

INVESTIGATION, INTERPRETATION AND INTERNALIZATION OF *CONCERTO PICCOLINO*

FOR VIBRAPHONE BY MILTON BABBITT

James Yakas, B.M., M.M.

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APPROVED:

Mark Ford, Major Professor

Steven Friedson, Committee Member

Christopher Deane, Committee Member

John Holt, Chair of the Division of Instrumental  
Studies

Felix Olschofka, Interim Director of Graduate  
Studies in the College of Music

John W. Richmond, Dean of the College of Music

Victor Prybutok, Dean of the Toulouse Graduate  
School

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Written in 1999, *Concerto Piccolino* is a part of the Composer's Guild of New Jersey Vibraphone Commission, which contains a collection of twelve soli written exclusively for vibraphone. *Concerto Piccolino* presents vibrant opportunities for both performer and listener to experience the compositional world of Milton Babbitt. With its limited register, ability to control duration and create extreme dynamics, the vibraphone serves as an appropriate vehicle for Babbitt's multi-dimensional style.

The intent of this study is to first situate this work into Babbitt's compositional output as well as referencing Babbitt's other works for solo percussion. Next, an investigation into the background structure will provide a recommended analytical framework. Included is a performance guide for how these structures should be realized via surface materials throughout the interpretive and internalization stages of the work. Examining a recommended progression from analysis through performance will demonstrate *Concerto Piccolino's* significance and proper place in the standard repertoire of percussion. The study concludes with discussing connections to pedagogy and how the importance of Babbitt's work, as well as other composers of serious music, is vital to the forward progress of music performance.

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By

James Yakas

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## CHAPTER 1

### INTRODUCTION

Upon its inception in the early part of the twentieth century, vibraphone was used as an auxiliary instrument in the orchestras of vaudeville, as well as appearing on a number of novelty recordings. Soon after, during the 1920s and 1930s, its popularity in jazz overshadowed any appearance of the instrument in an orchestral or contemporary music setting. Even after Berg's introduction of the vibraphone in his opera *Lulu* in 1939, the vibraphone was still largely considered an instrument for improvisation. It would take decades for contemporary composers to consider the vibraphone as a viable choice for solo compositions. Examples of its early use in a concert setting are Darius Milhaud's *Concerto for Marimba and Vibraphone* (1947) and James Beale's *Three Pieces for Vibraphone* (1959).

Milton Babbitt's *Concerto Piccolino* (1999) has not only become a standard in the contemporary percussion canon, but is an outstanding example of how vibraphone can provide a suitable medium in realizing twentieth century compositional techniques. Milton Babbitt dedicated his entire career to the use of twelve-tone technique. Although he applied principles as developed by Schoenberg, Webern and Berg, Babbitt is considered an innovator in multi-dimensional serialism and self-referential compositional procedures.

Written in 1999, *Concerto Piccolino* is a part of the *Composer's Guild of New Jersey Vibraphone Commission*, which contains a collection of twelve soli written exclusively for vibraphone. The piece was commissioned by Peter Jarvis and is published by Calabrese Brothers Music.<sup>1</sup>

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<sup>1</sup> Milton Babbitt. *Concerto Piccolino* (1999). Toms River, NJ : Calabrese Brothers Music, 2009.

*Concerto Piccolino* presents vibrant opportunities for both performer and listener to experience the compositional world of Milton Babbitt. With its limited register, ability to control duration and create extreme dynamics, the vibraphone serves as an appropriate vehicle for Babbitt's multi-dimensional style. After situating this work into Babbitt's compositional output as well as referencing Babbitt's other works for solo percussion, I will first provide a recommended analytical framework. This framework will be based on the compositional procedures that create the underlying structure of *Concerto Piccolino*. I will also include a performance guide for how these structures should be realized via surface materials throughout the *interpretive* and *internalization* stages of the work. Examining a recommended progression from analysis through performance will demonstrate *Concerto Piccolino's* significance and proper place in the standard repertoire of percussion.

