

ORBITAL TECHNIQUE AND ANALYSIS OF *ORBITS*

A Thesis  
by  
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## **Abstract**

### ORBITAL TECHNIQUE AND ANALYSIS OF *ORBITS*

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Orbital Technique is a new compositional technique I developed that was used to compose the orchestral piece *Orbits*. The purpose of this paper is to describe both the process and some theoretical occurrences of Orbital Technique, as well as offer an analysis of *Orbits* in order to highlight the use of the technique within the piece. This will be accomplished in two distinct sections: an introduction that will describe the technique in detail and cite important aural and theoretical occurrences within the technique, and a final section that will consist of an analysis of *Orbits* that will utilize vocabulary defined in the introductory section.

## **Acknowledgments**

I would like to thank my committee members Gabriel Fankhauser and Victor Mansure, as well as my composition teacher and committee chair Scott Meister.

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## **Background of Orbital Technique**

Orbital Technique gets its name from the visual similarity to celestial bodies that orbit a gravitational point in space (e.g., planets orbiting the Sun). The similarity between Orbital Technique and the natural occurrence of orbiting celestial bodies is not a mathematical or scientific similarity, but simply an imperfect visual analogy suggesting a spatial relationship between “orbiting” objects and a gravitational “center” (i.e., pitches that “orbit” a “center”). Kepler’s third law of orbital motion states (in non-scientific terms) that a planet farther away from the Sun has a larger orbit and travels slower due to a weaker gravitational pull. Similar to Orbital Technique, the closer a pitch is to the “center” (which is analogous to a tonic tone), the stronger the relationship between the two pitches. In contrast, the farther a pitch is from the “center,” the weaker the relationship between the two points.

I began development for Orbital Technique during the first half of the 2013 year with a piece called *Tonalities for Cello and Piano*. The theoretical basis for the first movement I composed (Mvt. 2) was a polytonal combination of the whole-tone and octatonic scales. After the completion of *Tonalities for Cello and Piano* Mvt. 2, I wanted to compose a first movement that was theoretically similar to Mvt. 2, while being aurally dissimilar. When I began sketches for the piece, I wrote an imitated figure that utilized expanding intervals between each pitch. The theory behind the figure illustrated in Figure 1 became the basis for the piece, in which each pitch is

derived from a “center,” and each movement in a single direction away from the center is one half step greater than the previous movement (discussed on pp. 5-6). As I progressed through the piece, I added other rules depending on the situation that arose (e.g., the center must be well established, each center could be transposed by octave, etc.).

The image shows a musical score for two instruments: Cello (Vc.) and Piano (Pno.). The Cello part is written in bass clef with a key signature of one sharp (F#). The Piano part is written in treble clef with a key signature of one sharp (F#). Both parts are marked 'pp' (pianissimo). The score is labeled '6' and '7' at the beginning of the measures. The Cello part has a fermata over a note, and the Piano part has a fermata over a note. The score is labeled '6' and '7' at the beginning of the measures.

Figure 1. *Tonalities for Cello and Piano, Mvt. 1, mm. 6-7.*

The similarity between this technique and the previous movement's is this: When the terminal pitch of the expansion is reached (after 11 half steps are reached, the sequence starts over), the pitches available for use all belong to the octatonic scale. The difference, however, is that each pitch needs to have an established center and must adhere to its place in accordance to the center (i.e., in Figure 1, all of the pitches following the C#3 in the cello part must be present only in the octaves D3-E3-G3-B3-E4-B♭4 once the center is established). While the basic framework of Orbital Technique can be found in the structure of *Tonalities for Cello and Piano Mvt. 1*, it is far looser and less established than the rules used to compose *Orbits*. When I began work on *Orbits*, the first step was to map out the technique and to formally



establish the rules based on the aural and theoretical phenomena that occur (or should occur) within the parameters of the technique in order to attain a uniform technique throughout.

### The Chosen Orchestration of *Orbits*

The use of the saxophone family in an orchestral setting is one that receives mixed opinions. Some composers have composed individual parts for saxophone within the orchestral setting (Milhaud, Copland, and Gershwin to name a few), while many still consider the instrument to be at home only in the symphonic band setting (as far as large ensembles are concerned). Also, many pieces that either feature or include saxophones tend to be in the jazz style or similar subgenre, which in some circles has pigeonholed the saxophone as a specialized instrument that should only be included in specific circumstances. Luckily, this mindset is becoming less standard and many composers and orchestras are realizing the saxophone family's true versatility as members of the orchestra.

Along with the saxophone becoming more and more common within modern orchestral compositions, there are also substantial numbers of saxophone solos written for saxophone and orchestra (generally for alto and soprano saxophones); however, there are a relatively small number of compositions for saxophone quartet and orchestra. A few of the more well known of these quartets are Phillip Glass' *Concerto for Saxophone Quartet*, William Bolcolm's *Concerto Grosso for Saxophone Quartet and Orchestra*, and Miklós Maros' *Concerto Grosso for Saxophone Quartet and Orchestra*. While there are a handful of concerto grosso style saxophone

compositions currently in modern repertoire, it is a style of orchestration that has yet to be explored fully. As a saxophone player myself, I chose this specific orchestration as the setting for *Orbits* so I could explore the colors and textures possible from such a combination.

### Basics and Vocabulary of Orbital Technique

As mentioned previously, all of the pitches available for use are derived from a center, which is comparable to a tonic tone. The center is called the orbital center (abbreviated: OC). Each movement away from the center in a single direction will be referred to as a designated orbital level (abbreviated: OL) based on its distance from the orbital center (e.g., OL-8, OL-3, OL-10, etc.). In Figure 2, the orbital center is C4<sup>1</sup>. The ascending orbital levels are numbered from OL-1 to OL-11 depending upon each pitch's distance from the previous pitch (i.e., OL-1 is a single half step away from the previous pitch, the orbital center; OL-11 is 11 half steps away from the previous pitch, OL-10). Both the ascending and descending levels are numbered similarly; however, during analysis the orientation of the pitches above or below the orbital center are to be designated only if the orbital level falls below the orbital center (i.e., OL-5b = orbital level 5 *below* the orbital center, OL-5 = orbital level 5 *above* the orbital center). The pitches end at the 11<sup>th</sup> orbital level since OL-12 would be an octave and the process would start over on the tritone (a phenomenon which is elaborated upon on p. 10).

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<sup>1</sup> For the sake of clarity, the orbital center of the majority of the examples given in the next sections will begin on C4 or C in another octave unless otherwise written.

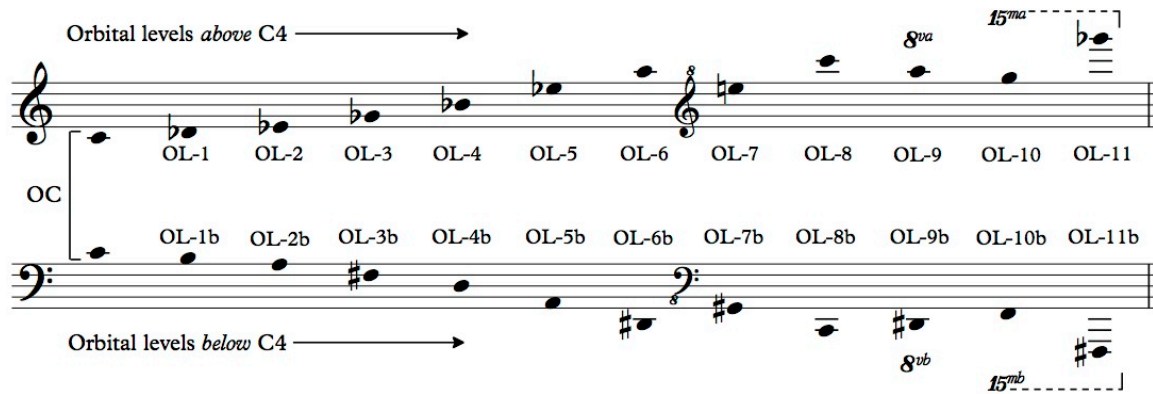


Figure 2. Orbital levels above and below C4.

Unlike traditional scales and modes, there is not a standard return to the “tonic” tone (in this case the orbital center) when either ascending or descending through the pitches; however, while OL-8 and OL-8b are technically the same pitch class as the orbital center, they cannot be considered comparable to the orbital center because of their place within the orbital levels and the intervals that surround them. Given the orbital center’s place as the starting point of the expanding intervals, OL-8/OL-8b is relationally dissimilar to the orbital center and therefore cannot be considered a true return.

Because of the inability to reach the orbital center while ascending or descending through the orbital levels, in order for the orbital center to function in different octaves, both the orbital center and all of the orbital levels need to be transposed by octave. The significance of this is that the orbital center must be established in a specific octave (i.e., present within the vertical or linear structure of

the passage<sup>2</sup>) before the orbital levels based on that octave can be reached. For example, if the orbital center is B $\flat$ 3, then OL-4 would be A $\flat$ 4. In order for the A $\flat$ 4 to be present within a passage, the B $\flat$ 3 must also be present somewhere within the passage, either linearly or vertically. This is because each orbital level must be able to relate to an orbital center.

There are two ways in which an orbital center can function: as a moving “tonic” that can be transposed to any octave (as previously described), or as a fixed center that is based on the highest or lowest pitch available to the ensemble or solo instrument. As can be seen in Figure 2, one difficulty when composing with this technique is the possible inability to reach the orbital levels in the extreme ranges (i.e., the very highest and lowest orbital levels). That is why, to reach the highest or lowest orbital levels available to a single orbital center, one must utilize the entire range that the orchestration provides. To do this, the orbital center needs to either be placed in the very highest octave available (if *descending* through the levels) or the very lowest octave available (if *ascending* through the levels); however, even when utilizing the entire range of every instrument available, the five and a half octave range of the orbital levels in a single direction may still cause an inability to reach every orbital level.

