in Chapter III.

Ex. 4.6. Epitaph in Prime Form

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[10] Joseph N. Straus, *Introduction to Post-Tonal Theory, Third Edition,* (New York: Pearson/Prentice Hall, 2004), 140.

One will notice that the normal order of this collection now creates a different shape, and therefore, modally, yields a different sound. However, in *Hermes*, modes are not truly applied. Rather, the diatonic collection and other collections (such as Z–related pairs) are used as referential collections; they allude to modes and sonorities, yet exclude traditional voice leading and functional harmony that would identify them as such.

As discussed in section IV–a, some collections of *Hermes* create consonant sonorities. At times the *Epitaph* even alludes to a pitch center. In his *Movements for String Quartet, Op. 5, No. 3*, Webern uses a C–sharp pedal in the cello while other pitches—that detract from identifying the piece as C–sharp major or minor—are placed above. However, the dominance of the C–sharp pedal draws attention, and is confirmed as an organizing factor throughout the work when played by all the instruments; significantly, it is also the last note of the piece.[11]

Incidentally, Scene I of *Hermes* also contains C–sharp as a salient pitch. The opening measures create a pedal C–sharp in the violins, doubled by the flutes, supported by an unstable foundation of glissandi.

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[11] Straus, *Post-Tonal Theory,* 131.

Ex. 4.7. Epitaph Collection (Measures 1–6, strings only).

Above this figure, the winds play pitches of the *Epitaph* in mircopolyphony (a term that

will be discussed in Chapter VI).

Ex. 4.8. Epitaph Collection (Measures 1–5).

Other variations of the *Epitaph* are used in transposition. While Scene IV is centered on F–sharp, it also includes a gradual recapitulation of the *Epitaph* from Scene I. In measures 152–195 the *Epitaph* is represented by its normal order, and its transposition T_{11}. Though the transposition begins earlier, measures 170 –178 show both forms played between all strings. The horizontal models in this section maintain gradual ascent or descent, slowly unfolding each member of the *Epitaph* in prime and transposed forms. Vertically, this overlapping creates a tension between the transpositions, creating minor and major seconds, and tri-tones.

Ex. 4.9. Epitaph Transpositions.

Over this tension, the cello strums pizzicato chords. This figure includes explicit quotations from the original *Epitaph* melody, as circled below. Though not in the same strict rhythm, the pitches are in order and their shape maintains that of the transcription. Measures 75 and 76 show a major third transposition of the series from its original setting.

Ex. 4.10. Epitaph Quotations
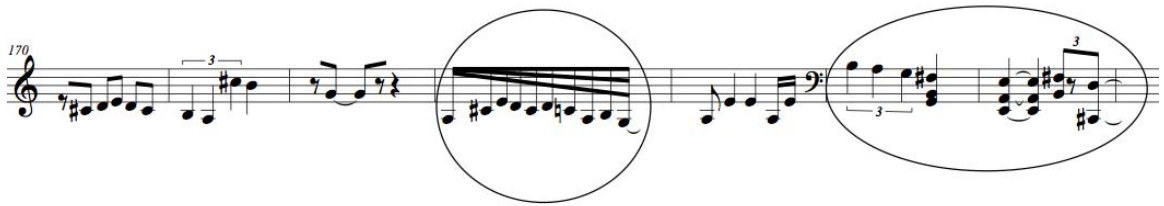
Another example of transposition and combination can be heard in the ostinato used for Scene VI. This ostinato pattern undergoes several variations, though always restarting with an octave leap on A.

Ex. 4.11. Epitaph Ostinato.
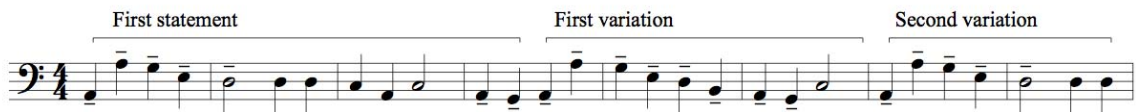
Apart from the extended use of the *Epitaph,* there are other consonant collections used for centric purposes that, when combined, create tone clusters. The first, stated just after the piece begins, is Hermes's theme: F–sharp, G–sharp, A–sharp, C–sharp, D–sharp, known as set class 5-35. This is a pentatonic collection used in in transposition, retrograde, and in fragments both progressively and simultaneously deployed; the juxtaposition of pentatonic fragments creates a dissonant texture and yields non-pentatonic secondary sets formed. Hermes' theme is a quintuplet figure using 5-35. This theme is often accompanied by other transpositions of this set distributed among the winds, strings, marimba, and celesta. This melody is repeated several times through out

the piece, in its full quintuplet form, augmented forms, and diminished forms (such as the

sextuplet figure in the lower two staves), and in fragments.

