

Concerto

For Bassoon and Chamber Orchestra

A Thesis

Presented for the Master of Music Degree
The University of Tennessee, Knoxville

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Abstract

The Concerto for Bassoon and Chamber Orchestra is a three-movement composition for solo bassoon accompanied by an ensemble of modest proportions. This piece is composed in partial fulfillment of the requirements of the degree Master of Music with a concentration in Composition from the University of Tennessee, Knoxville. The Concerto was composed during the 2010-2011 academic year. This paper provides a narrative analysis of the Concerto in terms of the parameters of its musical content, and relationships thereof. In so doing, references are made to related or influential compositions of the last century in respect to genre, style, form, pitch content, rhythm, and orchestration.

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Score to Concerto for Bassoon and Chamber Orchestra	cooperconcerto.pdf
Audio Realization, Movement I	cooperconcertoI.mp3
Audio Realization, Movement II	cooperconcertoII.mp3
Audio Realization, Movement III	cooperconcertoIII.mp3

I. Introduction

The Concerto for Bassoon and Chamber Orchestra is a three-movement cycle featuring a virtuosic soloist accompanied by a mixed ensemble of modest proportions. Over the course of the movements, a variety of stylistic influences are perceived, representing the influences of not only composers of Western art music, but also the appropriation of African-American vernacular materials. This latter aspect, however, is also based in part on the work of several Western composers of the past century, whose work involved the exploration and merger of these vernacular materials with the cultivated language of Western music that had evolved over the previous centuries.

The following chapters of this document form two separate but closely related parts. The first part, comprising Chapter II through Chapter V, is a narrative in which the processes of the Concerto's composition are discussed. In the second part, Chapter VI, particular works of the past century influential in the composition of the Concerto are discussed.

For the first part, each chapter approaches a different parameter of content, and is broken into four sections: a brief introduction is followed by a more detailed discussion of the parameter as it is found in each movement. Chapter II discusses the structural organization of the work, providing a necessarily frame of reference for the next three chapters. The first of these, Chapter III, describes procedures and relationships of pitch content in the composition, treating vertical, chordal structures (harmony) and horizontal, linear structures (melody) as equal components. In Chapter IV, rhythmic content is examined as the local temporal organizing force of the pitch content already analyzed. In both Chapter III and Chapter IV, special attention is given to motives of pitch or rhythm found throughout the work that provide the Concerto cyclic unity.

Chapter V, the last chapter in the first part, discusses orchestration as the method of conveying and organizing both texture and timbre.

In Chapter VI, the works mentioned fall into two categories. The first category is those pieces studied from the genre of compositions for solo bassoon with accompaniment, including sonatas and concertos for the instrument. The second category includes works from other genres. Evidence of the influence of works from both categories will become visible over the course of this discussion.

II. Form

While any parameter could serve as a point of departure for an analysis of the Concerto for Bassoon and Chamber Orchestra, an overview of its form will provide a framework within which each of the other primary parameters may be discussed. This composition, like most concertos, is conceived in three movements and reflects the traditional general tempo scheme found in three-movement compositions, fast – slow – fast. For the most part, however, this scheme exhibits the extent of structural relationship between this concerto and its predecessors; the forms of the first and second movements do not closely adhere to traditional models, and the form of the final movement functions as a structural microcosm of the Concerto as a whole.

For reasons that will be discussed in more detail in Chapter V: Orchestration, the traditional practice of composing distinct sections for the orchestra without the soloist has been discarded in favor of a formal design that nearly always focuses on the soloist; minimal, if any, suggestions of orchestral ritornellos are present in the composition. The form, then, more closely resembles that of an instrumental sonata, only in this case the soloist is accompanied by an orchestra rather than by a keyboard instrument.

First Movement

By far the longest of the three movements, the Concerto's first movement also has the most complicated formal plan. It bears a distant resemblance to the procedures found in sonata form, insofar as thematic organization is concerned. As mentioned above, however, the sonata principle as a formal model is not closely followed; rather, it is reflected in the pairing of expository and developmental sections of distinct theme groups followed by a recapitulation and coda. Figure 1 shows the structural breakdown of Movement I.

First Theme Group (FTG)			Second Theme Group (STG)			FTG	STG		FTG
Exposition Mm. 1-36	Development 37-80	Transition 81-88	Evolution 89-109	Exposition 110-116	Development 117-164	Variation 165-207	Development 208-216	Variation 217-242	Coda 243-250

Figure 1: Form of Movement I.

To clarify, the movement begins immediately with the exposition of the first theme group, arriving at a cadence on the downbeat of m. 37. This marks the beginning of a developmental digression that continues through m. 80, during which not only the materials of the first theme undergo development, but materials of the second theme group are subtly introduced. Mm. 81-88 function as a transition to the second theme group.

Unlike the first theme group, the second theme group does not begin with a clear exposition of new material. Though the character of the music changes in m. 89, a complete statement of the second theme does not occur until mm. 110-117. Mm. 89-109, then, must function evolutionally. Only after m. 117—the new theme in its entirety is only stated once, as opposed to multiple statements of the theme in the first group—does thematic development begin. As in the first theme group, the development of the second theme group is far longer than the exposition itself, lasting from m. 117 through m. 164.

Starting in m. 165, as the bassoon concludes the development of the second theme group, a recapitulation of the first theme group begins its approach toward a climactic moment at m. 208, immediately followed by a brief development of the second theme group which arrives at greater climax in mm. 214-216. Only beginning in m. 217 is there another complete statement of the second theme; this time, it is voiced in the trumpet as the bassoon soloist plays a rhythm from the first theme group, suggesting a thematic synthesis. Further statements of the second theme continue through m. 243, after which a coda based on the first theme completes the movement.

Second Movement

The form of the second movement is based in its monothematic character, and bears little resemblance to any common formal design, although some of the same principles found in the first movement exhibit themselves here as well. Taking into consideration the organization of the

second theme group of Movement I, the form of Movement II appears more balanced, as a similar order of procedures occurs. Just as the second theme group in Movement I began with an evolutionary introduction before a complete statement of the theme, the second movement begins with eleven measures leading to the first complete thematic statement. Interestingly, these measures—and most of the movement, since they are evolutionary—develop a motive from the first movement, which will be discussed in Chapter II: Pitch Content.

Following the completion of thematic statements in m. 21 are contrasting and developmental phrases which come to a close at m. 35. An analysis of the melodic content of these phrases reveals a pattern suggestive of song form: phrases beginning in mm. 12, 17, and 30 are all similar, while a contrasting idea occurs and develops in mm. 22-29. M. 36 marks the beginning of a varied return of the evolutionary materials with which the movement started, bringing the movement to a climax in m. 42. As the climax resolves, the theme, also varied, returns in m. 47. Unlike the first instance, however, this time the consequent ideas bring the movement to a close, rather than leaving the themes and harmonies in question as occurred in mm. 22-35. Figure 2, below, provides diagram of the form of Movement II.

Evolution Mm. 1-11	Exposition 12-24	Development 22-35	Evolution Variation 36-46	Exposition Variation 47-55
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Figure 2: Form of Movement II

Third Movement

Of the three movements in the Concerto, the third most closely resembles a traditional formal design. However, its ternary plan also reflects the design of the composition as a whole, with its outer fast sections surrounding a slow section broadly suggestive of the tempos of each movement. The first section, mm. 1-50, is divided into two theme groups of roughly equal duration. The first theme group, starting in m. 1 with a sparsely accompanied statement by the soloist, continues through m. 25. Mm. 26-27 serve as a brief transition during which characteristic motives of each theme group occur before the orchestral introduction of the second theme group occurs in mm. 28-31. The second theme group continues until its conclusion at the grand pause in m. 50.

The second section of the final movement lasts from m. 51 through m. 68. While these 18 measures may seem out of proportion with the preceding 50, the drastically slower tempo results in more balanced duration proportions between the sections. As with most ternary forms, the third section consists of a return of the thematic material from the first section. However, as this section is not a literal restatement of the first section, though some phrases are very similar, the thematic proportions and organization are different. Though faster now, the first and second theme groups return in the same order as before, with a similar two-measure transition between them. The movement concludes with a coda that further recapitulates the first theme group, with a couple of gestures from the second theme group providing a sense of thematic synthesis for the conclusion of the composition. The thematic organization of the third movement is demonstrated in Figure 3.