The last facet of the basics of Orbital Technique is “orbital modulation.” In Orbital Technique, modulation is extremely similar to that of traditional functional

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<sup>2</sup> I use the term “passage” here as a deliberately vague descriptor when describing how to establish an orbital center. In this context, a passage can mean anything from a short phrase to a formal section of a piece. Where the orbital center is located is entirely up to the composer; however, the more distance put between the orbital center and its orbital levels (both vertically and linearly), the more the relationship between the orbital levels and orbital center is diminished.

harmony, by which there is a change of “tonic” (orbital center). Methods of modulation are also very similar to traditional techniques since destroying the feel of the previous orbital center is essential, which can be done through common tone modulation, direct modulation, monophonic modulation, etc. A modulatory method that is unique to Orbital Technique is the tritonal modulation, which is explained on p. 10.

Now that the basics of Orbital Technique have been explained, the next sections will briefly discuss the aural and theoretical phenomena caused by the parameters of Orbital Technique, and also the compositional decisions necessary in the utilization of Orbital Technique.

### Aural and Theoretical Phenomena Related to Orbital Technique<sup>3</sup>

While the use of Orbital Technique within a composition is essentially up to the composer, there are some aural and theoretical occurrences within the technique that are worthy of note. Firstly, there is an emphasis of the tritone within the intervals. Tritonal relationships can be seen both in relation to the orbital center (the tritone of the orbital center appears both at OL-3/OL-3b and OL-11/OL-11b) as shown in Figure 3, and between individual levels (between OL-5/OL5b and OL-6/OL-6b, and also between OL-2 and OL-2b) as shown in Figure 4 and Figure 5, respectively.

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<sup>3</sup> It should be noted that I have not attempted to identify and describe every theoretical phenomena that occur within the technique. Also, both the aural and theoretical concepts discussed in this section are subjective and are features of the technique that stand out as important to me. It is entirely possible for others to experience the technique differently, both in terms of aural perception and theoretical approach.

OC

TT at OL-3b                      TT at OL-3

TT at OL-11b (5 octaves below)      TT at OL-11 (5 octaves above)

Detailed description: A single musical staff in treble clef with a key signature of one sharp (F#). The staff contains four notes: a whole note F# on the first line (labeled 'OC'), a whole note G on the second line (labeled 'TT at OL-3b'), a whole note Bb on the second space (labeled 'TT at OL-3'), and a whole note G on the second space (labeled 'TT at OL-11 (5 octaves above)'). A whole note F# on the first line is also present, labeled 'TT at OL-11b (5 octaves below)'.

**Figure 3. Tritones of the orbital center.**

OL-5      OL-6

Tritone between OL-5b and OL-6b      OC      Tritone between OL-5 and OL-6

OL-6b      OL-5b

Pitch classes between upper and lower level tritones are the same (3, 9).

Detailed description: A grand staff (treble and bass clefs) with a key signature of one sharp (F#). The bass clef contains two notes: a whole note F# on the first line (labeled 'OL-6b') and a whole note G on the second line (labeled 'OL-5b'). The treble clef contains two notes: a whole note Bb on the second space (labeled 'OL-5') and a whole note C on the third line (labeled 'OL-6'). Brackets indicate tritones between OL-5b and OL-6b, and between OL-5 and OL-6. The OC is marked with a circled dot on the second line (G) in both staves. A text box on the right states: 'Pitch classes between upper and lower level tritones are the same (3, 9)'.

**Figure 4. Tritone between OL-5 - OL-6 and OL-5b - OL-6b.**

Tritone between OL-2 and OL-2b

OL-2b      OC      OL-2

Detailed description: A single musical staff in treble clef with a key signature of one sharp (F#). The staff contains three notes: a whole note F# on the first line (labeled 'OL-2b'), a whole note G on the second line (labeled 'OC'), and a whole note Bb on the second space (labeled 'OL-2'). A bracket above the staff indicates a tritone between OL-2b and OL-2.

**Figure 5. Tritone between OL-2b and OL-2.**

Because of the absence of a dominant tone as seen in traditional functional harmony, the tritone to the orbital center (OL-3 and OL-3b) becomes the aurally dominant tone to the orbital center. Of course, this can depend entirely on the style of the composer and individual composition utilizing the technique (being that emphasis can be given to a different orbital level or the relationship could be intentionally hidden), but the intervallic relationship between the orbital center and

the 3<sup>rd</sup> orbital level is still strong in comparison to the other orbital levels because of the aural significance of the tritone.

The tritonal relationship between the orbital center and OL-11/OL-11b is also worthy of note (Figure 3). The continuation of the levels past OL-11/OL-11b (e.g., OL-12, OL-13, OL-14, etc.) would result in a repeat of the levels with a new orbital center: the tritone of the original orbital center (though separated by an extra octave). This occurrence can be used as an orbital modulation, in which the orbital center modulates to its tritone (called tritonal modulation); however, since the range would be too extreme to continue to higher orbital levels other than OL-11/OL-11b, a tritonal modulation can be used as a common tone modulation at the 11<sup>th</sup> orbital level. Note that a true tritonal modulation can only occur if OL-11/OL-11b can be reached in the range of the instruments. An example of a tritonal modulation can be found on p. 16.

### Compositional Decisions Related to Orbital Technique

Because of the way in which Orbital Technique is structured, there are a few choices in the implementation of the technique that should be determined by the composer. The first should be the proper usage of the technique within a composition. Aside from the rules detailed in the “Basics and Vocabulary of Orbital Technique” section of this paper, the implementation of the technique is entirely up to the composer. Put simply, the harmonies and melodies created while adhering to the parameters of Orbital Technique are not standardized as long as each pitch can properly relate to an orbital center in the correct octave.



Another issue that should be discussed is the use of accidentals. Mostly, deciding which enharmonic spelling to use in any given situation is up to the composer and should be decided on a case-by-case basis; however, certain accidentals become a necessity when the lower orbital levels are in use. To give an example, the orbital center of the melody in Figure 6 is A4. In order to reach OL-1 and OL-1b by step, the spellings B $\flat$  and G $\sharp$  (respectively) should be used; however, once OL-3 and OL-3b are reached, stepwise motion is no longer practical (and in most cases, impossible). The question then becomes this: Does one continue in a single direction with like accidentals (all raised pitches/all lowered pitches) as is standard in other techniques, or should the process be dependent entirely upon contextual factors? While composing, I found myself more often utilizing similar accidentals in a single direction (lowered tones while above the orbital center, raised tones while below the orbital center), but the context should always be taken into consideration when deciding upon enharmonic spellings.<sup>4</sup>



**Figure 6. Accidental example.**

The next compositional decision that one must consider is range issues when composing for the highest and lowest orbital levels. As can be seen by the visual

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<sup>4</sup> Another factor when deciding upon an enharmonic spelling is the implied difference between the spellings (e.g., B $\flat$  being slightly lower than A $\sharp$ , G $\sharp$  being slightly higher than A $\flat$ , etc.). I am unsure how this anomaly affects the aural outcome of the technique, nor do I know the “correct” enharmonic spelling for each orbital level depending upon this principle.

example of Orbital Technique on p. 6, it can not only be very difficult to reach the highest orbital levels for certain instruments, but it can also be difficult to use the highest levels in an aurally interesting and practical way. Although every composer and composition is different, I have found that it is most practical to use the lower levels (up to about OL-6/OL-6b) as melodic content, and to use the higher levels (around OL-7 – OL-11/OL-7b – OL-11b) as either harmonic content or color. This decision can also change depending upon the instrument(s) being utilized, being that some instruments have greater difficulty with large leaps than others.

## **Analysis of *Orbits***

### Note on the Analysis of *Orbits*

Following will both be a formal analysis of the larger structure of the piece *Orbits*, and then a section demonstrating the importance of the introduction to the motivic development of the piece as a whole. I will analyze *Orbits* primarily with the vocabulary and process of Orbital Technique, but also from select techniques and vocabulary of other theories whenever relevant and intended (mostly dealing with motivic development). There will be no attempt made to analyze the piece fully with any other type of analytical technique other than to reinforce intended compositional occurrences within the piece or to employ recognizable vocabulary for simple understanding. The reason for these analytical constraints is that, since the purpose of this paper is to prove the validity of Orbital Technique, the type of analysis should reflect the compositional technique (though I do believe that other analytical techniques could be revealing as well).