Ex. 4.12. Hermes' Theme (Collection 5-35).

In Example 4.12 one notices the horizontal progression of this theme through layering

and transposition. The vertical relationships create moments of polytonality through

transposition. When 5-35 is transposed by 11 (T_{11}), both create brief instances of clusters

from measures 14–19

Ex. 4.13. Hermes' Theme Transpositions and Fragmentation.

In retrospect, one can see how Hermes' theme (5-35) makes sense as a consonant collection working outside of functional tonality, though creating dissonance of minor seconds in its transposition.

Scene II begins with Hermes' five-note theme, but adding D–natural and B–natural to the series. This combination suggests a whole tone collection, but excludes E and includes B-natural. Though its content is related to 5-35, it is always presented in the same form as a "gesture," an orchestral texture expressing specific material, which will be discussed in Chapter V. The later half of Scene II includes pitches from this collection, but it is fragmented against the cello line. This collection, known as 6-31, is represented in the double-septuplet figure in Example 4.14.

Ex. 4.14. Scene II, Collection 6-31.

IV–e. Z–Relations.

Additionally, the two other set classes used in *Hermes* belong to a category of set theory called Z–relations. Z–related sets have the same interval class content but are not transpositions or inversions of each other. The Z stands for "zygotic," meaning "twinned." Z–relations sound similar because they share the same interval content. Scene II is constructed from two Z–related sets: Z-36 and Z-38. Their pitch class sets are

listed as [0123568] and [0124578]. These two collections are practically identical, except

for the fourth and sixth pitches.

Ex. 4.15. Z-Related Sets

semi-tone   semi-tone

    These two Z–relations are used to create dissonance and when combined create

clusters. The following example shows the shared material between these two sets, and

how the different material (related by semi-tone) aids in the slow progression of

transition through chromaticism. In measure 110, chords using the Z–relation pitches

create a series of suspended sonorities. The juxtaposition of D against D–sharp alludes to

the gradual altering of material.

Ex. 4.16. Vertical Sonorities using Z–relations.

These chords create tri-tone and second relationships. In the subsequent measures,

these sonorities are augmented by a rhythmic expansion in the strings, followed by a

pizzicato section played by the cello using many of the same pitches from the Z–

relations yielding tri-tone, fifth, and sixth relationships.

IV–f. Serialism: Twelve–Tone Technique

Between 1917 and 1923, Arnold Schoenberg established the twelve–tone approach to explain the complex chromaticism that had dominated previous decades. He, as well as his pupils Anton Webern and Alban Berg, developed several approaches to the function of a twelve–tone row. A twelve–tone row is a group of twelve pitches within an octave. This collection remains in a specific order and is numbered (as in set theory) and used as a fixed model for the melodic and harmonic material for an entire piece.[12]

The clearest way to understand a tone row and its variants is to use a 12 x 12 matrix. The following matrix was used to construct the serial elements of Scene V. It is important to note that this matrix uses the absolute pitch method of serialism, instead the traditional method. In both methods, C is labeled as '0,' as in set theory, but the absolute pitch method does not label the *prime* row as 0. Since the twelve-tone row in *Hermes* begins on E, (the fourth semitone away from C) the prime row is labeled as P_4. This method was chosen so the prime row and its variants begin and end within the same n^{th} number. For example, the retrograde (R) of P_4 will be R_4. The absolute method can also be used to employ specific tonal centers, however this is not the case in *Hermes,* since "E" is not a primary pitch of Scene V.

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[12] Arnold Whittall, *The Cambridge Introduction to Serialism,* (United Kingdom: Cambridge University Press), 14.