A			B		A'			Coda
FTG Mm. 1-25	Transition 26-27	STG 28-50	Exposition 51-60	Variation 61-68	FTG 69-85	Transition 86-87	STG 88-100	FTG 101-112

Figure 3: Form of Movement III.

III. Pitch Content

While each movement of the Concerto for Bassoon and Chamber Orchestra maintains a distinct character defined in part by unique pitch content, harmonic unity among the movements is achieved in part by the use of two common, thematic prime forms. Multiple iterations of (025) and (016) occur vertically and horizontally throughout the composition, and can be traced to the first and second theme groups, respectively, of Movement I. The distinctive character of each theme group in the first movement can, to some extent, be attributed to the contrasting interval class vectors of these trichords, $\langle 011010 \rangle$ and $\langle 100011 \rangle$, respectively; the only common interval class is ic 5, perfect fourths and fifths.

Despite their unifying function, these trichords constitute a relatively small portion of the overall pitch content of the composition. For the most part, the Concerto was composed from diatonic pitch collections—of which these trichords are important components—suggestive of several different musical languages. In the first and last movements, harmonies imply the disparate influences of Paul Hindemith and jazz or blues. The second movement employs a few techniques taught by Joseph Schillinger, resulting in some sonorities reminiscent of French impressionism.

First Movement

Just as the form of the first movement is the most complicated of the three, its harmonic language also ranks as most complex, although it, like the other movements, is primarily based in traditional diatonic modes. Chromatic departures from the modes enrich the harmony throughout the movement, with the first theme group governed by jazz-like harmonies balanced by the second theme group's Hindemithian harmonic language. These contrasting harmonic styles,

when considered alongside rhythmic differences between the theme groups, provide an explanation for the distinctive character of each theme group similar to the harmonic and thematic contrasts found when comparing the primary and secondary theme groups in many compositions in sonata form.

The movement begins in B-flat aeolian, with upper neighbor tone C-flats occasionally suggesting phrygian inflections. Most instances of the first theme group involve these modes, though with a wide variety of pitch centers. Their employment may be attributable to the first theme group's origin in vernacular style: the traditional 12-bar blues progression was an important source in this composition. However, the progression is never found in its entirety; rather, it is disguised with chromatic alterations, substituted harmonies, and truncation. Figure 4 compares traditional blues with mm. 8-17 of the first movement of the Concerto.

With the exception of chord quality—dominant seventh in the blues as opposed to minor seventh in the Concerto—the first seven measures of each progression are identical. In the eighth, a substitution of VI⁷ occurs in the Concerto, in place of the expected i^{m7}, followed by a tritone substitution of the dominant in the ninth measure of the progression. Whereas a traditional blues would proceed to the subdominant in the tenth measure and return to tonic in the eleventh and twelfth measures, in the Concerto the tritone-substituted dominant in the eighth measure resolves deceptively, modulating to C# minor, effectively truncating the expected blues progression as the next phrase begins at m. 17. Each recurrence of this theme involves some variation of this treatment of the blues prototype.

Blues (in B _b)											
B _b ⁷	B _b ⁷	B _b ⁷	B _b ⁷	E _b ⁷	E _b ⁷	B _b ⁷	B _b ⁷	F ⁷	E _b ⁷	B _b ⁷	B _b ⁷

Mm. 8-17									
B _b ^{m7}	B _b ^{m7}	B _b ^{m7}	B _b ^{m7}	E _b ^{m7}	E _b ^{m7}	B _b ^{m7}	F _# (G _b) ⁷	B ⁷	C _# ^{m7}

Figure 4: Blues Influence in Movement I. Comparison of traditional 12-bar blues, I: 8-17.

As mentioned in the introduction to this chapter, prime form (025) is a characteristic trichord of the first theme group. Rather than discussing every instance, however, this analysis will focus on important statements of this motive. In the pickup to the first measure, the second through fourth sixteenth notes in the bassoon introduce the motive in its most characteristic voicing: a descending perfect fourth followed by a descending major sixth (see Figure 5a). Rhythmically, it is most characteristically found in the last two eighth notes of one measure and the downbeat of the next, as in the cello in mm. 8-9 and 10-11 (see Figure 5b). However, it is not found with its most characteristic voicing and rhythm simultaneously at all in the exposition.

As discussed in the previous chapter, the cadence at m. 37 marks the beginning of the development of the first theme group, which can be divided into two parts: mm. 37-54 and mm. 55-80. The first part continues the vernacular influence expressed in the exposition, but now this influence takes place with sparse accompaniment figures that suggest the background instrumental cues in a medium or large jazz ensemble; the directional chromatic harmony is not necessarily functional in the traditional sense, but serves as punctuation throughout this section. During this part of the development, the bassoon performs (025) with both characteristic voicing and rhythm for the first time in mm. 47-48 (see Figure 6a), but this does not occur until after the

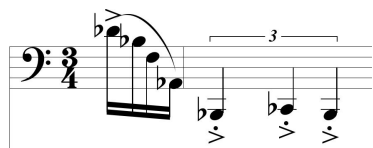


Figure 5a: Characteristic voicing of (025), in the last three sixteenths of the pickup measure, from bassoon, I: pickup-1.

Source: Timothy Cooper, *Concerto for Bassoon and Chamber Orchestra*, Attachment to Master's Thesis in Music Composition, The University of Tennessee, August 2011, 1.



Figure 5b: Characteristic rhythm of (025), with two eighth notes before a downbeat and a note on the downbeat, from cello, I: 9-12.

Source: Cooper, *Concerto*, 1-2.



Figure 6a: First characteristic statement of (025), from bassoon, I: 47-48.

Source: Cooper, *Concerto*, 12.



Figure 6b: First statements of (016), from bassoon, I: 44-45.

Source: Cooper, *Concerto*, 12.

first clear statements of (016) by the bassoon in mm. 44-45. Figure 6b, which shows writing more typical of the development of the second theme group, contains two examples of (016): first, the G-sharp on the second beat of m. 44 passes up to the D on the downbeat of m. 45 with an E-flat neighbor, and second, the last three pitches of the figure outline the set again.

As the movement continues, these sets not only undergo reiteration in many contexts, but also undergo chromatic alterations through the course of the thematic development. In the second part of the development section of the first theme group, the overall language evolves to predict harmonic structures more typical of the second theme group, with progressively more lydian inflections than aeolian or phrygian. However, this development section comes to a close with a variation of the blues-influenced progressions of the exposition. The transition, in mm. 81-88, explores other modes not emphasized to this point, including dorian in m. 81 and mixolydian in m. 83, as determined by the pitch content in relation to the root of each harmony.

In the second theme group, the thematic trichord (016) is often found as a subset of the tetrachord (0157), frequently voiced as the first, second, fourth and fifth degrees of the lydian mode. This is clearly visible in the trumpet in mm. 89-90 (see Figure 7a). During the evolution section of the second theme group, the pitches associated with the rhythmic figure introduced by the trumpet in these measures undergo chromatic transformations prior to the exposition of the second theme group beginning in m. 110 (Figure 7b). Here, although the bassoon only plays pitches E-flat, A-flat, and G, the tetrachord is complete with lydian tendency when taken in context above a pedalpoint on D-flat.



Figure 7a: Lydian implications of tetrachord (0157), superset containing trichord (016), from trumpet, I: 89-90. The pitches associated with this rhythmic figure undergo chromatic transformation in other voices through m. 109.

Source: Cooper, *Concerto*, 28.



Figure 7b: Lydian Implications in the second theme: The bassoon, above D-flat pedalpoint in cellos and basses, reflects augmentation of the rhythmic figure in the trumpet in Figure 7a. This trichord, (015), becomes tetrachord (0157) with the bass pitch. From bassoon, I: 110.

Source: Cooper, *Concerto*, 28.

While most of the chromatic variations or extensions of the lydian mode in the evolution of the second theme group are based upon the instances described above, one particular harmonic progression requires further analysis. The chords on beats two through four in the string parts of m. 99 (see the reduction in Figure 8 on the next page) are the first complete statement of this progression, though it is predicted in the strings and woodwinds in m. 91. While the chords on beats two and three clearly indicate the lydian mode, a dramatic darkening occurs on the last beat. This change in color is the result of two phenomena: first, the register is somewhat lower than the preceding chords, and second—and more importantly—the natural subdominant and subtonic are borrowed, implying the mixolydian, as opposed to lydian, mode. This device occurs several times within the second theme group, notably in mm. 111 and 112.