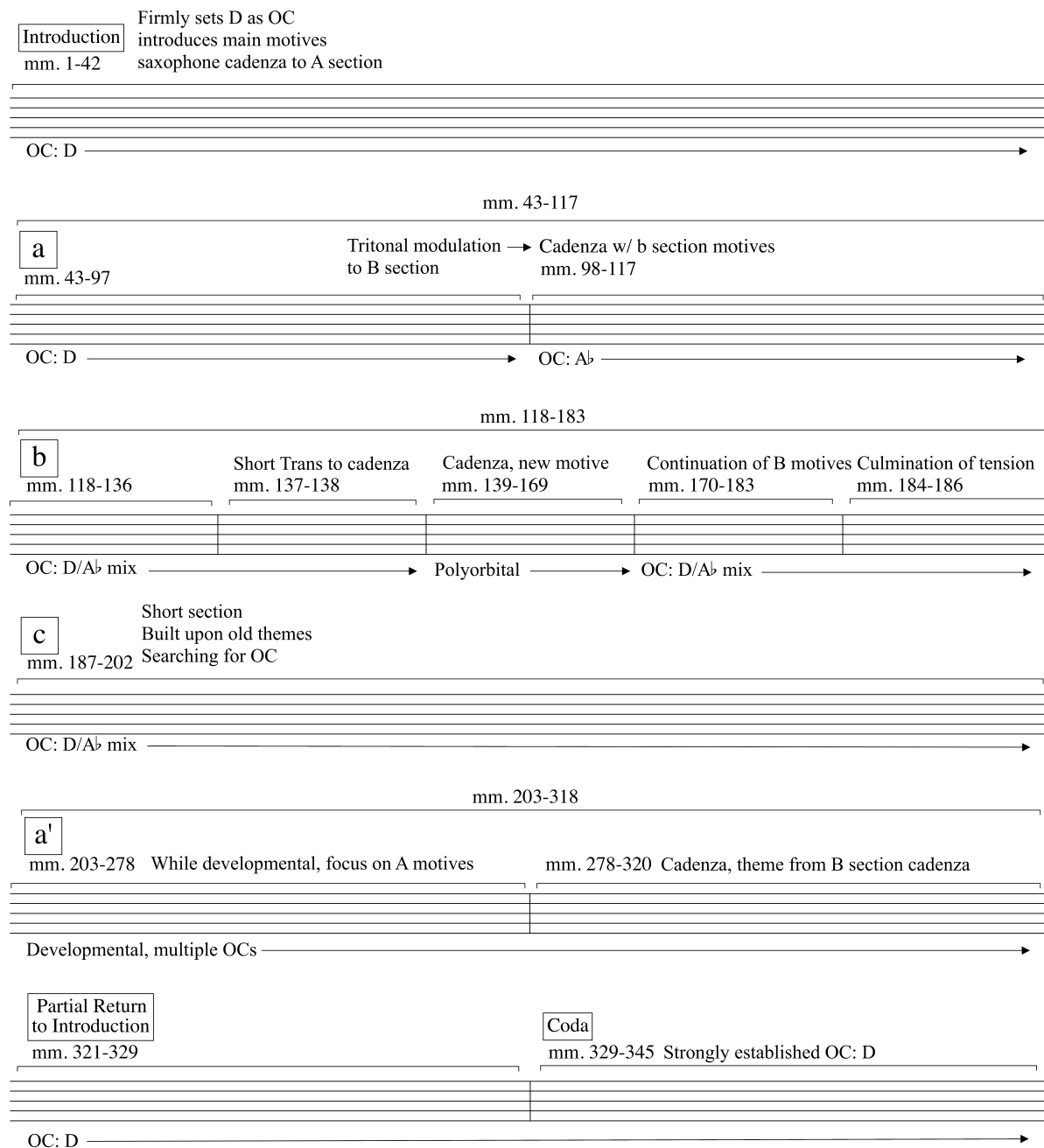
Also, during the next two sections, I will primarily use the terms “motive” or “figure” when referring to the prominent melodic/harmonic units used in each section, the difference between the two being the length of the unit in question (i.e., “motive” being a short musical idea, “figure” being slightly or significantly longer). I am hard-pressed to use the term “theme” when referring to these melodic and harmonic units (e.g., the main theme of the A section, the main theme of the B

section, etc.) since they are so fragmentary that the term would be insufficiently broad.

Lastly, I will occasionally use the term “harmonic tension” when referring to the character of a specific section or phrase. While it is understandable to associate this wording with some type of tonal dissonance, Orbital technique is at most times dissonant (at least in the traditional definition of dissonance). When I use the term “harmonic tension” it is meant to describe a section or phrase in which there are multiple orbital levels sounding against one another (usually contrapuntally) that create tension unlike the established aural character of Orbital Technique.

#### Form and Structure in Respect to Orbital Center Relationships

While *Orbits* does not adhere to a traditional form, it could be considered a loosely structured sonata-allegro form because of its tonal relationships in regard to formal boundaries, its developmental material, and the return to original formal and motivic material (though there is not a complete recapitulation in the original orbital center). Figure 7 is a diagram of *Orbits*' form, which will be explained in the subsequent paragraphs.



**Figure 7. Diagram of form and orbital relationships.**

Figure 7 gives general characteristics of each formal section (orbital centers, motivic elements, cadenzas, etc.) and the corresponding measure numbers. The introduction (mm. 1-42) contains statements of many of the main motives and

figures that are seen throughout the piece (some transposed, some direct statements). This section serves both as a unifying link between the beginning of the piece and the main motives, and also as a space to introduce Orbital Technique by firmly establishing D as the main orbital center and showcasing the full range of the technique (OL-11b – OL-11). The introduction and its relevance within the piece will be explained in detail in the next section of this paper.

The A section then begins after a short saxophone cadenza (m. 43). Section A is characterized by short (mostly rhythmic) motives, a quick tempo, and a rapid interplay between the saxophone quartet and orchestra. A tritonal modulation leads into another saxophone cadenza, in which the orbital center then becomes  $A\flat$ . The tritonal modulation occurs in the piccolo part and is shown in Figure 8. The orbital center is still D before the moment shown in Figure 8, and the first pitch is OL-11 of the lowest established orbital center possible within the orchestra (D2). As stated before, the tritonal modulation is similar to a common tone modulation, in which the pitch begins as OL-11, but then continues the line as the new orbital center. Using this modulation, the orbital center becomes  $A\flat$  beginning at m. 93. This is the only use of tritonal modulation within the piece.

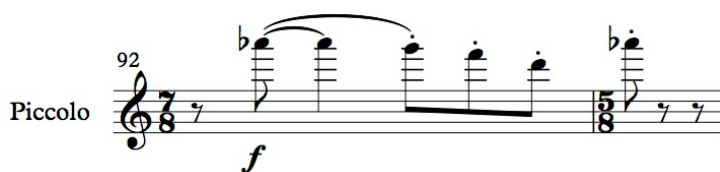


Figure 8. Orbital modulation in piccolo, mm. 92-93.

The B section (mm. 118-183), while generally in  $A\flat$ , is at most times polyorbital<sup>5</sup> (the saxophone quartet is in  $A\flat$  while the surrounding orchestra tends to stay in D). This section is much slower in contrast to the previous and consists of sporadic rhythmic layering. The saxophone cadenza that connects the front and back halves of the B section (mm. 139-169) is polyorbital and partially developmental because of its frequent modulations. This section is also noteworthy because it introduces motives in compound meter that are only found within saxophone cadenzas and not within the orchestra (with only one exception in which the orchestra transitions to the saxophone cadenza at m. 278). Measures 184-186 is labeled “culmination of tension” because rhythmic and harmonic tension builds in the prior measures, and the result of the tension is a string of techniques that destroy the sense of orbital center (and is one of the few places within the piece that does not adhere to the rules of Orbital Technique because of its aleatoric pitches).

The next section is labeled as “C” (mm. 187-202), but is built upon the augmentation and diminution of a rhythmic motive that was previously introduced in the A section; however, it is considered an entirely new section since the motive gains prominence and is aurally dissimilar from the B section. Mainly, the C section is used as an aural “palate cleanser” from the rhythmic and harmonic complexities of the previous sections. The mix of D and  $A\flat$  orbital centers also characterizes this section, though it is structured in such a way that each melodic layer is “searching” for an agreement of orbital center. The orbital centers of D and  $A\flat$  are passed

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<sup>5</sup> Polyorbital (comparable to polytonal) means that there is more than one established orbital center occurring within a passage. In Figure 7, there is not a technical difference between the sections labeled “D/ $A\flat$  mix” and the ones labeled “polyorbital” other than to show that the sections labeled polyorbital contain a mix of orbital centers other than D and  $A\flat$ .

between the melodic lines as each try to “agree” on an orbital center, but ultimately an agreement cannot yet be made.

The next section I have labeled as A' (mm. 203-320) and focuses mostly on the A motives and figures (with scattered quotations of other motives). This section is developmental in style and frequently modulates to uncommon orbital centers (i.e., not D or A $\flat$ ). The second half of the A' section is a cadenza (mm. 278-320) that brings back the saxophone quartet motives from the cadenza of the B section (which, as stated earlier, are primarily saxophone quartet motives). This cadenza is very important in that, while also polyorbital, it eventually finds its way back to the orbital center of D without the overbearing mix of the A $\flat$  orbital center.

The A' section ends with the original saxophone cadenza that introduced the A section, this time leading into a partial repeat and variation of the introduction (mm. 321-329) that strongly establishes the orbital center D. After a short coda (mm. 329-345) that once again mixes the D and A $\flat$  tonalities, the piece ends with a strong cadence with the D as orbital center. To clarify, I am calling this section a coda because it is an extension of what could be considered a natural ending after the recap of the introductory material.

### Analysis of the Introduction and Motivic Relationships

The introduction of *Orbits* both contains important motivic elements that can be linked to the rest of the piece, and also firmly establishes the technique and the orbital center of D before introducing the A section. These two important qualities are exemplified in the first four measures.



As is seen in Figure 9, the strings open the piece by immediately establishing the orbital center of D, establishing the technique by descending through the levels down to OL-8b, and foreshadowing one of the more prevalent figures of the piece (i.e., the layered descent of the levels starting from the orbital center). The first measure begins with a statement of the orbital center, and by m. 2 reaches OL-3b (the tritone) in the Violin 2 part. The statement then repeats, this time reaching OL-8b (the same pitch class as the orbital center) in the double bass part. This figure works well in establishing the orbital center because of the close relationship between the orbital center and OL-3b and OL-8b, and the figure is usually found in areas in which the orbital center is obscure or in the process of being established. While this statement does not foreshadow any of the formal motives or figures found in the main sections of the piece (A, B, or C), it can be found in the following places: the saxophone cadenza at m. 98 (transposed to A $\flat$ ), the saxophone cadenza at m. 139 (m. 152 transposed and beginning from a different orbital level with diminution, m. 160 transposed and beginning from a different orbital level with diminution and varied), and the C section beginning at m. 195 in the strings and saxophones (in A $\flat$  and then in D).