Ex. 4.17. *"Hermes" Matrix*

	I_4	I_{11}	I_{10}	I_3	I_0	I_1	I_5	I_6	I_9	I_2	I_8	I_7	
P_4	E	B	A#	Eb	C	C#	F	F#	A	D	Ab	G	R_4
P_9	A	E	Eb	Ab	F	F#	A#	B	D	G	C#	C	R_9
P_{10}	A#	F	E	A	F#	G	B	C	Eb	Ab	D	C#	R_{10}
P_5	F	C	B	E	C#	D	F#	G	A#	Eb	A	Ab	R_5
P_8	Ab	Eb	D	G	E	F	A	A#	C#	F#	C	B	R_8
P_7	G	D	C#	F#	Eb	E	Ab	A	C	F	B	A#	R_7
P_3	Eb	A#	A	D	B	C	E	F	Ab	C#	G	F#	R_3
P_2	D	A	Ab	C#	A#	B	Eb	E	G	C	F#	F	R_2
P_{11}	B	F#	F	A#	G	Ab	C	C#	E	A	Eb	D	R_{11}
P_6	F#	C#	C	F	D	Eb	G	Ab	B	E	A#	A	R_6
P_0	C	G	F#	B	Ab	A	C#	D	F	A#	E	Eb	R_0
P_1	C#	Ab	G	C	A	A#	D	Eb	F#	B	F	E	R_1
	RI_4	RI_{11}	RI_{10}	RI_3	RI_0	RI_1	RI_5	RI_6	RI_9	RI_2	RI_8	RI_7	

Similar to set theory, the original twelve–tone row construction is known as the *prime* row. The first row of this matrix, reading left to right, shows the prime row: E, B, A–sharp, E-flat, C, C–sharp, F, F–sharp, A, D, A–flat, and G. After a row and its variants are indicated through the matrix, there are several different approaches to the functionality of a row, or rows.

Schoenberg tended to avoided rows with tonal centers, while Berg, on the other hand, often established strong tonal centers with triadic and scale references. Webern incorporated integrated cross-referencing, using half of a row's prime form and then inverting, or reversing the other half.[13] Criteria of this nature aided in the construction of Scene V. One approach is to use all successive notes (one after another) from one version of the row at a time. This is used at the start of the Scene V carried by the

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[13] Cope, *New Directions,* 22-27.

trombone solo. At measure 219, the strictest Schoenberg technique is used; all the

pitches in P_4 are exhausted in succession.

A second approach uses more than one version of the row at a time by overlapping.

Alban Berg used this method in his *Lyric Suite,* where he incorporates four versions of a

row simultaneously all beginning with F. Instead of using several versions of the row

starting with the same pitch, in *Hermes* rows sharing similar order are overlapped. In

measures 230–235, P_4 and R_4 are juxtaposed between the winds and strings. R_4 (in the

celli and winds) is the reverse order of P_4 (in the basses and violins).

Ex. 4.18. Juxtaposition of Rows P_4 and R_4.

In measures 237-249, I_4, RI_4, and a pedal G in the strings (held over from the last pitch of the previous row) are overlapped. I_4 (played in triads by the brass) and RI_4 (played in succession in the winds) are retrogressions of each other.

Ex. 4.19. I_4 Triads and RI_4.

Once again, keeping with a common sonority of second-relationships, but also expanding the sonorities to third and fourth relationships, pitches from RI_4 are played in succession by the brass. This happens twice, once at measure 237 and again at 244.

A final approach incorporates a Stravinskian method borrowed from composer and theorist Ernst Krenk. Krenk produced the first textbook on twelve-tone technique and also developed a technique using multiple rotations of the same tone row, where the same

row is used, but once exhausted its restatement begins on different pitches, still in succession. For example, if the twelve–tone row in *Hermes*, beginning on E, has been exhausted, the row will cycle again through E and then restart with the second pitch (B) of the tone row. Stravinsky used this method in *Movements* for piano and orchestra.

In this work, he divides his row into two hexachords, and treats each as a loop of interval classes by rotating each chord to generate six different orderings of the six pitches and interval classes.[14]

Ex. 4.20. Stravinsky Row Rotations.
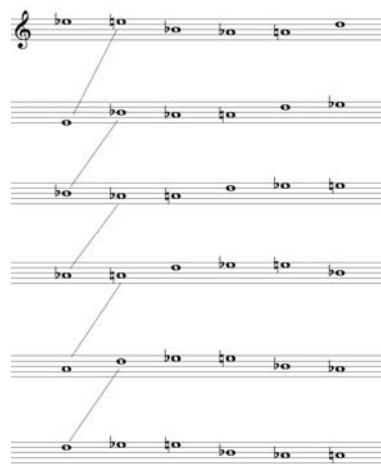
In *Hermes,* the tone row rotations are paired similarly. The following matrix shows the twelve row rotations used.

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[14] Whittall, *Serialism,* 138-139.

Ex. 4.21. Row Rotations Matrix.