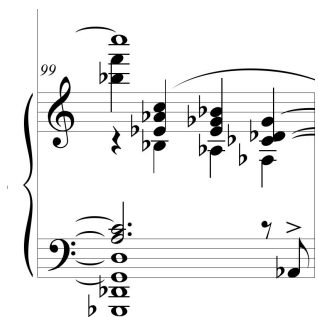


Figure 8: Modal mutation: While m. 99 clearly begins in the lydian mode of G-flat, the subtonic and natural subdominant are borrowed on the final beat implying a temporary mutation to the mixolydian mode of G-flat.

Source: Cooper, *Concerto*, 25.

As the second theme group continues into its development section, both of the thematic trichords come into consistent play, suggesting that this section is not only developmental of the second theme, but also serves as a synthesis of the two governing harmonic structures. From m. 125 through m. 164, both trichords play an important role in the development. To begin, (025) in its characteristic voicing and rhythm makes up much of the accompaniment, while (016) is expressed by the soloist, developing the figuration described earlier in Figure 6b. As this synthesis-development section progresses, these motives are found with increasing frequency in both the solo part and accompaniment.

M. 165 is the beginning of the recapitulation of the first theme group. The pitch content and processes through m. 199 generally reflect the material of the exposition of the first theme group. The processes change in m. 200, as the movement approaches its first climactic moment in m. 208. Throughout these measures, chromatic alterations akin to those of the evolution section of the second theme group occur, only now with materials from the first theme group. For the next eight measures, similar techniques are applied to material from the development

section of the second theme group, arriving at a climactic recapitulation of the second theme in m. 217. Variations on the same pitch material occur through m. 243, after which the movement concludes with a seven-measure coda repeating and elaborating on the materials of the first seven measures. While the movement began in B-flat, it concludes in B; however the last measure first arrives on B-flat, echoing the original pitch center before final punctuation in the aeolian mode a minor second higher.

Second Movement

Much of the pitch content in the Concerto's second movement revolves around development of (025). For the sections of evolution, mm. 1-11 and 36-46, much of the pitch material is derived from unordered, overlapping pentatonic sets, of which (025) is a key component. This rotation, in a system prescribed by composer/theorist/teacher Joseph Schillinger, involves modulating or mutating through modes by the retention of common tones.¹ While that method is not strictly followed in this movement, this technique explains the harmonic progressions of the evolutionary sections. Figure 9, below, shows the progression in the first 11 measures, with uncommon pitches connected between each collection (half notes indicate pitches that change within the harmonic span of a single collection). While the changing pitches may seem to suggest an overall diatonic modality to these measures, the strength of the competing pentatonic sets overrides this possibility.

Although the character of the bassoon melody is generally the same upon the beginning of the exposition in m. 12, the harmonic structures employed become far more varied. Whereas through m. 11 only seven pitch classes had been used, between mm. 12 and 20 all twelve pitch

¹ Joseph Schillinger, *The Schillinger System of Musical Composition*, 125-132.

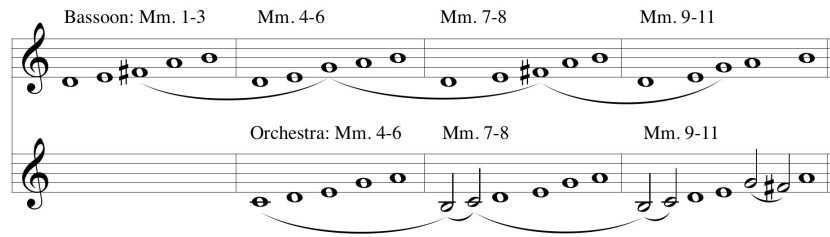


Figure 9: Pentatonic modal mutation in the evolution section of Movement II.

classes occur. As the harmonic possibilities increase in this section, the momentum and tension also increase, though the pitch content is still occupied with relationships governed by (025). A notable exception occurs at the brief climactic moment on the third beat of m. 19, in which the accompaniment states (016). With the E-flat in the bassoon, a return of the lydian sonority (0157) on D-flat, from the second theme group of the first movement, occurs, followed by a mutation to D-flat dorian in m. 20, suggestive of the mutation in m. 99 of the first movement from lydian to mixolydian. However, m. 21 becomes dramatically brighter with A lydian harmony transitioning to the contrasting phrase at m. 22.

The new material in mm. 22-24 is based stepwise-ascending roots and modal contrast as one measure passes to another measure: m. 22 is in E aeolian, m. 23 in F lydian, and m. 24 in F-sharp aeolian. During these measures, the bassoon performs the contrasting ideas of wide, descending leaps and ascending stepwise passages. M. 25 undergoes an increase in harmonic rhythm, proceeding from C ionian in the first half to F ionian in the second half.

In mm. 26-29, a motive introduced in the bassoon in m. 26 undergoes development, alternating in statements between the bassoon and accompaniment. During these measures, as frequently occurs in developmental sections, the accompaniment continues to ascend by step, with parallel major ninths between the bass voice (in tenor register) and a higher voice. This first

section of the second movement comes to a close with development of the first motive of the bassoon line, iterating (025), in m. 12.

As already mentioned, the evolution variation in mm. 36-45 employs a similar technique of rotating pentatonic collections to that which occurred in the first eleven measures. In addition, like the climactic moment of the exposition involved a vertical statement of (016), the bassoon line in m. 41 does the same horizontally (see Figure 10 below). Also, this is one of very few phrases in the movement in which a tritone occurs melodically, though indirectly, and is emphasized directly in the concurrent trumpet part.

The variation of the exposition that begins at m. 46 demonstrates asymmetrical vertical expansion of the theme as it was first presented in m. 12: with the same mode (but on a different root), the intervals are wider, yet the tones on each beat of the measure still form the trichord (025), as shown in Figure 11.



Figure 10: Statement of (016) at the climax of Movement II. From bassoon, II: 41.

Source: Cooper, *Concerto*, 72.



Figure 11: Asymmetrical Vertical Expansion: The theme as first presented in m. 12 and as varied in m. 46 outlines the trichord (025) in both instances. The latter demonstrates asymmetrical vertical expansion of the former.

Source: Cooper, *Concerto*, 67 and 73.

While the exposition explores all twelve chromatic pitches with subtle mutations between modes, the modal shifts in the variation are far more dramatic, reaching their apex in m. 49 as B-flat lydian in the first half of the measure, under a sustained high D in the bassoon, gives way to D lydian. The next two measures demonstrate less dramatic shifts as the movement prepares to come to a close. The movement concludes with a C-flat major seventh sonority performed by the orchestra, with an added sharp eleventh. The root, fifth, and eleventh of this final chord form trichord (016), balancing the movement's opening solo passages articulating (025).

Third Movement

More so than either of the other two, the final movement is concerned with neighbor and passing motion associated with a primary pitch. Accordingly, this centricity gives the final movement a more tonal focus than either of the other two.

The first theme group of the last movement, in particular, is concerned with passing and neighbor motion. The movement begins with the bassoonist playing an accented upper neighbor tone (or appoggiatura) G-sharp, above the pitch center of F-sharp. This is balanced in the next beat with unaccented lower neighbor motion to the leading tone and back, after an octave displacement of the F-sharp on the beat. The third beat of the first measure demonstrates asymmetrical vertical expansion of this process, with the beat subdivisions proceeding from "tonic" to subtonic to dominant and back to subtonic. The first beat of the next measure further continues this vertical expansion to perfect fourths; however, the entire pitch content of the beat itself could be considered a lower neighbor group to the preceding and succeeding harmonies. The second beat of m. 2 passes up a scale to a turn on beat three, which resolves to the pitch center on the first beat of the third measure, but not before another accented upper neighbor tone

(or appoggiatura) on the downbeat; Figure 12 shows these measures. These techniques, along with transposition and inversion of the same material, explain the vast majority of pitch content in the bassoon part throughout the first theme group. The only other significant melodic idea in this section is the figure of a descending compound melody in sixths first stated in mm. 5-6.