The image shows a musical score for five string instruments: Violin I, Violin II, Viola, Violoncello, and Double Bass. The score is divided into four measures. Measure 1 is in 4/4 time, measure 2 is in 3/4 time, and measures 3 and 4 are in 4/4 time. The key signature has one sharp (F#). Dynamics include *p* (piano) and *mf* (mezzo-forte). Specific notes are labeled with OC, OL-1b, OL-2b, OL-3b (tritone), OL-4b, OL-5b, OL-6b, OL-7b, and OL-8b. The Double Bass part has a *p* dynamic at the end of measure 4.

Figure 9. Strings, mm. 1-4.

The next motive of import is in m. 4 and is played by a solo trumpet. The significance of the statement shown in Figure 10 is not its pitches, but its rhythm. The two 32<sup>nd</sup> note pickup to the downbeat of m. 5 is the most prevalent motive in the A section (though it is a two 16<sup>th</sup> note pickup in the A section). This rhythmic figure is also varied in the high winds during this section (m. 8). Figure 11 shows the first statement by the low brass that begins the A section. As can be seen in Figure 11, the same rhythmic figure as stated by the trumpet in mm. 4-5 is restated at the beginning of the A section. The pitches utilized in this opening are inconsequential (OC, OL-1, OL-2, OL-3); however, the pickup notes are stated multiple times, varied throughout, and it is the most aurally recognizable motive of the A section.

4 st. mute solo

Tpt. 1

*p* *mp*

Figure 10. Trumpet solo, mm. 4-9.

42

Trombone

Trombone

Bass Trombone

Tuba

*f* *fp* *ff* *fl. t.*

*f* *fp* *ff* *fl. t.*

*f* *fp* *ff* *fl. t.*

*f* *fp* *ff* *fl. t.*

Figure 11. Low brass, mm. 42-44.

The string part in mm. 9-10 is a vertical combination of two different motives. The first motive is presented by the Violin I and the top line of the divisi Violin II parts. The orbital levels in relation to the orbital center are written above the notated pitches in Figure 12. This is a partial figure of one that is seen mostly in the B section of the piece. It is characterized by a homorhythmic layering of melodic lines, each a single orbital level apart. In this occurrence, the first layer is OL-1b – OC – OL-1 – OC – OL-1b, the second layer is OL-2b – OL-1b – OC – OL-1b – OL-2b, and the third layer is OL-3b – OL-2b – OL-1b – OL-2b – OL-3b. Aside from the introduction, the saxophone quartet states this figure in m. 103, foreshadowing the

B section and transposed to  $A\flat$  (the orbital center of the saxophone cadenza and the B section). This figure is used both as melodic material in some cases, or as color (usually accompanied by a diminution of the rhythms). It is also utilized as the first climax of the B section in m. 133. The other motive in this example is rhythmic, which is the off-beats played by the double bass, cello, viola, and the lower division Violin II. This is a minor motive that can also be found in the developmental A' section beginning on m. 253.

MOTIVE (on the 8th note)

Vln. I (upper) - OL-1b -- OC -- OL-1 -- OC -- OL-1b  
 Vln. I (lower) - OL-2b -- OL-1b -- OC -- OL-1b -- OL-2b  
 Vln. II (upper) - OL-3b -- OL-2b -- OL-1b -- OL-2b -- OL-3b

9 pizz.

Violin I

Violin II

Viola

Violoncello

Double Bass

*pp*

*pp*

*pp*

*pp*

*pp*

*pp*

Figure 12. Strings, mm. 9-10.

The next motive is also rhythmic and is presented by the bassoons in m. 10, shown in Figure 13. While the pitches in Figure 13 are not important, the quintuplet

figure is commonly found throughout the piece to create rhythmic (usually along with harmonic) tension against the standard divisions (both vertically and implied), generally leading into a cadence point. Two of the more noteworthy sections in which this division is utilized are during the building of rhythmic tension near the end of the B section from mm. 177-184 (not shown here because the section is too orchestrally complicated for a parenthetical figure to be practical), and during the main climax of the coda, in which the quintuplet clashes back and forth between standard divisions of the beat (Figure 14).

Figure 13 shows the musical notation for Bassoon 1 and Bassoon 2 in measure 10. The notation is in bass clef with a 4/4 time signature. The music features a quintuplet of eighth notes starting on the second beat, marked with a 'p' (piano) dynamic and a '5' indicating the quintuplet. The measure ends with a quarter rest on the fourth beat.

Figure 13. Bassoons, m. 10.

Figure 14 shows the musical notation for a Saxophone quartet (Soprano, Alto, Tenor, and Baritone) from measures 331 to 333. The notation is in treble clef. The music features a complex rhythmic pattern with quintuplets and other rhythmic figures, marked with a '5' indicating the quintuplet. The time signature changes from 4/4 to 2/4 and back to 4/4.

Figure 14. Saxophone quartet, mm. 331-333.

The climax of the introduction is from mm. 15-18 and is (orbitally speaking) the most important figure in the piece. Figure 15 is an orchestral reduction of these measures (with the horns and trumpets omitted, since they do not contribute to the orbital significance of the figure). Up until the point shown in Figure 15, the highest orbital level that has been present is OL-9b (the double bass part in m. 7). Measures 15 and 17 contain a vertical combination of every orbital level in a single direction (aside from OL-11b, which exceeds the range of the instruments, except for a voicing that would be inaudible at this dynamic level). The orbital center of the first chord (m. 15) begins at the lowest pitch possible in order to reach the highest orbital level (OL-11, played by the piccolo). The orbital center of the second chord (m. 17) contains the highest pitch possible in order to reach OL-10b (a higher pitch is possible in the piccolo, which would make reaching OL-11b possible, but the closest orbital levels below the orbital center could not be conveniently reached by the other instruments). While (tonally) extremely dissonant and jarring, this section represents orbital technique in its purest form and is the most defining point of the introduction.

Orchestral Reduction

(omitting horns and trumpets)

15

OL-11

OC

sub. *ff*

OC

OL-10b  
(OL-11b out of range)

Figure 15. Orchestral reduction, mm. 14-17.

With the exception of the introduction and the A section before the saxophone quartet cadenza at m. 98, the majority of *Orbits* (before the partial return of the introduction at m. 321) is polyorbital (mostly, a mix of D and its OL-3/OL-3b A $\flat$ ). The final saxophone cadenza (mm. 278-320) is also polyorbital, but does return to the original orbital center of D during the transitional measures of the cadenza (mm. 306-318). After an altissimo OL-7 pitch in the soprano saxophone, this introductory figure is stated again and varied in order to better “lock in” the orbital center of D (Figure 16). Once again, the horns and trumpets of the figure (mm. 320-328) have been omitted in Figure 16. Beginning from m. 320, this is an exact quotation of the introductory figure from m. 15. This figure alleviates the ambiguity of the orbital center of the previous measures; however, the orbital center changes once again in m. 324 in order to extend the cadence. This time, the orbital center changes to E $\flat$ , which is the first orbital level above the main orbital center, D. Like the chord in m. 320, the orbital center and all of its levels (above) are present within the chord in m. 324. The OL-3b of the E $\flat$  orbital center (A) then transitions the orbital center to C $\sharp$ , which is the first orbital center below the main orbital center, D.

Similarly, like the chord in m. 322, the orbital center and all its levels (below) are present within the chord in m. 326 (with the exception of OL-11b, which is again out of range). Finally, in m. 327 the OL-8b in C# (which is OL-1b in D) leads back into the orbital center of D in m. 328 at the cadence.

The image shows an orchestral reduction of music from measures 317 to 328. The top system features a Soprano Saxophone line and a piano accompaniment. The piano part is marked with dynamics *mf* and *fff*. The bottom system continues the piano accompaniment. Annotations include:
 

- OL-11**: Points to a chord in measure 320.
- OC**: Points to a chord in measure 326.
- OL-10b**: Points to a chord in measure 327.
- New OC: Eb (OL-1 to D)**: Points to a chord in measure 327.
- New OC: C# (OL-1b to D)**: Points to a chord in measure 328.
- Back to OC: D**: Points to the final chord in measure 328.

 Measure numbers 320 and 328 are boxed in the score.

Figure 16. Orchestral reduction, mm. 317-328.

These two orbital centers ( $E^b$  and  $C^\sharp$ ), while containing completely different orbital levels, are inherently connected to the orbital center of D because of their placement within its levels (OL-1 and OL-1b respectively). Furthermore, because of their placement within the phrase and their close proximity to the original orbital center, they are aurally more relational to the orbital center D than they are as independent orbital centers; and instead of diminishing the prominence of D as the orbital center, they ultimately strengthen and better establish D as the main orbital



center of the phrase and the piece as a whole. Because of the conclusive establishment of the orbital center from mm. 320-328, a short coda ends the piece strongly in D.

The last foreshadowing motive of the introduction (Figure 17) begins at m. 20 and is similar to the previous motive. Measures 20-29 contain the entire range of the orbital levels (above) the orbital center. Also, this marks the first occurrence of the piece in which the orbital levels of an orbital center are presented before the establishment of the orbital center in the correct octave, though one could argue that the orbital center was established in the previous measures (although the previously established orbital center was on the highest pitch, not the lowest). While this can cause ambiguity of the orbital center, it is short lived since the orbital center becomes present on a strong beat in m. 25. This motive is restated in the piece, but not necessarily utilizing the same orbital levels. The fundamental characteristic of this motive is a stratification of the higher orbital levels, usually above the orbital center, between two or more instruments. While not extremely prominent within the piece, there are two noteworthy uses of the motive as transitory material within the saxophone section. Figure 18 shows the first statement, and it is used to end the orchestral part of the A section and to help establish the new orbital center of  $A\flat$  (after the tritonal modulation in the piccolo part). This same motive is used in the A' section as well (mm. 243-247), but transposed to D.