## CHAPTER 2

### HISTORICAL CONTEXT

Andrew Mead, the preeminent scholar of Babbitt's music created the most comprehensive study of the composer's three compositional periods in his book, *An Introduction to the Music of Milton Babbitt*.<sup>2</sup> Mead's text is organized into three progressive periods. The first period addresses the use of trichords in *Trichordal Pathways*<sup>3</sup>, discussing Webern's influence on Babbitt. Mead entitles Babbitt's second period *Expansion and Consolidation*<sup>4</sup>, referring to the early use of all-partition arrays. Mead concludes with *The Grand Synthesis*<sup>5</sup>, which analyzes compositions that mainly use super-arrays. Arrays are essentially a mosaic of how pitch content is organized. Super-arrays are formed by linking multiple arrays, which can also be considered an "array of arrays" that are simultaneously unfolding in different registers. The true artistry in Babbitt's compositional procedure is how he manages to mask any previously used deep structures with completely original surface materials. Mead discusses this in his first chapter:

Babbitt's music is not static, however. Listening to one of his compositions is akin to seeing nature in all of its richness. All the immediacy of individuality of light falling through thick forest growth or the play of waves in a tidal drip derive from the interactions of simpler, more universal underlying forces, and it is the complexity of their interaction that causes the enormous wealth of variety in their manifestation.<sup>6</sup>

In *Concerto Piccolino*, Babbitt's pitch organization is undoubtedly linked to the consistent patterns that are formed on the surface. This piece is similar to the other works composed in

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<sup>2</sup> Andrew Mead, *An Introduction to the Music of Milton Babbitt*. Princeton, NJ: Princeton University Press, 1994.

<sup>3</sup> Ibid.

<sup>4</sup> Mead, *Introduction*, 124.

<sup>5</sup> Ibid, 204.

<sup>6</sup> Ibid, 8.

the later part of Babbitt's life, having connections in the way he achieved idiosyncratic writing for a variety of instruments, while still retaining his signature style of multi-dimensional serialism.

Babbitt's self referential character is an example of how great composers thrive on their limitations. The term "self referential" used in this study as well in many writings about Babbitt refers to his autonomous compositional style. One cannot conceptualize the music of Babbitt in reference to music that had been heard or written in the past. The process in which he composes creates works that can only be contextualized in that specific piece, making it self-referential. Each piece has original structural elements as well as surface material. Composition methodically seeks to not only limit motivic material, but also organically vary these motives in unique ways. Mead refers to Babbitt's innovative style of variation as "maximal diversity"<sup>7</sup>. It is this diversity that is utilized, occurring in multiple compositional domains, in *Concerto Piccolino*.

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<sup>7</sup> Mead, *Introduction*, 10.

## CHAPTER 3

### MUSIC FOR PERCUSSION

In an interview with composer James Romig, Babbitt claims to have never written a piece in the “abstract”. In other words, he has always had the limitations or as he calls it, character, of a specific instrument or performer in mind.<sup>8</sup>

Babbitt’s two pieces for solo percussion, which were written before *Concerto Piccolino*, are *Homily* for snare drum (1987) and *Beaten Paths* for marimba (1988). *Homily* was part of a collection of snare solos commissioned by Stuart Saunders Smith. Working with the Noble and Cooley Drum Company, Smith commissioned numerous avant-garde composers to create a set of snare drum pieces to help bring a new perspective to the snare drum as a solo instrument.<sup>9</sup> The final result is now a four-volume set of snare drum solos titled *The Noble Snare*. In the Romig interview, Babbitt expresses how an integral part of his compositional process is tied to the control of duration and even further, the ability to adjust dynamics during duration or decay. Because of this, Babbitt uses very little percussion in his orchestral pieces. He also comments on how his snare drum solo, based on the limitations of the instrument, was one of his most difficult pieces to compose. Even with these limitations, Babbitt manages to create a unique structure utilizing his serialized time-point system. The time-point system is a system created by Babbitt to serialize rhythm. This was preceded by the durational row system, which used durational values to create a row. The time-point system uses attack points within a given modulus. This gives the row the ability to be taken through the classic four operations

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<sup>8</sup> Milton Babbitt, *Two Discussions with Milton Babbitt.* Interview by James Romig, 11 April 2002, Dickenson College, Carlisle, PA.