The orchestral accompaniment for the first theme group generally serves as punctuation for the soloist, providing pitches that confirm the minor mode, and pitch center thereof, implied by the soloist at a given instance. The prevailing root motion throughout the first theme group is by ascending minor third, becoming most apparent in mm. 22-25 as pitch centers ascend a minor third each measure.

The transition to the second theme group, mm. 26-27, contains several motives from the first theme group. In addition, it introduces the thematic scalar figuration that characterizes the second theme group, as well as a short syncopated theme based on (025) found only in the transition here and in mm. 86-87.

The pitch content of the second theme group may be considered a synthesis of many of the materials of the entire composition so far—both of the preceding movements as well as the first theme group of the current movement—while still expressing new thematic ideas. The



Figure 12: Opening of Movement III: The first two measures and one beat of the bassoon part in Movement III demonstrate most of the pitch procedures in with the first theme group.

Source: Cooper, *Concerto*, 77.

modal interplay suggests many of the verticalities of both theme groups of the first movement, while the lines of the orchestral wind instruments recall the horizontal realization of the same modes in the second movement. The progression of pitch centers in mm. 44-47 makes reference to the ascending minor thirds at the end of the first theme group of the current movement. Also, while not necessarily absent from other parts of the second theme group, the motivic trichords (025) and (016) return at the end of this section, as seen in the bassoon in flute parts of mm. 47-49 in Figure 13, on the next page. The bassoon states (025) with the lower pitch of each trill and the G-flat in the first beat of m. 48. The flute finishes its statement in m. 49 with (016). This concurrence of the two trichords, rare elsewhere in the composition, symbolizes the completion of the synthesis expressed in the second theme group.

The contrasting, slow section of the final movement explores no new pitch material. Rather, it develops two contrasting pitch ideas already central to the Concerto, but does so in a style unlike any other part of the work. Most of the bassoon melody is comprised of various voicings of (016), with (025) occurring in mm. 54-56. Beneath this melody is a descending progression of fourth-chords in the vibraphone and strings, decorated with subtle ornamentation in the glockenspiel.

The image shows a musical score for two instruments: Bassoon and Flute. The Bassoon part is written in bass clef and the Flute part in treble clef. Both parts start at measure 47. In measure 47, the Bassoon plays a trill (indicated by a wavy line) starting on a G-flat. The Flute is silent. In measure 48, the Bassoon continues with a descending line, and the Flute remains silent. In measure 49, the Bassoon plays a trill, and the Flute plays a descending line. The dynamic marking 'mp' (mezzo-piano) is indicated at the start of measure 49 for the Flute part.

Figure 13: Concurrence of (025) and (016). Both motivic trichords occur at the conclusion of the second theme group in Movement III. From bassoon and flute, III: 47-49.

Source: Cooper, *Concerto*, 91-92.

The remainder of the movement involves a slightly modified return of the first and second theme groups, followed by a coda based primarily on the first theme group, with interpolated scales derived from the second. Few new pitch ideas or processes are expressed in this section; however, the orchestral accompaniment in the coda contains final statements of the two motivic trichords as heard most often in the first movement, having the effect of bringing the composition to a close with a clear sense of unity across the movements. Trichord (025) occurs in the cellos and basses in m. 105 as a descending perfect fourth followed by a descending diminished seventh, emphasizing the Neapolitan and dominant functions of the bass line in the measure (see Figure 14a), and also occurs in the last measure as the pizzicato chord in the strings. Trichord (016) is found in the flute, trumpet, and first violin in mm. 107-108 as the top voice of the final chords before the prolongation of the concluding pitch center D (Figure 14b).

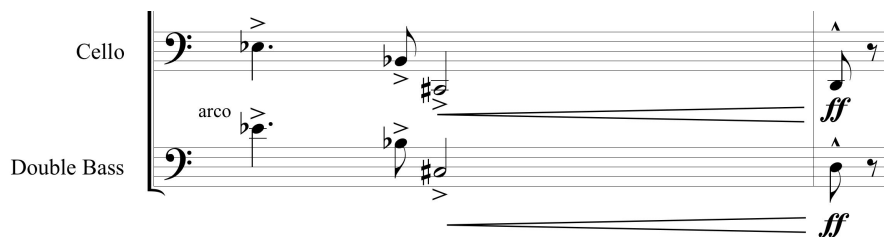


Figure 14a: The final horizontal statement of (025), in the characteristic sequence of descending intervals (enharmonically). From cello and bass, III: 105-106.

Source: Cooper, *Concerto*, 107-108.



Figure 14b: The final horizontal statement of (016), from trumpet, III: 107-108.

Source: Cooper, *Concerto*, 108.

IV. Rhythm

As crucial as the pitch content is to the unity and development of the composition, without rhythmic organization, the pitch content would be a meaningless wash of sound. Some of the discussion of pitch content in the previous chapter already introduced rhythmic implications; that will continue in this chapter as, at their core, pitch and rhythm are interdependent parameters of any musical composition.

The relationship between pitch and rhythm does not end with their inseparability. Rather, this inseparability results in a realization of the primary factors in establishing musical style. While other parameters, such as timbre and texture, are also components of style, they typically play a secondary role to the primary pitch-time content. The style of the Concerto for Bassoon and Chamber Orchestra is no exception to this generalization. The stylistic implications of the work are determined in large by the juxtaposition of distinctive rhythmic and harmonic figurations. As suggested previously, some of the styles conveyed in the composition include jazz, blues, and other African-influenced vernacular styles, as well as Hindemithian and impressionist musical languages.

First Movement

Much of the energetic momentum of the first movement is attributable to the few rhythmic motives upon which its first theme group is based. Their character amplifies the vernacular implications of the pitch content already discussed, further suggesting the influence of African-American musical styles within the Concerto. However, while the pitch content makes reference to blues progressions, the rhythmic motives suggest more recent movements in American vernacular music.

The most prevalent of these motives is the quarter note triplet, present in some form in nearly every measure of the first theme group's exposition, and occurring less frequently during its development. The triplet, as expressed in this movement, is a play on the traditional understanding of swing-rhythm interpretation: whereas each beat in swing music undergoes syncopated subdivision implying compound meter, with the quarter-note triplet figure, that notion is reversed. Instead, although on the surface this figure indicates rhythmic asymmetry, when considered in a broader context, it approximates metric balance within a measure of 3-4 time (see Figure 15). The result is a polyrhythmic figuration that one may perceive as imprecisely expressing syncopation frequently found in hip-hop, with each measure truncated to three beats; or, each measure could be reinterpreted as an imprecise realization of quadruple meter, with each part of the triplet approximating a single beat (though, precisely, the value would be that of a dotted eighth note).

Besides the motives identified in the previous chapter, the only other prevailing rhythmic figure of not only the first theme group, but the movement as a whole, is one that frequently precedes the triplet: four consecutive sixteenth notes, which may be preceded by another

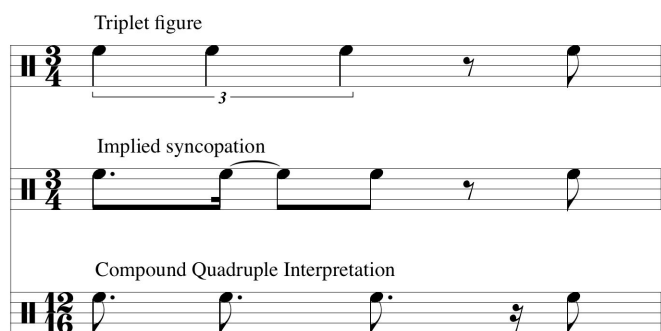


Figure 15: Movement I Polyrhythms: Different interpretations/implications of the quarter-note triplet rhythmic motive.

sixteenth note. The function of this motive changes according to its metric placement and pitch contour. Figure 16 demonstrates several different applications of this motive.