OL-11

20

*p*

*p*

*p*

OC on strong beat

Figure 17. Orchestral reduction, mm. 20-25.

Statement in D (mm. 83-85)

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

*f*

*mf*

*mp*

*p*

Restatement with A $\flat$  orbital modulation (mm. 94-96)

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

*mf*

*mp*

*p*

*p*

*p*

//

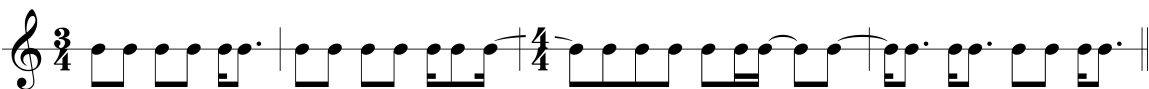
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Figure 18. Saxophone quartet, mm. 83-85 and mm. 94-96.

While there are a few secondary motives throughout the piece that are not quoted or implied at all in the introduction, there is only one that must be mentioned in order for the analysis of the piece's motives to be complete. It is a rhythmic motive that is only found within the percussion section, and is first stated during the A section starting at m. 49. The rhythm of the motive is shown in Figure 19. While primarily used as a percussion break within the A section, it is the structural foundation of the C section (and is also utilized in the A' section for a less significant purpose). From the beginning of the C section (m. 187), this motive is both present in its original form, and augmented by both double and quadruple factors (the quadruple augmentation spans the entire C section and is the underlying rhythmic backbone of the section). As stated previously, the C section contains only quotations of previously stated motives, but the varied use of this rhythmic figure becomes prominent enough within this section to warrant a formal label.



**Figure 19. Percussion rhythmic motive.**

## Conclusions

While there are numerous other theoretical occurrences within the piece *Orbits* that are worthy of analysis, delving into their structures would exceed the scope and parameters of this paper. Hopefully the present analysis suggests the compositional versatility of Orbital Technique. Also, while the harmonic and melodic foundations of Orbital Technique are distinct because of the use of ever-expanding intervallic relationships, the compositional decisions and variations within a piece while utilizing this technique stay largely the same. There is no need to “reinvent the wheel” while utilizing Orbital Technique, and its use is quite similar to that of any synthetic scale or pitch set. This is an intentional simplicity in the development of the technique in the hopes of creating a technique that is “composer friendly” in its versatility. Further theoretical and functional occurrences may yet be discovered in my continued use of the technique, but it is my hope to keep the rules of Orbital Technique as simple as possible in order to not overly-regulate its utilization.

## Vita

Bradley Stuart Green was born in Dunn, NC to Richard and June Green. He graduated from Campbell University in May 2012 with a B.A. in Music Composition and Music Education. He attended Appalachian State University beginning fall 2012 to work towards a Master of Music degree concentrating in Music Theory and Composition. While attending ASU, he became a part of the GRAM (Graduate Research Associate Mentor) program in order to perform original research in the field of music theory pedagogy with his mentor Dr. Jennifer Snodgrass. The M.M. was awarded in May 2014. He began work toward his D.M.A. in Music Composition at the University of Maryland at College Park in August 2014.

Mr. Green is a member of Pi Kappa Lambda, Society of Composers, Inc., and College Music Society. He currently resides in College Park, MD.

# ORBITS

for Saxophone Quartet and Orchestra

by Bradley Green

## Instrumentation

Flute/Piccolo 1	Trumpet in B $\flat$ 3
Flute 2	Trombone 1
Flute 3	Trombone 2
Oboe 1	Bass Trombone
Oboe 2	Tuba
Clarinet in B $\flat$ 1	Saxophone Quartet
Clarinet in B $\flat$ 2	Timpani/Aux Perc
Bassoon 1	Percussion 1
Bassoon 2	Percussion 2
Horn in F 1	Harp
Horn in F 2	Violin I
Horn in F 3	Violin II
Horn in F 4	Viola
Trumpet in B $\flat$ 1	Violincello
Trumpet in B $\flat$ 2	Contrabass

## Orchestra Performance Notes

**Measures 15-18 / mm. 320-326:** The notation "norm---->bells above stands---->norm" appears in the upper brass sections. This means to begin the phrase from a normal playing position, then slowly lift the instrument's bell above the stands as the performer holds the notated pitch, and then return to a normal playing position. For a more dramatic change, it is possible to begin the phrase with the bell of the instrument facing towards the ground.

---

### **Measures 79-81:**

**Strings** - The notation "bows down, instrument at side" is in preparation for the strumming technique. The downward directional arrows denote that the instrument should be strummed downward (very similar to strumming a guitar). This section should be played harshly and should emphasize the percussive attack of the strumming. The subsequent notation "norm" means to return to a normal playing position.

**Harp** - The diamond notation of this section means to slap the soundboard with the open palm of the right hand. The "x" notation means to knock the soundboard with the knuckles of the right hand. This notation appears again later in the piece (**mm. 173-181**) and the technique stays the same.

---

**Measure 128:** The "x" notation and "over-pressure" in the strings means to bow the string with enough pressure to cause a harsh, crude sound. Over-pressure is meant whenever the "x" notation is notated within the string parts.

---

**Measure 130:** Horns 1 and 3 should begin the note with their hand already in the mute position, and then pull their hands out of the bells in order for the pitch to fall. Horns 2 and 4 should do the opposite (slowly put their hands in their bells in order to raise the pitch).

---

**Measure 183:** For 10-12 seconds, each brass player should repeatedly pulse (at the quarter note) on their lowest sound possible while growling. NOTE: While each part has a different notated tempo, this does not necessarily mean that each part has to follow that tempo exactly. The use of different tempos are to show that each performer's pulse should not match that of the other performers pulses.

**Measure 184:** In 6-8 seconds, the strings should tremolo gliss. up to their highest notes (starting from the highest open string), adding over-pressure while ascending. There is no need for each performer to ascend at the same rate (it would actually be helpful for each performer to ascend at slightly different rates).

**Measure 185:** For 3-4 seconds, the saxophone quartet should growl on random pitches as fast and loud as possible (notated *fff*). For this measure to be most effective, the slap tongued chord at the beginning of m. 186 should be reached exactly together.

---

**Measures 270-275:** Strings should add overpressure slowly through phrase.

## Saxophone Quartet Performance Notes

**Cadenza mm. 97- 116:** This cadenza should be taken slowly, with care given to each individual phrase. The ceasura notation in this section is just to denote a short pause between phrases. The "x" notation is for key slaps. At the end of the molto accelerando, the key slaps should be played as fast as they can be played cleanly. The final measures (mm. 114-116) are aleatoric and should last as long as the time specified above the fermata. **Measure 114** should be random key slaps as fast as possible. In **m. 115**, air should be added to each horn until *f* is reached. Then, when *f* is reached (**m. 116**), the technique should continue until each performer is completely out of air.

---

**Measures 165-167:** Starting at m. 166, there is not a notated meter. Each performer should play each line as fast as possible. In m. 167, each player should begin the line approximately halfway though the previous instrument's line, stratifying the line.

---

**Measure 185:** See above

# ORBITS

Bradley Green

**Esoterically** ♩=50 (♩=100) **accel.** . . . . . **A tempo**

Piccolo

Flute/Piccolo 1

Flute 2

Flute 3

Oboe 1

Oboe 2

Clarinet in B♭ 1

Clarinet in B♭ 2

Bassoon 1

Bassoon 2

Horn in F 1

Horn in F 2

Horn in F 3

Horn in F 4

Trumpet in B♭ 1 *st. mute* *solo* *p* *mp*

Trumpet in B♭ 2

Trumpet in B♭ 3

Trombone 1

Trombone 2

Bass Trombone

Tuba

Soprano Saxophone

Alto Saxophone

Tenor Saxophone

Baritone Saxophone

**Esoterically** ♩=50 (♩=100) **accel.** . . . . . **A tempo**

Timpani, Bongos  
Cym on Timp, Cabasa

Percussion 1  
(Sus cym, S.D., 4 tom-toms,  
Brake Drum, Wood Block,  
Temple Blocks)

Percussion 2  
(Sizzle Cym, Cr Cym, Glockenspiel,  
Large tam-tam, Metal Shaker, Crotales,  
B. D., Triangle, Chimes)

Harp *p* *mf* *ad. lib. gliss.* *mf* *ff* *C#*

**Esoterically** ♩=50 (♩=100) **accel.** . . . . . **A tempo**

Violin I *p* *mf* *ff*

Violin II *p* *mf* *ff*

Viola *mf* *ff*

Violoncello *mf* *ff*

Contrabass *p* *f* *mp*



8

Fl. /Picc. 1 *p*

Fl. 2 *p*

Fl. 3 *p*

Ob. 1 *p*

Ob. 2 *p*

Cl. 1 *p*

Cl. 2 *p*

Bsn. 1 *p* 5

Bsn. 2 *p* 5

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1 *mute out*

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax. *mp*

Alto Sax. *mp*

Ten. Sax. *mp*

Bari. Sax. *mp* Open Slap Tongue

Timp. Wood *sub. ff*

Perc. 1 Sizzle Cym soft mallets *mp*

Perc. 2 *p*

Hp. *pp*

Vln. I *pizz.* *pp*

Vln. II *pizz.* *pp*

Vla. *pizz.* *pp*

Vc. *pizz.* *pp*

Cb. *pizz.* *pp*

15 Suddenly Forceful! ♩=♩

20 Steadily

Fl. / Picc. 1 *ff*

Fl. 2 *ff*

Fl. 3 *ff*

Ob. 1 *ff*

Ob. 2 *ff*

Cl. 1 *ff*

Cl. 2 *ff*

Bsn. 1 *ff*

Bsn. 2 *ff*

Hn. 1 *mf* norm → bells above stands *ff* → norm *p*

Hn. 2 *mf* norm → bells above stands *ff* → norm *p*

Hn. 3 *mf* norm → bells above stands *ff* → norm *p*

Hn. 4 *mf* norm → bells above stands *ff* → norm *p*

Tpt. 1 *tutti* *mf* norm → bells above stands *ff* → norm *p*

Tpt. 2 *mf* norm → bells above stands *ff* → norm *p*

Tpt. 3 *mf* norm → bells above stands *ff* → norm *p*

Tbn. 1 *ff*

Tbn. 2 *ff*

B. Tbn. *ff*

Tba. *ff*

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

15 Suddenly Forceful! ♩=♩

20 Steadily

Timp.