<sup>9</sup> Baker, “The Snare Drum as a Solo Concert Instrument”. DMA diss., University of North Texas, 2004.

(Transposition/Inversion/Retrograde/Retrograde Inversion) while still preserving the intervallic relationships (something that the durational row system was not able to do). Changes in the rhythmic modulus as well as implement changes throughout the work signal compositional boundaries. As he often does, Babbitt uses a pun to derive the title to *Homily* from a St. John Chrysostom homily. "And why, it is asked, are there so many snares? That we may not fly low, but seek the things that are above".<sup>10</sup>

Referencing *Beaten Paths* for marimba, Babbitt describes how his approach was similar to writing for piano, always challenged by the inability to control the dynamics of duration. Even further, the marimba has the limitation of having a smaller range and fewer pitches that are able to simultaneously sound. In the program notes to *Beaten Paths*, Babbitt seems to comment, even to the point of frustration, in his inability to utilize the entirety of his compositional aesthetic in this particular medium. He again uses a pun (in the title) to express his challenge in composing for an instrument that essentially contains only a series of attacks. "Of the multiple references of the title *Beaten Paths*, probably the least apparent is that which suggests the adaptation of properties of other of my works to a medium in which I cannot realize fully or at all salient characteristic traits of much of my music".<sup>11</sup>

Romig also references the ability to roll on percussion instruments as creating an "illusion of sustain", but Babbitt immediately dismisses the idea of rolling, referring to the act as a sort of "cliché".<sup>12</sup> In discussing the ideological capabilities of instruments, Babbitt also

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<sup>10</sup>Daphne Leong, "Webs and Snares: Multiple References in Babbitt's *Homily* and *Beaten Paths*." *Music Theory Online* 17, no. 2 (July 2011): 17 2.8., accessed August 5<sup>th</sup>, 2017, <http://www.mtosmt.org/issues/mto.11.17.2/mto.11.17.2.leong.html>.

<sup>11</sup> Milton Babbitt, *Beaten Paths* (1988). Sharon, VT: Sonic Art Editions, 1988.

<sup>12</sup> Babbitt, Romig Interview.

reluctantly states his preference for writing for wind instruments, string instruments or voice, because of their durational control.<sup>13</sup> This sentiment, although not surprising given how duration plays such a large role in Babbitt's music, is pertinent in considering the durational qualities of percussion keyboard instruments. Vibraphone, with its ability to control the length of duration (although not the dynamic of the durations), facilitates more opportunity to realize Babbitt's compositional practices. It is this durational control that separates *Concerto Piccolino* from Babbitt's other pieces written for solo percussion. Babbitt addresses idiomatic concerns again in the Romig interview: "So, from the very outset, the -- I don't want to say limitations -- characteristics of the instrument, the range of the instrument and so forth, play a fundamental role in the whole question of shape and structure of the piece."<sup>14</sup> Knowledge of these underlying structures is an essential element to any interpretation of these works. In his snare drum solo, Babbitt clearly exhausts all parameters by creating obvious time-point boundaries. These boundaries are marked by dynamic changes, adjustments in the rhythmic modulus, as well as implement changes. The boundaries are less obvious in *Beaten Paths*, but this does not diminish the importance of an informed performance.<sup>15</sup> The lack of durational control inherent in the marimba obligates the performer to grasp onto all available interpretive materials that can be gleaned from the analysis. In *Concerto Piccolino*, this study will show how the limited register of a three-octave instrument plays an integral role in the structural elements of the composition.

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<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> Leong, "Webs and Snares".

Daphne Long's article entitled "Webs and Snares" makes pertinent theoretical connections to Babbitt's first two works for percussion.<sup>16</sup> Her connections between the two pieces regarding a shared array and multiple cross-referencing of material highlights Babbitt's late style, as well as proving his ability to exhaust motivic material throughout the limitations of these instruments. Although these first two percussion works are different in instrumentation, Leong illuminates Babbitt's compositional style by first connecting the underlying structures of both pieces. Leong continues to show, even as they are connected in their deep structures, that these two pieces are articulated differently on the surface. Both of the pieces are based on the same 4-part all-partition array, articulated in 4 lynes. All partition arrays are arrays that feature all possible combinations of the aggregate. 4-part arrays feature 34 aggregates because there are 34 ways of dividing 12 into 4 or fewer parts. Lynes are horizontal strands of the aggregate found in an array. In the snare drum piece, the lynes are presented through time-points, articulated through dynamics, pianissimo through fortissimo.<sup>17</sup> The marimba piece is presented in a high and low register, two lynes for each register, articulated through pitch class.