The second theme group, in contrast to the preceding section, is far less energetic. Throughout the evolution and exposition sections, as well as mm. 117-124 of its development, rhythmic activity is limited to that which will highlight the harmonic content, not the least of which is the dotted eighth note-sixteenth note rhythm described in the previous chapter. Contrast between the sections is accomplished through the shift in relative importance of each parameter: in the first theme group rhythm prevails, while the second is governed by pitch content. Beginning in m. 125, however, this disparity is reconciled. As mentioned in the previous chapter, a synthesis of pitch content occurs during the development section of the second theme group. The same is true of rhythmic content, as the more fluid rhythms of the second theme group, expressed by the soloist, are juxtaposed against the quarter-note triplet figure in the vibraphone. Just as the competing pitch content meshes between the soloist and orchestra as the development progresses, so does the rhythmic content, with both species of motives occurring in both the bassoon and its accompaniment.

The recapitulation of the first theme group, beginning in m. 165, maintains the quarter-note triplet and descending sixteenth note arpeggiation from the exposition, but does so with softer dynamics and articulations. The distinctive smoothness of mm. 165-181 is also a result of the imposition of the decorative style of continuous sixteenth notes found in the transition between the first and second theme groups in mm. 81-86. Interruptions to this texture in mm. 177-183 prepare the listener for the variation on this continuous sixteenth-note texture found in the next phrase, mm. 184-193. Previously, sixteenth notes had been grouped in fours by beat;



Figure 16a: Sixteenth-note figurations. The two groups of sixteenth notes in this example demonstrate decoration of the downbeat and a descending arpeggiation preceding a quarter-note triplet.

Source: Cooper, *Concerto*, 4.



Figure 16b: The groups of sixteenth notes in this figure, from the transition between the first and second theme groups, show decoration of weak beats.

Source: Cooper, *Concerto*, 21-22.



Figure 16c: From the development section of the second theme group: the first group of sixteenth notes is an ascending scale emphasizing the melodic tritone on weak beats; the second group is another example of decoration of the strong beat, and the last group is one of few examples of a scalar descent to a strong beat, again outlining the melodic tritone.

Source: Cooper, *Concerto*, 34.



Figure 16d: Also from the development section of the second theme group, the first group of sixteenth notes not only decorate the downbeat, but also form an important melodic motive. The second group is one of few examples of a scalar ascent to a downbeat.

Source: Cooper, *Concerto*, 39.

however, that practice evolves in this phrase as groups of three sixteenth notes, as indicated by accent and slur patterns, are interpolated among the standard groups of four sixteenth notes.

As the recapitulation of the first theme group approaches a climax at m. 208, all techniques heretofore associated with the first theme group come to the surface: accented quarter-note triplet patterns (or parts thereof), consecutive groups of sixteenth notes with contours implying various functions, groups of three (instead of four) sixteenth notes, etc. Also, for the first time, dramatic metric changes build rhythmic tension as this climactic moment approaches.

An arrival at a larger climax, constructed of material from the second theme group, occurs in m. 217. Leading up to it, sharp tutti attacks in the orchestra occur, with successively smaller rhythmic gaps between each hit. Upon arrival at m. 217, the soloist plays quarter-note triplets beneath the orchestra, as the accompaniment restates the second theme. As variations of the second theme continue, the soloist plays increasingly more florid rhythms, decorated with many trills, until arriving at the fermata in m. 243. After restating the opening rhythmic motives, the bassoon then plays seven beats of very fast, continuous sixteenth notes, with each beat outlining a different contour found within the movement. The movement concludes with a quarter-note triplet in the bassoon and orchestra.

Second Movement

If rhythm is defined as the temporal relation of pitch events on a local scale, then parts of the second movement, which might otherwise seem rhythmically uninteresting, may be perceived as precisely planned series of events. The evolutionary sections are each organized,

again using techniques suggested by Joseph Schillinger,² by the summation series commonly referred to as the Fibonacci sequence (see Figure 17). In the first eleven measures, this occurs in the bassoon part not in relation to rhythmic durations, as one might expect, but rather in terms of the quantity of notes in each phrase (excluding ornamentation).

Concurrently, in the accompaniment, a decreasing arithmetic series occurs in the upper strings and vibraphone in mm. 7-11, with chord durations successively decreasing from five beats to two beats until the chord on the downbeat of m. 11. A similar phenomenon occurs in the strings at the variations of the evolution, in mm. 36-39. However, this time the decreasing time between attacks occurs in quarter-note values determined by the Fibonacci sequence: eight, five, three, two, and one. This occurs arithmetically again in mm. 40-41, with decreasing eighth-note values between attacks: three, two, and one.

The rhythmic content of the exposition (mm. 12-20) and its variation (mm. 46-55), like the second theme group of the first movement, takes a secondary role to the primary pitch



Figure 17: Phrase/rhythmic growth by summation series. Excluding thirty-second notes and the eight-note triplet in m. 9, the opening eleven measures of the bassoon solo in Movement II demonstrate the application of the summation series to increasing numbers of notes in each phrase: 3, 5, and 8, respectively, in the first system, and 13 in the second system.

Source: Cooper, *Concerto*, 65-67.

² Schillinger, 90-91.

content. The climactic moments of these sections, in mm. 19 and 49, are treated using Schillinger's recommendation of increased rhythmic activity approaching the climax and decreased activity afterward.³ The decreased activity is especially visible in the closing measures of the movement, as an expressive *ritardando* occurs, as well as a metered *ritardando* in the orchestral accompaniment.

The most rhythmic activity in the movement happens in contrasting and developmental phrases after the exposition, in mm. 22-35. The triplet figure characteristic of the first part of the development, mm. 26-29, first occurs in m. 25. The rest of the development is based on the head-motive of the theme, shown previously in Figure 11. An asymmetrical augmentation of this motive occurs in the bassoon in mm. 33-35, as the development gives way to the variation of the evolution.

Third Movement

Both theme groups, along with the contrasting middle section, of the final movement exhibit different rhythmic characteristics. However, they are all unified by a common trait: repeated pitches. This feature is derived from the repeated notes characteristic of the quarter-note triplets in the first movement.

The repeated note phenomenon is most prevalent in the first theme group. When introduced in the first measure, seven out of twelve sixteenth notes are all of the same pitch class. Overall, the first theme group is characterized by an incessant sixteenth-note drive, whether articulated by the soloist, ensemble member, or both, at any given instant. The soloist,

³ Schillinger, 90-91.

for the most part, is responsible for maintaining this perpetual motion, while the orchestra punctuates the texture or fills in gaps necessary for the soloist to breathe.

In the second theme group, the repeated note figuration is far less pronounced, and never occurs in the solo part. Rather, when it occurs, it typically involves a single eighth-note repetition on the third beat of most measures in one layer of the accompaniment texture. Two contrasting figures are more typical of the solo writing during this theme group, which occur in pairs similar to the descending sixteenth note arpeggiation and quarter-note triplets found in the first theme group of Movement I. As shown in Figure 18, these two motives are: 1) a marcato eighth-note on the downbeat that leaps down to another eighth-note tied over to the second beat, and 2) an ascending scalar figure of nine pitches in the space of three eighth-notes.

As with the rhythmic motives of the first movement, considerable variation of these motives occurs as the theme group progresses and returns after the contrasting middle section. The orchestral rhythmic content of the middle section draws on the application of summation and arithmetic series described above regarding Movement II, expressed in the vibraphone by repeated chords determined by these functions. The rhythm of the solo part does not reflect any such strict procedure, but rather gives the impression of free variation of pitch material previously described.

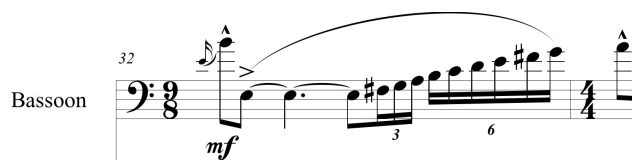


Figure 18: Rhythmic motives in Movement III. M. 32 of the bassoon part demonstrates both rhythmic motives characteristic of the second theme group in Movement III.

Source: Cooper, *Concerto*, 86.

The return of the first and second theme groups introduces a miniscule amount of new rhythmic material. However, the coda, in mm. 101-112, synthesizes the rhythmic ideas of the two theme groups, with repeated sixteenth-note motive and primary rhythmic motives of the second theme group sounding concurrently.

V. Orchestration

With a concerto, an accepted paradigm of the genre is that the soloist “wins.” However, the bassoon is not a particularly powerful instrument, and as such, does not compete very well with an ensemble as accompaniment. For that reason, much care was taken with regard to the chosen ensemble forces, as well as achieving balance between featuring the soloist and featuring the orchestra.