E	B	A#	Eb	C	C#	F	F#	A	D	Ab	G
B	A#	Eb	C	C#	F	F#	A	D	Ab	G	E
A#	Eb	C	C#	F	F#	A	D	Ab	G	E	B
Eb	C	C#	F	F#	A	D	Ab	G	E	B	A#
C	C#	F	F#	A	D	Ab	G	E	B	A#	Eb
C#	F	F#	A	D	Ab	G	E	B	A#	Eb	C
F	F#	A	D	Ab	G	E	B	A#	Eb	C	C#
F#	A	D	Ab	G	E	B	A#	Eb	C	C#	F
A	D	Ab	G	E	B	A#	Eb	C	C#	F	F#
D	Ab	G	E	B	A#	Eb	C	C#	F	F#	A
Ab	G	E	B	A#	Eb	C	C#	F	F#	A	D
G	E	B	A#	Eb	C	C#	F	F#	A	D	Ab

Each row—reading left to right—is always used in succession; no inversions or transpositions are used. The rotations used in *Hermes* begin at measure 250. Not only are they layered, but they are displaced as well, having separate entrances that add to the disjointed nature of this section. Example 4.22 shows this layering. The first violins consecutively play rows one and two, the second violins play rows two and three, the flute and celesta play rows three and four, and the oboe rows five and six. The rotation technique is always represented with a triplet figure and continues from measures 250 – 278.

Underneath this texture the basses play every other note of rows one and two. This technique is somewhat reflective of *klangfarbenmelodie*, a technique created by Schoenberg. Though this pointillistic effect originally divides the pitches of a melody between different instruments for a variety of timbres, Scene V uses the technique as a way to rhythmically offset a melodic structure and still maintain cohesiveness with the original material.

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Ex. 4.22. Scene V Row Rotations.

The final serial technique is used in vertical sonorities heard by the brass in measures 255–271. Each brass instrument, excluding the trombone solo, which has continued the original twelve–tone row through this entire scene, plays its own row. At measure 255, the first horn begins with I_{11}, the second horn with I_{10}, and the trumpet with I_3. At measure 260, the pattern begins to fragment; the first horn plays the first pitch of I_1, the second horn plays the first pitch of I_0, and the trumpet plays the first pitch of I_5; this continues in a similar pattern until Scene VI. The relationships in these chords are the same as that of previous sections of the piece, namely seconds, tri-tones, and fourths.

Ex. 4.23. Scene V Brass Chords (I_{11}, I_{10}, and I_3).

Ex. 4.24. Scene V Brass Chords (I_1, I_0, and I_5).

IV–g. Anticipations (Transition Material)

It is important to remember that Scene V is still centered on the fifth tone of the *Epitaph*, "G;" it remains a dominant pitch for this scene, and is even used as an anticipation to transition out of the previous scene. This anticipation is heard at the end of Scene IV after the *Epitaph* transpositions. The cello begins to play a high G (doubled three octaves lower by the cello section), sustaining for four measures in a very slow tempo. As the string-texture thins in the strings, the cello fades to *pianississimo*. G is once again maintained when passed to the violin, violas and basses, as shown in measure 197.

Ex. 4.25. Anticipation into Scene V.

At measure 197, the strings sustain a G–minor chord that is quickly altered to an enharmonic respelling of the 5-35 cluster. In the winds, Hermes's rhythmic gesture (from Scene I) is mutated for a brief instance as a five-note G–Mixolydian scale; from this point, serial techniques are gradually heard until they are fully applied in measure 220.

Another instance of anticipation is used during the recapitulation of the *Epitaph* out of Scene VII into Scene VIII. Fragments of chromatic scales are heard under a cycle of the prime 12-tone row presented in the winds by sixteenths, quintuplets, and triplet figures; this is another instance of micropolyphony, to be discussed in Chapter V. Additionally, three note motives and the 5-35 series from Scene I, and 6-31 from Scene II in the clarinet lines, and the return of the *Epitaph* in the celesta are also present. This compression of the concertos motivic and rhythmic ideas ultimately centers on C-sharp, anticipating its return in Scene VIII.

Ex. 4.26. Transition from Scene VII into Scene VIII

Ex. 4.27. Combining Motivic Material from Scenes I and II.

Finally, the *Epitaph* is restated in the celesta and C–sharp begins to dominate the

transition and smoothly connects with Scene VIII.

Ex. 4.28. Anticipation into Scene VIII

As was the case in many of Schoenberg's compositions, the twelve–tone applications in Scene V are meant to provide a chaotic atmosphere, avoiding allusions to tonal centers. Ultimately, the use of serial techniques in this concerto is uncharacteristically free compared to those of Schoenberg, Berg, and Webern because the applications change so frequently. And, while these composers mainly used one of these techniques in a single work, the goal of this concerto is not exclusive to one technique. Overlapping, combinations, and anticipations add to the eclectic nature of the piece.