Perc. 1 *ff* Cr Cym *mp* → *ff*

Perc. 2 *ff*

Hp. *p*

15 Suddenly Forceful! ♩=♩

20 Steadily

Vln. I arco *ff* *pizz.* *p*

Vln. II arco *ff* *pizz.* *p*

Vla. arco *ff* *pizz.* *p*

Vc. arco *ff* *pizz.* *p*

Cb. arco *ff*

22 *accel.*

Fl. / Picc. 1 *f*

Fl. 2 *f*

Fl. 3 *p*

Ob. 1 *f*

Ob. 2 *p*

Cl. 1 *f*

Cl. 2 *f*

Bsn. 1 *mp* *mf* *p* *mf* *ff*

Bsn. 2 *mp* *mf* *p* *mf* *ff*

Hn. 1 *p* *ff*

Hn. 2 *p* *ff*

Hn. 3 *p* *ff*

Hn. 4 *p* *ff*

Tpt. 1 *p* *st. mute* *mute out*

Tpt. 2 *p* *st. mute* *mute out*

Tpt. 3 *p* *st. mute* *mute out*

Tbn. 1 *p* *mf* *ff*

Tbn. 2 *p* *mf* *ff*

B. Tbn. *p* *mp* *mf* *p* *mf* *ff*

Tba. *p* *mp* *mf* *p* *mf* *ff*

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax. *mf*

*accel.*

Timp. *ff*

Perc. 1

Perc. 2

Hp. *f*

*accel.*

Vln. I *f* *arco* *ff*

Vln. II *f* *arco* *ff*

Vla. *f* *arco* *ff*

Vc. *arco* *mp* *mf* *p* *mf* *ff*

Cb. *pizz.* *p* *mp* *mf* *p* *mf* *ff*

*col lengo buttato*

*col lengo buttato*

*col lengo buttato*

*arco*

30 Slower ♩=50 (♩=100)

molto accel.

Sop. Sax. *mf* *cresc. poco a poco* *ff*

Alto Sax. *mf* *cresc. poco a poco* *ff*

Ten. Sax. *mf* *cresc. poco a poco* *ff*

Bari. Sax. *cresc. poco a poco* *ff*

42 Unrelenting ♩=138

Fl. / Picc. 1

Fl. 2 *mp*

Fl. 3 *mp*

Ob. 1 *mp*

Ob. 2 *mp*

Cl. 1 *mp*

Cl. 2 *mp*

Bsn. 1 *mf*

Bsn. 2 *mf*

Hn. 1 *ff*

Hn. 2 *ff*

Hn. 3 *ff*

Hn. 4 *ff*

Tpt. 1 *f* *fp* *ff*

Tpt. 2 *f* *fp* *ff*

Tpt. 3 *f* *fp* *ff*

Tbn. 1 *f* *fp* *ff*

Tbn. 2 *f* *fp* *ff*

B. Tbn. *f* *fp* *ff*

Tba. *f* *fp* *ff*

Sop. Sax. *fff*

Alto Sax. *fff*

Ten. Sax. *fff*

Bari. Sax. *fff*

42 Unrelenting ♩=138

Timp. *mp* soft mallets *ff*

Perc. 1 *f* ch.

Perc. 2 *f* ch.

Hp. *ff* *lv.*

Vln. I *mp* *div.*

Vln. II *mp* *div.*

Vla. *mf*

Vc. *mf*

Cb. *mf*

49

Fl. /Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Timp. wood mallets *mf*

Perc. 1 Snare Drum *mf* snares off

Perc. 2

Hp. *ff* *L.v.*

Vln. I *ff* *L.v.*

Vln. II *ff* *L.v.*

Vla. *ff* *L.v.*

Vc. *ff* *L.v.*

Cb. *ff* *L.v.*

61

58

Fl. / Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Timp.

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

*p*

*ff*

*mp*

*mf*

*mp*

*bisbigl.*

*p*

*C#*

Tom-toms

Glockenspiel  
brass mallets

Large tam-tam  
rollers

Bongos  
w/ drumsticks

dampen

67

Fl. 1/Picc. 1 *mf*

Fl. 2 *mf*

Fl. 3 *mf*

Ob. 1 *mf*

Ob. 2 *mf*

Cl. 1 *mf*

Cl. 2 *mf*

Bsn. 1 *mf*

Bsn. 2 *mf*

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1 *mf*

Tpt. 2 *mf*

Tpt. 3 *mf*

Tbn. 1 *mf*

Tbn. 2 *mf*

B. Tbn. *mf*

Tba. *mf*

Sop. Sax. *mp*

Alto Sax. *mp*

Ten. Sax. *mp*

Bari. Sax. *mp*

Bongos *mf*

Perc. 1 *mf*

Perc. 2

Hp.

Vln. I *mf*

Vln. II *mf*

Vla. *mf*

Vc. *mf*

Cb. *mf*

74

75

Fl. /Picc. 1 *f*

Fl. 2 *mf* *f*

Fl. 3 *mp* *mf* *f*

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1 *fp* *f*

Hn. 2 *fp* *f*

Hn. 3 *fp* *f*

Hn. 4 *fp* *f*

Tpt. 1 *fp* *f*

Tpt. 2 *fp* *f*

Tpt. 3 *fp* *f*

Tbn. 1 *fp* *f*

Tbn. 2 *fp* *f*

B. Tbn.

Tba.

Sop. Sax. *mf*

Alto Sax. *mf*

Ten. Sax. *mf*

Bari. Sax. *mf*

Bongos *ff*

Perc. 1 *f*

Perc. 2 *mf*

Glockenspiel  
hard plastic mallets

Cr Cym *f*

Hp. *mf*

C<sup>b</sup>

Knock soundboard  
w/ knuckles (R hand)

Slap soundboard  
w/ palm (L hand)

75 *mf* *pizz.*

Bows down,  
instrument at side

*ff* *Harshly*

*ff* *Harshly*

*ff* *Harshly*

*ff* *arco*

*ff* *arco*

*ff*



81

Fl. 1 / Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Bongos

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

85

85

85

*mp* *ff* *f* *mp* *f* *mp* *ff* *p* *ff* *mp* *f*

Timpani wood mallets

*p*

S. D.  
*p* snares on, hit near edge of head

Metal Shaker

*p*

Norm

Norm

Norm

89

Fl. /Picc. 1 *f* *ff*<sup>3</sup> *molto rit.*

Fl. 2 *ff*<sup>3</sup>

Fl. 3 *ff*<sup>3</sup>

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1 *ff*<sup>3</sup>

Tpt. 2 *ff*<sup>3</sup>

Tpt. 3 *ff*<sup>3</sup>

Tbn. 1 *ff*

Tbn. 2 *ff*

B. Tbn. *ff*

Tba. *ff*

Sop. Sax. *ff* *p*

Alto Sax. *ff* *mf* *p*

Ten. Sax. *ff* *mp* *p*

Bari. Sax. *ff* *p*

Timp. *molto rit.*

Perc. 1

Perc. 2

Hp. *f* *arco* *molto rit.*

Vln. I *f* *ff*<sup>3</sup> *arco* *molto rit.*

Vln. II *ff*<sup>3</sup> *arco*

Vla. *ff*

Vc. *ff* *arco*

Cb. *ff*

97 Sporadically ♩=50

Sop. Sax. *p* key slaps *f* Slap Tongue *p* *f*

Alto Sax. *p* key slaps *f* Slap Tongue *p* *f*

Ten. Sax. *p* key slaps *f* Slap Tongue *p* *f*

Bari. Sax. *p* *f* Slap Tongue *p* *f*



molto accel.

103

Sop. Sax. *f* *p* *molto cresc.*

Alto Sax. *f* *p* *molto cresc.*

Ten. Sax. *f* *p* *molto cresc.*

Bari. Sax. *p* *f* *p* *f* *p* *molto cresc.*



♩=150

109

Sop. Sax. *f* *ff* *fff* *f* *until out of air*

Alto Sax. *f* *ff* *fff* *f* *until out of air*

Ten. Sax. *f* *ff* *fff* *f* *until out of air*

Bari. Sax. *f* *ff* *fff* *f* *until out of air*

add air until *f* is reached

117 With Exactness  $\text{♩}=69$

Fl. /Picc. 1  $f$

Fl. 2  $f$

Fl. 3  $f$

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1  $f$

Bsn. 2  $f$

Hn. 1  $mp$

Hn. 2  $mp$

Hn. 3  $mp$

Hn. 4  $mp$

Tpt. 1  $mp$  bubble mute in (plunger out)  $mf$

Tpt. 2  $mp$  bubble mute in (plunger out)  $mf$

Tpt. 3  $mp$  bubble mute in (plunger out)  $mf$

Tbn. 1  $mp$

Tbn. 2  $mp$

B. Tbn.

Tba.  $f$

Sop. Sax.  $mp$   $f$

Alto Sax.  $mp$   $f$

Ten. Sax.  $mp$   $f$

Bari. Sax.  $mp$   $f$

117 With Exactness  $\text{♩}=69$

Timp.  $f$

Perc. 1 Brake Drum  $f$

Perc. 2 Crotales brass mallets  $l.v.$   $mp$

Hp.  $mp$

117 With Exactness  $\text{♩}=69$

Vln. I  $mp$  pizz.