For the first consideration, research into existing compositions for bassoon and ensemble was essential to decide upon the appropriate performing forces and applications thereof. Table 1, below, lists several works for bassoon and orchestra, along with their instrumentation. Clearly, as seen by the variety of instrumentations represented, composers have taken many approaches to the orchestration of their bassoon concertos. Many composers eliminate wind and percussion sounds altogether, relying solely on strings for accompaniment, while at the other extreme, John Williams’s *Five Sacred Trees* is accompanied by a large orchestra.

Table 1: Comparative instrumentation of representative composition for bassoon and orchestra.

Composer	Title	Instrumentation
Mozart, W. A.	Concerto in B-flat, K. 191	Solo + 0200 2000 Strings
Weber, C. M. v.	Concerto in F	Solo + 2202 2200 Timp Strings
Hummel, J. N.	Grand Concerto in G	Solo + Strings
Elgar, E	Romance, Op. 62	Solo + 2222 3030 Timp Strings
Villa-Lobos, H.	Ciranda das sete notas	Solo + Strings
Jolivet, A.	Concerto	Solo + Hp Pn Strings
Françaix, J.	Concerto	Solo + Strings
Jacob, G.	Concerto	Solo + Strings
Welcher, D.	Concerto da Camera	Solo + 1110 1100 1Perc Pn Strings
Williams, J.	Five Sacred Trees	Solo + 3(Pic)2(EH)2(BC)2(CB) 4331 Timp Hp Cel Pn Strings
Zwillich, E. T.	Concerto	Solo + 1(Pic)1(EH)1(BC) 2110 1Perc Strings
Gubaidulina, S.	Concerto	Solo + Low Strings

The Concerto for Bassoon and Chamber Orchestra represents middle ground between these extremes, and most closely resembles Dan Welcher’s *Concerto da Camera*. The only difference in performing forces between his work and the composition under consideration is the presence of a second percussionist in lieu of the pianist. The instrumentation of the Concerto for Bassoon and Chamber Orchestra is listed in Table 2, below, compared to Welcher’s. The percussion instruments employed all generate metallic sounds: glockenspiel, vibraphone, crash cymbals, and triangle. These instruments were chosen due to their substantial timbre and register differences from the bassoon.

For the second consideration described above, achieving balance between soloist and orchestra, so as to ensure the soloist would “win” in the end, a decision was made from the outset of the composition process to keep to a minimum any passages that feature the orchestra. While this had the consequence of making the solo part an incredible test of endurance—one will

Table 2: Comparative instrumentation of the Welcher and Cooper bassoon concertos.

Welcher	Cooper
Solo Bassoon	Solo Bassoon
1 Flute	Flute
1 Oboe	Oboe
1 Clarinet	Clarinet
1 Horn	Horn
1 Trumpet	Trumpet
1 Percussion	2 Percussion
1 Piano	
Strings	Strings

quickly observe the dearth of rests in the solo part—on top of the virtuosic technical ability demanded of the performer, it was necessary to keep the dynamic proportions of the ensemble subdued enough that the bassoonist would triumph. As such, certain traditional concerto concepts, such as orchestral ritornellos and other thematic passages, rarely occur within the Concerto for Bassoon and Chamber Orchestra. The following pages describe some of the orchestration techniques employed as a result of these considerations.⁴

First Movement

As explained above, the composition rarely features the orchestra in a capacity beyond that of accompaniment. That is not to say, however, that the orchestral parts are devoid of thematic material; on the contrary, a frequent device—especially in the exposition of the first theme group—is the alternation of thematic statements in the soloist and accompaniment. Starting in m. 8, all instruments of the orchestra, in performing some facet of this function, play short note values, with the exception of a sustained, decaying chord in the vibraphone. The same texture continues throughout the exposition, with other instruments performing thinly layered sustained pitches while the rest of the ensemble continues the rhythmic drive, explained in the previous chapter, with detached pitches.

Although the orchestra accompanying the bassoon is already relatively small, the timbre and register of much of the string family can still easily overpower the soloist. For this reason, the violin, viola, and cello parts are marked “always muted” in the first measure. The bass, being the only instrument playing in the lowest register of the ensemble, is not muted; this allows its

⁴ Rather than relying on figures illustrating the points discussed, the reader will find it useful to refer to the score directly as the following analysis describes orchestration techniques.

frequent pizzicato notes to resonate more fully, as well. Nonetheless, all string parts are generally kept at low to medium dynamic levels, so as not to bury the soloist. In addition to short bowed notes, the strings frequently play single chords pizzicato to break the bowed texture, allowing the soloist opportunities for clearer projection above the ensemble.

The development section of the first theme group continues the style of detached playing, for the most part, though sustained and connected harmonies become more prevalent in the text as the second part of the development begins at m. 55. Up to this point, the entire texture of the development is characterized by sparseness in the solo and orchestral parts, with occasional coloristic effects like bowed tremolos (m. 38) and trills (m. 41) in the strings and trill-like figurations in the flute and oboe in mm. 45 and 50-51. The sparse quality of the texture comes to an extreme in mm. 46-49, dropping down to a disjunct conversation between pizzicato bass and soloist, answered by muted trumpet and woodwinds, colored by flutter-tonguing in the flute in m. 49.

Starting at m. 55, the texture becomes more sustained, with frequent alternation between wind and string sections beneath the soloist. Beginning in m. 60, with the entrance of the glockenspiel assuming the top voice of the harmony, the separation of choirs becomes less consistent. This blending of timbres, punctuated by pizzicato bass interjections, evolves through the stylistic shift at m. 72. The sustained texture immediately gives way to detached accompaniment, recalling the beginning of the exposition of the first theme group. The development comes to a close as the bassoon, trumpet, and clarinet perform jazz-influenced “licks” that immediately give way to a subdued character in the transition in mm. 81-88.

Despite the sustained presence of the whole ensemble at the beginning of the transition, the dynamic is at one of its softest levels so far. The thick warmth of the texture, with all

instruments playing in low registers, provides a dramatic contrast to the events of the first theme group. The most notable rhythmic activity in these measures is the alternation of sixteenth note passages between the clarinet, bassoon, and flute, above the bed of sustained string sonorities, enriched with the clarinet in mm. 85-86.

The beginning of the second theme group is announced with a new blend of sonority: brass and strings, answered by the woodwinds. The bassoon is less distinct from its orchestral accompaniment here, exchanging and competing with the woodwinds, in particular, more closely than before. This continues through m. 110, as the violins rest while the viola and cello provide the only sustained pitches in an otherwise disjunct contrapuntal passage. In the exposition of the second theme group, the clarity of the bassoon melody become more important, so stability and consistency in the accompaniment texture replaces the evolutionary style.

The beginning of the development, mm. 117-124, reveals a transition from this stability to a far thinner texture. As the bassoon performs a lighter, more fluid melodic line, the accompaniment also lightens. In mm. 125-136, woodwinds alternate with a descending figure while the dampened vibraphone reinforces these pitches and decorates them with the quarter-note triplet motive on each downbeat. Beneath this patchwork, two voices of the string family play parallel sevenths. The glockenspiel returns in m. 134, paired with pizzicato cello, predicting a more dramatic change in orchestration with the next phrase, in which the first violins assume the role previously held by the woodwinds. As the development continues, most of the orchestration techniques found in the exposition of each theme group appear, enhancing the effect of the synthesis of pitch and rhythmic material present in the section.

The recapitulation of the first theme group, starting at m. 165, contains the only occurrence of bowed string sonority alone in the first movement. With the return of the bassoon

beginning with the pickup to m. 170, the strings and vibraphone provide soft, warm sound reminiscent of the transition in mm. 81-88, and this similarity is strengthened by the runs of sixteenth notes in the flute and clarinet. The style changes dramatically at m. 184, with the flute (enhanced by glockenspiel) playing an inversion of the second theme while the strings begin to recall the orchestration of the exposition of the first theme group, more fully realized in mm. 194-200. The orchestration changes as the crescendo to the climax at m. 208 begins, with sixteenth notes in the bassoon frequently supported by sixteenth notes in other instruments, though each fragment begins first in the bassoon before being joined by other timbres. Meanwhile, the brass instruments punctuate this crescendo with attacks on the strong beats of mm. 203-208. In the next phrase, the orchestration undergoes a radical shift. The bassoon is left unaccompanied except for sharp, tutti punctuations (less horn, due to range). This texture changes without warning on the third beat of m. 214, as the ensemble sustains harmonies building to the arrival at m. 217.