CHAPTER V: METER AND RHYTHM

The meter of the piece remains between duple and triple meter, with a few occasions of compound meter (five–four). Most rhythms in *Hermes* are comparable to those heard traditional classical music before post-tonal composition. Non-traditional rhythms are modern techniques used to dissolve pulse and create chaotic events.

Example 5.1 shows a trombone figure in measure 212 of *Hermes*. György Ligeti uses this notation in his *Konzert für Violoncello und Orchester*. Many other composers have also implemented this technique, such as Kyrstoff Penderecki. The notation in Example 5.1 indicates to the player to gradually increase in speed throughout the figure.

Ex. 5.1. Feathered Notation

As mentioned in Example 4.7, the technique in Example 5.2 is known as micropolyphony. Measure 16 of Ligeti's *Konzert* shows his technique.

Ex. 5.2. Ligeti's Micropolyphony.

While mircopolyphony is primarily an orchestral technique that creates moving textures, it is also used as a rhythmic device to obscure time signatures and create a floating, ethereal sound. In *Hermes* this effect is created using selected pitches from the *Epitaph*, shown in measures 7 and 8.

Ex. 5.3. "Hermes" Mircopolyphony.

A hybrid of this technique is also used in improvisation.   From measures 105–108, the celesta player is asked to continue random rhythms against the orchestra. This is notated by a boxed collection of pitches from the *Epitaph* and a thick bar showing its duration.

Ex. 5.4. Hybrid Micropolyphony (Celesta).

Another instance of this technique is found in measures 65-78, this time in the percussion.

Ex. 5.5. Hybrid Micropolyphony (Percussion).

Proportional notation is used in two places. This technique acts as a rhythmic device and gives the players liberty to interpret the approximate entrance of pitches within a given time frame. Arvo Pärt's cello concerto *Pro et contra* was referenced when composing this section, specifically the proportional sections of movement I.

Ex. 5.6. "Hermes" Proportional Notation.

In measure 77, the first violins are asked to play four notes in a three-four bar; they will roughly divide four into three as best as they can. This is yet another technique helping dissolve the pulse so that the prominent beat is unclear.

CHAPTER VI: ORCHESTRATION: GESTURES

Hermes is scored for:

Flute
Oboe
B-flat Clarinet (2)
Bassoon
Horn in F (2)
Trumpet in C
Trombone
Percussion (2)
          -Marimba, Xylophone, Triangle, Timpani (3), Bass Drum, Templeblocks,
           24" Cymbal,
Piano/Celesta (1 player)
Violoncello solo
Strings

    Even though most of the instruments in the orchestra are used, the traditional

groupings of the wind and brass sections are relatively less in number. This arrangement

of instruments creates a chamber orchestra. For this particular piece, the smaller wind

and brass sections help with the balance of the orchestra with the cello solo.

    Two of the most essential aspects of this concerto are the voicings and pairings of

instruments to create gestures. In Pintshcher's *Relfections of Narcissus,* the orchestra

often responds to the cello voice with a specific ascending sweep, pairing winds, strings

and percussion (mallets, celesta, and the like). Whenever this particular gesture occurs it

always includes the same instruments (or slight variations), which act as a motivic device

for the piece. Instead of using specific melodic material to shape the direction of a work,

many composers use orchestration for unifying purposes. Gesture 5-35 is always paired

with specific instrumentation, as shown in these three sections.

Ex. 6.1. The "Hermes" Gesture.

Scene I, Measure 9.   Scene II, Measure 59.   Scene VII, Measure 402

Another orchestral gesture in modeled after Bartok's orchestration used in his

opera *Bluebeard's Castle*, specifically in the scene entitled "Csendes Fehér Tavat

Látok." This particular gesture parallels the scene when Hermes is sneaking into

Apollo's field to steal his cows. Consequently, the gesture is delicately orchestrated

for a uniquely mysterious sound. Though harmonic material from 6-31 is used, the

orchestration is identical to Bartok's.

Ex. 6.2. Bartok Orchestration in "Hermes."

Bartok's orchestration uses a combination of flutter-tongue technique in the winds and brass, tremolo in the strings, pianissimo rolls on the cymbals and timpani, and a double- septuplet figure stated in the winds and celesta. This gesture is used in many places in Scene II with slight variation each time, especially in fragmentation in other scenes throughout the concerto.