Vln. II  $mp$  pizz.

Vla.  $mp$  pizz.

Vc.  $mp$  pizz.  $f$  arco

Cb.  $mp$   $f$  arco

126

Fl. / Picc. 1 *f* *mf* *f*

Fl. 2 *f* *mf* *f*

Fl. 3 *f* *mf* *f*

Ob. 1 *mf* *f*

Ob. 2 *mf* *f*

Cl. 1 *mf* *f*

Cl. 2 *mf* *f*

Bsn. 1 *mf* *f*

Bsn. 2 *mf* *f*

Hn. 1 *f* w/hand +

Hn. 2 *f* w/hand +

Hn. 3 *f* w/hand +

Hn. 4 *f* w/hand +

Tpt. 1 *f* 3

Tpt. 2 *f* 3

Tpt. 3 *f* 3

Tbn. 1 *f*

Tbn. 2 *f*

B. Tbn. *f*

Tba. *f*

Sop. Sax. *p* *f* *mp* *f*

Alto Sax. *p* *f* *mp* *f*

Ten. Sax. *p* *f* *mp* *f*

Bari. Sax. *p* *f* *mp* *f*

Timp. *mp* soft mallets

Perc. 1 *f* *p* *f* *mp* *f* S. D. edge 6 *mp* ch.

Perc. 2 *f* *p* *f* *mp* *f*

Hp.

Vln. I *f* *mf* *f* Sul E over-pressure gliss.

Vln. II *f* *mf* *f* Sul E over-pressure gliss.

Vla. *f* *mf* *f* Sul D over-pressure gliss.

Vc. *f* *mf* *f* Sul C over-pressure gliss.

Cb. *f* *mf* *f*

132

Flute

138

Musical score for woodwinds and brass instruments, measures 132-138. The score includes parts for Flute, Oboe 1 & 2, Clarinet 1 & 2, Bassoon 1 & 2, Horn 1-4, Trumpet 1-3, Trombone 1-3, and Saxophone section (Soprano, Alto, Tenor, Baritone). The music features various dynamics such as *ff* and *mf*, and includes articulation like accents and slurs. Measure 138 contains a repeat sign. The key signature has one sharp (F#) and the time signature is 7/8.

132

138

Musical score for percussion and harp instruments, measures 132-138. The score includes parts for Timpani, Percussion 1 & 2, and Harp. Percussion 1 is marked with *center* and *ff*. Percussion 2 is marked with *ff l.v. all*. The Harp part features a melodic line with triplets and sixteenth notes, marked with *mf*. Measure 138 contains a repeat sign. The key signature has one sharp (F#) and the time signature is 7/8.

132

138

Musical score for string instruments, measures 132-138. The score includes parts for Violin I & II, Viola, Violoncello, and Contrabass. The Violin parts feature a rhythmic pattern with accents, marked with *ff*. The Viola, Violoncello, and Contrabass parts are marked with *mf* and include *pizz.* (pizzicato) markings. Measure 138 contains a repeat sign. The key signature has one sharp (F#) and the time signature is 7/8.

139

Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

*mf*

147

Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

*f* *ff* *mf*  
*f* *ff* *mf*  
*f* *ff* *mp* *p*  
*f* *ff* *mp*

Growl .....  
Growl ...  
Growl ..  
Growl

156

Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

*p* *ff* *f* *p* *pp*  
*p* *ff* *f* *p* *pp*  
*ff* *p* *f* *p* *pp*  
*p* *ff sub. p* *f* *p* *pp*

*molto rit.* ..... *Much Slower* ..... *accel.* .....

Growl .....  
Growl .....  
Growl .....  
Growl .....

163

Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

*f* *sub. p* *p*  
*f* *p*  
*f* *p*  
*f* *p*

*as fast as possible* ..... *as fast as possible (per performer)* .....  
*as fast as possible (per performer)* .....  
*as fast as possible (per performer)* .....  
*as fast as possible (per performer)* .....

$\text{♩} = 70$

169 Building Intensity ♩.=♩

168

Fl. /Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

169 Building Intensity ♩.=♩

Timp.

Bow sus cym. placed upside-down on timpani

mf (pedal slide, ad lib)

D, Ab, Eb

Perc. 1

Perc. 2

Sizzle Cym bow

mf

Tom-toms

mf

Hp.

mf

169 Building Intensity ♩.=♩

Vln. I

Vln. II

Vla.

Vc.

Cb.

pizz.

f

f

f

f

f



176

Fl. / Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Timp.

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

wood mallets

S. D.

*p*, *f*, *ff*, *p < f p*, *gliss.*, *arco*, *Sul E*, *Sul D*, *Sul C*, *pizz.*, *arco*, *gliss.*

183 10"- 12" 6"- 8" 3"- 4" 186 Steadily ♩=56

Fl. /Picc. 1  
Fl. 2  
Fl. 3  
Ob. 1  
Ob. 2  
Cl. 1  
Cl. 2  
Bsn. 1  
Bsn. 2

[♩=58] pulse with growl on lowest sound possible  
[♩=63] pulse with growl on lowest sound possible  
[♩=51] pulse with growl on lowest note possible  
[♩=50] pulse with growl on lowest sound possible  
[♩=56] pulse with growl on lowest sound possible  
[♩=53] pulse with growl on lowest sound possible  
[♩=62] pulse with growl on lowest sound possible  
[♩=60] pulse with growl on lowest sound possible  
[♩=59] pulse with growl on lowest sound possible  
[♩=52] pulse with growl on lowest sound possible  
[♩=54] pulse with growl on lowest sound possible

Hn. 1  
Hn. 2  
Hn. 3  
Hn. 4  
Tpt. 1  
Tpt. 2  
Tpt. 3  
Tbn. 1  
Tbn. 2  
B. Tbn.  
Tba.

Growl  
fff  
Growl  
fff  
Growl  
fff  
Growl  
fff

Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

183 10"- 12" 6"- 8" 3"- 4" 186 Steadily ♩=56

Timp.  
Perc. 1  
Perc. 2  
Hp.

strike w/ shaft of drum sticks  
Large Tam-tam  
Wood Block  
hard rubber mallets  
B.D.  
l.v. all  
mf

183 10"- 12" 6"- 8" 3"- 4" 186 Steadily ♩=56

Vln. I  
Vln. II  
Vla.  
Vc.  
Cb.

norm. gliss. over-pressure  
pp ff  
norm. gliss. over-pressure  
pp ff  
norm. gliss. over-pressure  
pp ff  
norm. gliss. over-pressure  
pp ff  
norm. gliss. over-pressure  
pp ff

190

Fl. / Picc. 1 *mf* *fl. t.* *p*

Fl. 2 *mf* *fl. t.* *p*

Fl. 3 *mf* *fl. t.* *p*

Ob. 1 *pp*

Ob. 2

Cl. 1 *pp*

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1 *mp*

Hn. 2

Hn. 3 *mp*

Hn. 4

Tpt. 1 *st. mute in* *mp*

Tpt. 2 *st. mute in* *mp*

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Cabasa *mp*

Perc. 1

Perc. 2

Hp. *8<sup>va</sup>* *F<sup>+</sup>* *8<sup>va</sup>*

Vln. I *Sul D* *pp* *mf* *mp*

Vln. II *Sul D* *pp* *mf* *mp*

Vla. *Sul G* *pp* *mf*

Vc. *slap pizz.* *f*

Cb. *slap pizz.* *f*

196

Picc. *p* *rit.*

Fl. 2 *pp*

Fl. 3 *pp*

Ob. 1 *pp*

Ob. 2 *pp*

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1 mute out

Tpt. 2 mute out

Tpt. 3

Tbn. 1 *mp*

Tbn. 2

B. Tbn.

Tba. *f* *in tempo*

Sop. Sax. *p*

Alto Sax. *p*

Ten. Sax. *p*

Bari. Sax. *p*

Cab. *rit.*

Perc. 1

Perc. 2

Hp. *8va* *Ab*

Vln. I *sul pont* *slow gliss.* *rit.*

Vln. II *sul pont*

Vla.

Vc.

Cb.

202 Unrelenting ♩=138

Fl./Picc. 1  
Fl. 2  
Fl. 3  
Ob. 1  
Ob. 2  
Cl. 1  
Cl. 2  
Bsn. 1  
Bsn. 2

Hn. 1  
Hn. 2  
Hn. 3  
Hn. 4  
Tpt. 1  
Tpt. 2  
Tpt. 3  
Tbn. 1  
Tbn. 2  
B. Tbn.  
Tba.  
Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

202 Unrelenting ♩=138

Cab.  
Perc. 1  
Perc. 2  
Hp.

Timpani wood mallets  
Sus Cym soft mallets  
Cr. Cym

202 Unrelenting ♩=138

Vln. I  
Vln. II  
Vla.  
Vc.  
Cb.

Fl./Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Timp.

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

213 214

Fl./Picc. 1 *f* *mf*

Fl. 2 *f*

Fl. 3 *f*

Ob. 1 *f* *mf*

Ob. 2 *f*

Cl. 1 *mf*

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1 *f*

Hn. 2 *f*

Hn. 3 *f*

Hn. 4 *f*

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1 *f*

Tbn. 2 *f*

B. Tbn. *f*

Tba. *f*

Sop. Sax. *mp* *f* *mf* *f*

Alto Sax. *mp* *f* *mf* *f*

Ten. Sax. *mp* *f* *mf* *f* 3

Bari. Sax. *mp* *f* *mf* *f* 3

Bongos  
drum sticks *mp* *mf* 214

Perc. 1

Perc. 2 Glockenspiel  
hard plastic mallets *mf*

Hp.