One of the few places in the composition during which the orchestra is given the opportunity to prevail over the soloist occurs at m. 217, as the trumpet plays the second theme accompanied by strings and trills in the woodwinds. Attention soon returns to the soloist for a sweeping series of runs in mm. 222-223, answered by the clarinet with an accelerating scale exceeding two octaves. M. 224 is one of few measures in the movement entire void of string parts, drawing more attention to the clarinet's scale and the bassoon's trill. The texture thickens over mm. 225-227 in preparation for a cadence that announces the final variation of the second theme.

This variation, mm. 229-242, pairs descending gestures in the strings with florid ornaments in the woodwinds, while the bassoon plays many trills and scales. The arrival at the

fermata in m. 243, with a sustained chord in the woodwinds and bowed tremolo in the strings, builds tension before proceeding the coda, which echoes the orchestration of the introduction.

Second Movement

The orchestration of Movement II, due in part to its consistent sustained rhythms and harmonies, is not nearly as complex as the preceding movement. The orchestration is straightforward, built upon sustained bowed strings with occasional wind and percussion enhancement, with three notable exceptions: the unaccompanied opening (mm. 1-3), the development section (mm. 26-35), and the unaccompanied retransition (mm. 44-45).

The texture of accompaniment in the evolution gradually thickens from nothing in the first three measures to low-mid range sustained string harmonies enhanced by the vibraphone. Wind instruments join the texture beginning in m. 8, with the full ensemble playing at a soft dynamic in m. 11. The beginning of the exposition, in m. 12, along with its variation in m. 46, is punctuated first with bass pizzicato on the second beat, answered by a chord in the vibraphone and glockenspiel on the fourth beat. The climactic moment in m. 19 is enhanced by a return of these percussion sonorities. The transition, m. 21, to the contrasting phrase is colored with wind sounds as the bassoon briefly leaves foreground of the texture.

During the contrasting phrase, mm. 22-25, the string accompaniment becomes thinner as the basses and violas exit the texture. At the beginning of the developmental phrase, starting in m. 26, winds take over the accompaniment. The orchestration through m. 35 features a woodwind quintet, including the soloist. This distinctive collection of timbres is further colored in m. 31: the trumpet and glockenspiel brighten the sound, while bowed tremolos in the strings (less bass) provide the entire sonority an ethereal wash.

The orchestration of mm. 36-42 is similar to mm. 4-11; however, a significant difference occurs as the climax in m. 41 is announced by a near-fanfare in the trumpet, preceded and followed by the tones of the glockenspiel. This full ensemble texture quickly reduces to nothing, as the strings anticipate the forthcoming unaccompanied measures with a pizzicato chord.

The orchestration of the thematic variation that closes to movement also bears resemblance to the initial statement in mm. 12-20. This time, however, the winds gradually take over the upper strings as the movement comes to a close. The final chord of the movement, in contrast to the opening unaccompanied phrase, contains five different timbres, each with a different function: the root and fifth of the sonority are performed by basses and cellos, respectively, while the most dissonant pitch, the sharp eleventh of the chord, is given to the voice with the most focused timbre, the horn. The flute and clarinet play the third and seventh of the chord, respectively, sounding within an octave of the horn.

Third Movement

In several ways, orchestration in the final movement of the Concerto satisfies traditional expectations of the genre more completely than found in the other movements. Frequent use of the orchestra as punctuation of the bassoon's melody, as in m. 3, is a more idiomatic accompaniment technique than many of those observed previously. In addition, the thematic portrayal and orchestral dynamic in the following passages reflects traditional concerto norms more directly than is ever expressed in the previous movements: mm. 8-9, 28-31, and 88-89; to a lesser degree, mm. 77-78 may also fall into this category, though the bassoon is still a prominent figure in these measures.

As far as orchestration techniques are concerned with the ensemble as accompanist, mm. 14-17 demonstrate distribution of contrapuntal material among the winds. M. 16 contains devices heretofore underutilized: the flute descends chromatically while flutter-tonguing, and the strings descend chromatically with double-stroked eighth notes, further emphasizing the thematic importance of repeated pitches. At the end of mm. 19, 21, and 23, the violas and cellos continue the sixteenth-note motor rhythm articulated in the bassoon to allow the soloist a much-needed chance to breathe, without interrupting the rhythmic drive of the phrase. Throughout mm. 18-25, the glockenspiel emphasizes the minor third relationship between pitch centers.

The orchestration style shifts dramatically with the beginning of the second theme group. While the orchestration of the first theme group is mostly characterized by an emphasis on downbeats, with pick-up figurations, the second theme group is far more concerned with the linear aspect of orchestration; in this way, the orchestration implies a return of the style with which the second movement closed.

The middle, slow section of the movement explores a new combination of timbres to create a sense of stasis. In mm. 51-59, the accompaniment is based on repeated chords in the vibraphone supported by bowed tremolos in the upper strings, with interspersed decoration by the glockenspiel. In mm. 60-68, this combination of timbres shifts slightly, as the strings are no longer playing tremolos. Also, the glockenspiel has been replaced with the winds, with lines subtly imitating the bassoon.

Although the orchestration style in the recapitulation undergoes no significant changes from the first section, some different techniques are present in the closing twelve measures of the composition. With the intent of finishing the work with as much excitement as possible, while still letting the soloist “win,” flourishes and scales in the winds in mm. 101-105 dominate the

accompaniment, while syncopation in the cellos and basses along with the sixteenth notes of the bassoon propels the momentum. The tutti chords in mm. 106-110 unify the ensemble and punctuate the soloist's melody. The work concludes with a pizzicato off-beat followed by a unison D in the strings, in response to the full-range scale executed by the bassoon in the penultimate measure.

VI. Review of Influences

While the Concerto for Bassoon and Chamber Orchestra is a complete and independent—original—work, aspects of its content reflects the influence of a number of composers of the past century. Note that the compositions cited in this chapter do not reflect a complete review of composers and works the influence of which is present in this Concerto, as such a task would involve nearly every major composition of the twentieth century. Rather, the selected compositions comprise a representative sampling of composers whose techniques have been adapted in the composition of the Concerto. Each of these works falls into one of two categories: 1) accompanied works for solo bassoon, such as sonatas and other concertos, and 2) significant compositions of the twentieth century from other genres. The following discussion will make reference to such compositions in relation to the parameters discussed in the preceding chapters: pitch (melody and harmony), rhythm, and orchestration.

Passages from Paul Hindemith's *Symphony: Mathis der Maler* were significant influences for both the harmonic and rhythmic language of the second theme group of Movement I, as well as most material from Movement II. The passage from the third movement, excerpted on the next page in Figure 19, demonstrates rhythmic figurations and modal chromatic harmony similar to those parts of the Concerto.

Much of the rhythmic character of Movement I, especially the first theme group, is based on the adaptation of figurations typically associated with jazz. While many composers of the twentieth century incorporated jazz elements in their work, including Copland, Milhaud, and Stravinsky, one of the clearest representations of polyrhythm and syncopation studied is from the opening measures of the final movement from André Previn's bassoon sonata (Figure 20).



Figure 19: Similarities to Hindemith. This passage from the third movement of Hindemith's *Symphony: Mathis Der Maler* influenced modally chromatic pitch material and rhythmic figurations in the second theme group from Movement I as well as much of the material from the second movement.

Source: Paul Hindemith, *Symphony: Mathis Der Maler* (New York: Ernst Eulenberg, 1984), 63-64.



Figure 20: Polyrhythm in Previn's bassoon sonata. The opening measures of the final movement of André Previn's bassoon sonata imply polyrhythmic activity similar to the first theme group of the Concerto's first movement.

Source: André Previn, *Sonata for Bassoon and Piano* (New York: Schirmer, 1999), 24.