By choosing to exclude rolls when composing for both of these instruments, Babbitt robs himself of one of his most important compositional parameters, duration. Durational control is central to Babbitt's compositional technique and having the inability to control and shape duration is something Babbitt speaks of missing when composing for percussion.<sup>18</sup> It is with this sentiment that one can see (and hear) in *Concerto Piccolino*, Babbitt gaining back one of his relinquished compositional tools on percussion, the ability to control duration.

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Babbitt, Romig Interview.



## CHAPTER 4

### VIBRAPHONE AS VEHICLE

Historically, the vibraphone has struggled to gain popularity among performers and composers of contemporary concert music. Aside from its initial departure from jazz and popular music, solo concert vibraphone repertoire is still second to solo marimba repertoire in exposure, accessibility and number of new compositions each year. However, judgments should not be made to perceive one instrument as more viable than the other. Rather, they should be approached for their idiomatic appropriateness, compositional function, and given merit on their musically relevant acoustic qualities. Like all percussion instruments, these keyboards possess limitations that should be considered from the time they are chosen as a vehicle for composition. The marimba, having had success in the academic world, has produced a rich tradition of performers and percussion composers who have generously contributed to the instruments' growth in the last three decades. The instrument has also become the instrument of choice for compulsory technical training for high school and college-aged keyboard students. Marimba, requiring little manipulation in the form of creating sound, has become a popular pedagogical starting point for percussion instructors. However, it is this lack of manipulation that also makes it a difficult instrument in which to control expression. The less obvious ways to manipulate the marimba often get lost in approach of immature performers. Subtleties of bar acoustics, mallet choice, gesturing and stroke type are advanced concepts that are only considered and achieved by committed marimba performers and composers.

Comparatively, vibraphone requires greater amounts of manipulation to simply function as a performance vehicle. Gaining the ability to achieve duration as well as expressively

controlling that duration is an element of music that some composers have gravitated toward. The manipulative techniques of the instrument require more attention to the theoretical material in the preliminary stages than that of realizing a work on marimba. The interpretive choices of note length, chord tone balance, clarity of line with a single pedal and four (or two) mallets, obligates the player to conceptualize the composition at a more theoretical level in the initial stages. One could also argue these are important considerations of a marimbist as well. However, the acoustic conditions of the marimba provide an appearance of interpretive finality. When in reality, as mentioned before, careful artistic choices need to be made to create a truly expressive interpretation on marimba. It is here a discussion of how these two instruments can be used pedagogically could be originated, however that is beyond the scope of this study. Comparing the interpretive approaches on these instruments is not a judgment on their validity as performance vehicles, or place in percussion pedagogy. Instead, this comparison intended to provide observations to consider during the interpretive, early stages of learning a piece.

Although Babbitt had written for vibraphone and drum set (with rolls, ironically) in his piece for Jazz Ensemble, *All Set* (1957), he had never used vibraphone as a solo vehicle in his compositions. Written almost twenty years ago, Babbitt's work for vibraphone still pushes the boundaries of the instrument, and has changed what composers thought was possible on the vibraphone.

First in terms of register, Babbitt uses all three registers of the instrument, functioning equally throughout the work. As we will see in the analysis portion of this study, the arrays that represent the structure of his pitch material are based on the interplay and cross-referencing between the three octaves of the vibraphone. Register is one of the integral parameters Babbitt

uses to stratify his pitch class world. His use of register in *Concerto Piccolino* is quite different than in a standard tonal piece. In tonal works for vibraphone, register is often used in a piano-like function, melody in the higher and middle register, and harmony in the lower register.