Certain gestures and colors are used sparingly instead of treating them as prominent material. An example of this technique is taken from the second part of Ravel's *Daphnis et Chloe*. This effect is only for strings, but uses different techniques to create an ethereal texture. This is shown in Example 6.3 in measure 152; the gradual ascending pizzicato line in the first violins adds a slight percussive nature to this one-beat gesture. The lower voices are divided between glissando and portamento techniques. Once again, the techniques are taken directly, but the pitches are specific to the concerto.

Ex. 6.3. Ravel orchestrations in "Hermes."

CHAPTER VII: CELLO AND OTHER INSTRUMENTAL TECHNIQUES

The cello solo's material is free composed, sounding almost improvisatory. There are instances where the cello lines include melodic and rhythmic fragments used in the orchestra, but for the most part they remain independent of the compositional techniques explained in Chapter V.

There are several places where the soloist is asked to perform percussive sounds on the instrument. Many composers have utilized this technique, Pendercki, Dutilleux, and Arvo Pärt to name a few. As seen in the notation, standard note-heads are replaced by letters: left hand (H), knuckle (K), thumb (T), and pinky finger (P) to create drum-like sounds on the body of the cello. The soloist has the freedom to perform this figure in its various forms on any wooden part of the instrument they find convenient.

Ex. 7.1. Percussive Techniques for Cello.
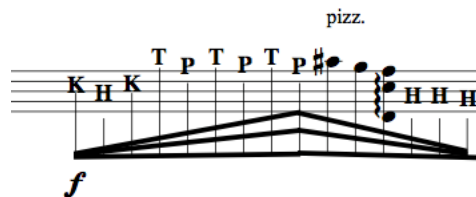
Other techniques include strumming the cello with a pick like a guitar, notated *quasi guitarra.* Rampant use of glissandi and tremolo, and extreme register playing is also seen throughout the piece, as in Ligeti, Penderecki, and Dutilleux's cello writing.

Two explicit sections of "dialogue" with the cello are heard between the first violinist

and the trombone. The first instance is represented in Scene IV in the senza misura

section from measures 140-146. Here, they players should not strictly abide by the

notation, but create an atmosphere that depicts a free-flowing conversation. This

being said, this section will sound different each time, giving the piece some

indeterminacy.

Ex. 7.2. Senza Misura

A second example is shown in measures 203–207 featuring the trombone. While

these sections are not senza misura, certain measures containing fermatas allow the

trombonist to accelerando at his will.

Ex. 7.3. Trombone and Cello

CHAPTER VIII: DEFINING STYLE AND CONCLUSION

Style is often a specific term, but in the modern age, it can denote a broader definition due to developments and elaborations. Specifically, a "style" in classical music is mostly defined by its time period. Within individual eras, there were expectations for the form and performance of a composition. Since styles change, it can be concluded as Bruce Haynes says in his book *The End of Early* Music, "Style is that which becomes unstylish."[15] Nevertheless, with the turn of the twentieth century composers began to move forward with new tonal and post-tonal methods, but still looked to the past for stylistic inspiration. Composers such as Paul Hindemith, Sergei Prokofiev, Maurice Ravel, and Igor Stravinsky developed their own voices in neoclassicism, looking to the traditions of the classical era as a response to the overly emotional romantic style of the late nineteenth century.

With the inspiration of Greek mythology, large orchestration, and the use of expanded tonal and post tonal systems, we can conclude that this concerto is composed in a post-romantic style, drawing on intensely emotional elements prominent in the romantic era, yet incorporating enough various compositional approaches to exclude it from a purely "romantic" categorization.

In the modern age, composers find themselves constantly developing styles and techniques, in many cases mixing them. In music, the term eclecticism is often used to define to style mixture; for example, baroque, classical, and romantic approaches

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[15] Bruce Haynes, *The End of Early Music,* (New York: Oxford University Press, 2007), 19.

may all be used in one composition. The continual development of techniques has also lent composers a diverse pallet for eclectic possibilities. Miriam Webster defines eclecticism (not musically exclusive) as composed of elements drawn from various sources. Since this concerto is drawn from several inspirations (the symphonic poem, the concerto, a Greek myth, the *Epitaph,* pitch collections, polytonality, serialism, and extended techniques such as micropolyphony, progressive rhythms, and indeterminacy, and includes quoting orchestration techniques of past composers) it is eclectic, though not in a stylistic sense. In the end, *Hermes* is identified as an eclectic symphonic poem-concerto, composed in a post-romantic style.

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