Several other solo bassoon works were influential in the composition of the Concerto. The first movement of André Jolivet's bassoon concerto ends with several scale figurations (Figure 21), the influence of which can be seen in the synthetic scale of in the penultimate measure of the Concerto, as well as in the scales that predominate the second theme group of Movement III. In addition, the opening phrase in the third movement of Alexandre Tansman's bassoon sonata (Figure 22) had a significant impact on the first theme group of the Concerto's third movement.

Another example that demonstrates the repeated-note theme and neighbor motion in the Concerto's last movement is found in the opening four measures of the third movement of Ernest Bloch's first Piano Quintet (Figure 23).

The musical score is for the closing measures of the opening movement of André Jolivet's bassoon concerto. It is written for bassoon and piano. The bassoon part features a complex melodic line with many triplets and sixteenth notes. The piano accompaniment consists of chords and arpeggiated figures. The score includes dynamic markings such as *f*, *p*, *fpp*, and *ff*, and a rehearsal mark (37). The piece concludes with a final chord marked *ff* and *Ted.*

Figure 21: Figurations from Jolivet. The closing measures of the opening movement of André Jolivet's bassoon concerto were influential in the final movement of the Concerto for Bassoon and Chamber Orchestra.

Source: André Jolivet, *Concerto pour basson, orchestre à cordes, harpe et piano* (Paris: Heugel, 1954), 18.



Figure 22: Repeated notes in Tansman. The opening measures of the Concerto's third movement reflect the motivic use of repeated notes found in the first measures of the final movement of Alexandre Tansman's bassoon sonata.

Source: Alexandre Tansman, *Sonatine pour Basson et Piano* (Paris: Eschig, 1952), 19.

In terms of orchestration, the influence of composer and bassoonist Dan Welcher's *Concerto de Camera* has already been noted as a prototype for ensemble instrumentation. While most of the orchestration in the composition reflects accepted practices, it is worth mentioning a few notable exceptions. One example, the frequent alternation between bowed and pizzicato strings, is typical of many passages of the first movement, and is practiced the first movement of Igor Stravinsky's *Symphony in Three Movements* (Figure 24). Also, the inclusion of the vibraphone in the ensemble, and its prominence as a percussive timbre, reflects a difference in concept of percussion sonority between much literature and the Concerto. Roy Harris, in his Third Symphony, uses sustained vibraphone chords to similar effect, as seen in Figure 25.



Figure 23: Repeated notes in Bloch. The string parts in the opening measures from the third movement of Ernest Bloch's first piano quintet indicate the percussive use of repeated pitches.

Source: Ernest Bloch, *Quintet for Piano and Strings* (New York: Schirmer, 2004), 76.

The image shows a page of musical score for Igor Stravinsky's *Symphony in Three Movements*, specifically Movement I. The score includes staves for Piano (Pte.), Violin I (Vcl. I), Violin II (Vcl. II), Viola (Va.), Violoncello (Vc.), and Contrabass (C-b.). The measures are numbered 89 and 90. The string parts are characterized by frequent alternation between bowed (arco) and pizzicato (pizz.) techniques, as indicated by the markings above the notes. The piano part provides a harmonic and rhythmic foundation.

Figure 24: String orchestration. Igor Stravinsky employed frequent alternation between bowed and pizzicato sonorities in the strings in the first movement of his *Symphony in Three Movements*, a practice adapted in Movement I of the Concerto.

Source: Igor Stravinsky, *Symphony in Three Movements, for Orchestra*. (New York: Associated Music Publishers, 1946) 36.

The image displays a page from a musical score for Roy Harris's Third Symphony. The score is written for a large ensemble, including strings, woodwinds, and percussion. The instruments shown are:

- Vibraphone:** The top staff, marked with a *mf* (mezzo-forte) dynamic.
- Flutes:** Two staves, labeled *Fl. 1* and *Fl. 2*, with *1st Flute* and *2nd Flute* markings.
- Oboe:** A staff labeled *Oboe*.
- Violins:** Two staves, labeled *Viol. 1* and *Viol. 2*.
- Violas:** A staff labeled *Viola*.
- Cello:** A staff labeled *Cello*.
- Double Bass:** A staff labeled *Db. B.*

The score features a complex arrangement of notes, including many beamed sixteenth and thirty-second notes, suggesting a fast, rhythmic passage. The vibraphone part is marked with a *mf* dynamic and includes a *dim.* (diminuendo) marking. The woodwinds and strings are also playing active parts, with the strings featuring a dense texture of beamed notes.

Figure 25: Inclusion of vibraphone. This excerpt from Roy Harris's Third Symphony demonstrates the use of sustained vibraphone sonority to enrich the timbre and texture of the strings section, a technique often used in the Concerto.

Source: Roy Harris, *Third Symphony in One Movement* (New York: Schirmer, 1940), 56.

The influences cited in this chapter reflect only a small fraction of the established compositional practices adapted in the Concerto. In terms of pitch content, many composers from the twentieth century who experimented with chromatic implications in diatonic modes could have been cited; however, the influence of Hindemith was far greater than any other individual. As described in Chapter III, other pitch materials were derived from vernacular genres, such as the blues, and Joseph Schillinger's composition system.

The stylistic range represented in the Concerto is a result of the interaction these pitch sources with similarly broad rhythmic sources. Again, the influence of Hindemith was most substantial, in terms of the contrapuntal distribution of motivic rhythmic units. As mentioned in the previous paragraph, Hindemith's influence, again, was balanced by the integration of vernacular rhythmic practices and facets of the Schillinger system.

VII. Conclusion

By now, few questions should remain as to the underlying concepts of compositional process demonstrated in the Concerto for Bassoon and Chamber Orchestra. Within individual parameters, balance was sought between the thematic principles of statement, variation, and development. Meaning was expressed as syntheses of contrasting ideas became more prevalent throughout the composition, culminating in the second theme group and coda of Movement III. Moreover, trans-parametric relationships added depth to this synthesis of themes, clearly expressed in the second theme group of Movement I.

Insofar as musical influences are concerned, it is clear that while hundreds of sources could be considered models for facets of the Concerto's composition, much of its language may be reduced to a synthesis of the following sources: the craft of Paul Hindemith, African-American derived vernacular musical styles, and the *Schillinger System of Musical Composition*. This syncretic realization reflects significant details of this author's background, thus the work may be seen as biographical. First, although this author has studied many of Hindemith's compositions and treatises, his influence is more direct, by way of pedigree.⁵ Second, this author has made it a point to study jazz and related styles concurrently with a study of Western art music, so a synthesis of the vernacular with the cultivated is a natural step in the evolution of compositional process. However, this evolution would not have occurred without the Schillinger System, which provided the techniques necessarily to merge the preceding disparate influences into a meaningful whole.

⁵ Hindemith taught composer Samuel Adler, who taught composer John Beall, who taught this author.

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Appendix

Appendices include the score and electronic audio simulation of the Concerto. These are available as attachments, listed on p. viii of this document.

Vita

A native of South Charleston, West Virginia, Timothy Cooper graduated in 2011 with the Master of Music degree in composition from the University of Tennessee, Knoxville, where he studied under major professor Dr. Kenneth Jacobs. He earned the Bachelor of Music degree in composition from West Virginia University in 2008, where his composition professors were Dr. John Beall and Dr. David Taddie.

In February 2011, Cooper's work for string quartet *Psalm* was chosen and performed by Osso String Quartet as the winning work in Lyrica Chamber Music's Third Annual Young Composer Competition. In 2009, his composition *Canaan Heights*, for mixed chamber ensemble, won the Knoxville Symphony Orchestra's Young Composer Competition and was premiered by members of the KSO that April. In addition, both *Psalm* and *Canaan Heights* have received honors from the College Music Society. Prior to his graduation from WVU, Cooper's orchestral work *At Gethsemane* was selected by the Pittsburgh Symphony Orchestra for its annual public reading session in March of 2008. A month earlier, the WVU Concert Choir premiered his setting of the Gloria.

Cooper served as the student representative of the Southern Chapter of the College Music Society in 2010-2011. He is also a member of the Society of Composers, Inc., ASCAP, Pi Kappa Lambda, and Phi Mu Alpha Sinfonia, and has presented his compositions in masterclasses with composers Libby Larsen, David Maslanka, Christopher Theofanidis, and John Corigliano. While at the University of Tennessee, Cooper taught ear training and music theory classes as part of a graduate teaching assistantship.