Vln. I 214 *f* *mf*

Vln. II *f*

Vla. *f* arco

Vc. *f* arco

Cb. *f*





229

Fl./Picc. 1  
Fl. 2  
Fl. 3  
Ob. 1  
Ob. 2  
Cl. 1  
Cl. 2  
Bsn. 1  
Bsn. 2  
Hn. 1  
Hn. 2  
Hn. 3  
Hn. 4  
Tpt. 1  
Tpt. 2  
Tpt. 3  
Tbn. 1  
Tbn. 2  
B. Tbn.  
Tba.  
Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.  
Timp.  
Perc. 1  
Perc. 2  
Hp.  
Vln. I  
Vln. II  
Vla.  
Vc.  
Cb.

Dampen

Ch.

*ff*

*ff*

*ff*

*ff*

Dampen

Dampen

Dampen

Dampen

238

Fl./Picc. 1

Fl. 2 *mp*

Fl. 3 *mp*

Ob. 1

Ob. 2

Cl. 1 *mp*

Cl. 2 *mp*

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba. *p*

Sop. Sax. *mf* *f* *p*

Alto Sax. *mf* *p*

Ten. Sax. *mf* *mp* *p*

Bari. Sax. *mf* *p*

238

Timp. *p*

Perc. 1 *p*

Perc. 2

Hp. *p*

238

Vln. I *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Cb. *p*

245

Flute 247

Fl. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

247

medium-soft mallets

mf slide full length

Temple Blocks  
hard rubber mallets

Triangle

mp

Hp.

247

Vln. I

Vln. II

Vla.

Vc.

Cb.

252 Playfully

Fl./Picc. 1 *mp* Piccolo

Fl. 2 *mp*

Fl. 3 *mp*

Ob. 1 *mp*

Ob. 2 *mp*

Cl. 1 *mp*

Cl. 2 *mp*

Bsn. 1 *mp*

Bsn. 2 *mp*

Hn. 1 *mp* *mf*

Hn. 2 *mp* *mf*

Hn. 3 *mp* *mf*

Hn. 4 *mp* *mf*

Tpt. 1 *mp* *mf*

Tpt. 2 *mp* *mf*

Tpt. 3 *mp* *mf*

Tbn. 1 *mp* *mf*

Tbn. 2 *mp* *mf*

B. Tbn. *mp* *mf*

Tba. *mp* *mf*

Sop. Sax. *f*

Alto Sax. *f*

Ten. Sax. *f*

Bari. Sax. *f*

252 Playfully D - F

Timp. *mp* Quick slide F, B, F

Perc. 1

Perc. 2

252 Playfully

Hp. *mp* *f* *mp* *ff* *A<sup>+</sup>*

Vln. I *mp* *f* *mp* *ff* *pizz.*

Vln. II *mp* *f* *mp* *ff* *pizz.*

Vla. *mp* *f* *mp* *ff* *pizz.*

Vc. *mp* *f* *mp* *ff* *pizz.*

Cb. *mp* *f* *mp* *ff* *pizz.*

259

Fl./Picc. 1 *f* fl. t. *f*

Fl. 2

Fl. 3

Ob. 1 *mf* *p* *tr* *ff*

Ob. 2 *p* *tr* *ff*

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1 *mp* *f*

Hn. 2 *mp* *f*

Hn. 3 *mp* *f*

Hn. 4 *mp* *f*

Tpt. 1 *mp* *f*

Tpt. 2 *mp* *f*

Tpt. 3 *mp* *f*

Tbn. 1 *mp* *f* *sub. p* *ff*

Tbn. 2 *mp* *f* *sub. p* *ff*

B. Tbn. *mp* *f* *sub. p* *ff*

Tba. *mp* *f* *sub. p* *ff*

Sop. Sax. *mf* *f* *sub. mp* *f* *mf* *ff*

Alto Sax. *mf* *f* *sub. mp* *f* *mf* *ff*

Ten. Sax. *mf* *f* *sub. mp* *f* *mf* *ff*

Bari. Sax. *mf* *f* *sub. mp* *f* *mf* *ff*

Timp. wood mallets *p* *mf* *f* *ff*

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

266 Building... *rall.*  $\text{♩} = 70$  277

Fl./Picc. 1 *ff*

Fl. 2 *ff*

Fl. 3 *ff*

Ob. 1 *ff*

Ob. 2 *ff*

Cl. 1 *ff*

Cl. 2 *ff*

Bsn. 1 *ff*

Bsn. 2 *ff*

Hn. 1 *ff*

Hn. 2 *ff*

Hn. 3 *ff*

Hn. 4 *ff*

Tpt. 1 *ff*

Tpt. 2 *ff*

Tpt. 3 *ff*

Tbn. 1 *ff*

Tbn. 2 *ff*

B. Tbn. *ff*

Tba. *ff*

Sop. Sax.

Alto Sax. *mf*

Ten. Sax. *mf*

Bari. Sax. *mf*

266 Building... *rall.*  $\text{♩} = 70$  B - Ab, F - D 277

Timp. *ff* Dampen

Perc. 1 Wood Block *ff*

Perc. 2 *mp* Mute w/ palm *ff*

Hp. *mp* *ff*

266 Building... *rall.*  $\text{♩} = 70$  277

Vln. I *mp* *ff* arco *norm.* *over-pressure*

Vln. II *mf* *ff* arco *norm.* *over-pressure*

Vla. *f* *ff* arco *norm.* *over-pressure*

Vc. *ff* arco *norm.* *over-pressure*

Cb. *ff*

278

Sop. Sax. *mf* *f*

Alto Sax. *f*

Ten. Sax. *f*

Bari. Sax. *f*

286

Sop. Sax. *ff* *decesc.* *mp*

Alto Sax. *ff* *decesc.* *mp*

Ten. Sax. *ff* *decesc.* *mp*

Bari. Sax. *ff* *decesc.* *mp*

294

Sop. Sax. *p* *pp* *ppp* *mf*

Alto Sax. *p* *pp* *ppp* *mf*

Ten. Sax. *p* *pp* *ppp* *mf*

Bari. Sax. *p* *pp* *ppp* *mf*

*♩=50*

305

*molto accel.*

Sop. Sax. *mf* *cresc. poco a poco*

Alto Sax. *mf* *cresc. poco a poco*

Ten. Sax. *mf* *cresc. poco a poco*

Bari. Sax. *mf* *cresc. poco a poco*

313

Sop. Sax. *f* *ff* *mf* *rall.*

Alto Sax. *f* *ff*

Ten. Sax. *f* *ff*

Bari. Sax. *f* *ff*

318

Fl./Picc. 1  
Fl. 2  
Fl. 3  
Ob. 1  
Ob. 2  
Cl. 1  
Cl. 2  
Bsn. 1  
Bsn. 2  
Hn. 1  
Hn. 2  
Hn. 3  
Hn. 4  
Tpt. 1  
Tpt. 2  
Tpt. 3  
Tbn. 1  
Tbn. 2  
B. Tbn.  
Tba.  
Sop. Sax.  
Alto Sax.  
Ten. Sax.  
Bari. Sax.

Timp.  
Perc. 1  
Perc. 2  
Hp.

Vln. I  
Vln. II  
Vla.  
Vc.  
Cb.



326

Flute

Fl. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1  
bells above stands  
*ff*

Hn. 2  
bells above stands  
*ff*

Hn. 3  
bells above stands  
*ff*

Hn. 4  
bells above stands  
*ff*

Tpt. 1  
bells above stands  
*ff*

Tpt. 2  
bells above stands  
*ff*

Tpt. 3  
bells above stands  
*ff*

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

328

Timp.  
medium mallets  
*mp* *ff*

Perc. 1  
*mp* *ff*  
S. D.

Perc. 2  
*ff*  
Chimes l.v. all  
bisbigl.

Hp.

Vln. I  
328  
div.  
*f*

Vln. II  
div.  
*f*

Vla.

Vc.

Cb.

*f*

332

Fl./Picc. 1

Fl. 2

Fl. 3

Ob. 1

Ob. 2

Cl. 1

Cl. 2

Bsn. 1

Bsn. 2

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Sop. Sax.

Alto Sax.

Ten. Sax.

Bari. Sax.

Timp.

Perc. 1

Perc. 2

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

337 **molto rit.** . . . . .

Fl./Picc. 1 *p*

Fl. 2 *p*

Fl. 3 *p*

Ob. 1 *p*

Ob. 2 *p*

Cl. 1 *p*

Cl. 2 *p*

Bsn. 1 *p*

Bsn. 2 *p*

Hn. 1 *mf mp p*

Hn. 2 *mf mp p*

Hn. 3 *mf mp p*

Hn. 4 *mf mp p*

Tpt. 1 *mf mp p*

Tpt. 2 *mf mp p*

Tpt. 3 *mf mp p*

Tbn. 1 *mf mp p*

Tbn. 2 *mf mp p*

B. Tbn. *p*

Tba. *p*

Sop. Sax. *mf mp p pp*

Alto Sax. *mf mp p pp*

Ten. Sax. *mf mp p pp*

Bari. Sax. *mf mp p pp*

Timp. *p* (pedal slide, ad lib)

Perc. 1 Glockenspiel hard plastic mallets

Perc. 2 Sizzle Cym bow *p*

Hp. *p* ad lib gliss.

Vln. I *p* div.

Vln. II *p* div.

Vla. *p* div.

Vc. *p*

Cb. *p*

**molto rit.** . . . . .