Second, the rhythmic language of Babbitt combined with the challenge of controlling duration on vibraphone, puts demands on the performer that are, at times, close to impossible to realize. Edits and omissions need to be made to make some passages playable. Having to perform this level of literature simply makes players more virtuosic. Diving in to the deep layers of this work, or any Babbitt composition, not only makes for a life-long project, but also makes the process of learning other compositions, of less depth, quicker to interpret, internalize and perform.

Finally, In the case of *Concerto Piccolino*, we have an opportune convergence of a percussion instrument capable of extreme manipulation of dynamics and duration, and a composer whose aesthetic is largely based on these two principles. Great composers write for the challenges or idiosyncrasies of the instrument. For *Concerto Piccolino*, its greatness lies in the fact that the piece would not work on any other keyboard percussion instrument. The brightness of the metallic bars which can provide a cutting rhythmic quality, contrasted with lush tones available with a light touch and dampening, provide a spectrum of colors that seems to be a fitting acoustic world for Babbitt's aesthetic. Performing an informed rendition of this work makes the vibraphone sound like a more "intelligent" vehicle for composition. Much more than for most pieces written for the instrument, most of which could easily be realized on piano.

The remainder of this study will present a progressive approach to learning *Concerto Piccolino*. The intent is to present a step-by-step method to proceed through an *investigative* stage of creating an analytic framework, to then use this information to make artistic *interpretive* choices and finally, to provide specific strategies of how to *internalize* these choices.

## CHAPTER 5

### INVESTIGATION

When approaching a compositional world like that of Milton Babbitt for the first time, a performer may find it difficult to ignore intuitions about pitch organization, interpretation and function that may be instinctual from a consistent exposure to tonal music. However, once immersed in the music, a performer can begin to understand the underlying systems that determine the surface material. It is with this essential knowledge that performers can attempt to bridge the gap that is created between composers (passing through notation and the performer) to the listener. However, finding a point of reference and contextuality in Babbitt's music is no easy task. Like all twelve-tone music, this piece does not rely on repetition, tonal recall, rhetorical material or motives. Instead, each note serves a very specific purpose, and is not dependant on a hierarchy of extensive intervallic properties.<sup>19</sup> Instead, Babbitt's unique contribution to the twelve-tone tradition was in the multiple dimensions that a single pitch class could serve a purpose. Unlike tonal organization, which depends on a hierarchy of diatonic collections (creating unique roles for each interval), Babbitt creates works that what Romig says, "only relate to themselves".<sup>20</sup> It is not that the music of Milton Babbitt lacks contextuality, it is that the webs of relationships are so allusive and buried, that hearing pitch content as varying degrees of stability needs to be abandoned. Joseph Straus, in his article "Listening to Babbitt" states, "Babbitt has attempted to solve the problem of contextuality - creating and apprehending musical coherence in the absence of communal norms for doing so- by insisting

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<sup>19</sup> Mead, *Introduction*, pg.9

<sup>20</sup> Babbitt, Romig interview.

on the most thorough and intensive possible integration of all the dimensions“.<sup>21</sup> The self-referential context that is created, which only “refers to itself”, establishes a set of rules that govern the dimensions of every Babbitt composition. By trying to determine how these dimensions are governed, one can see how the underlying web yields a clear function for every detail on the surface. Once *investigated*, these dimensions will then shape an *interpretation* that supports the consistent cross-referencing and “maximal diversity” that yields seemingly endless variations.

In order to arrive at an analysis of this work that will then determine an interpretation, it is necessary to look at the available evidence we have from Babbitt pertaining to the underlying structure. First, an obvious starting point would be a pitch-class analysis of the entire piece. There are obvious groupings of dynamic markings in triplicate, which would lead one to believe that identifying Babbitt’s use of trichords and analyzing the hexachords they generate would yield a clear structure. However, after much consultation on the analytical methods, it was determined that a pitch-class analysis, if at all, was not necessary to make theoretical connections in preparing a performance of the work. Instead, more insight was gained by looking at Babbitt’s description of the piece in the performance notes of the New Jersey commission:

The title should suggest one of the more pervasive and manifest properties of the relatively short composition: the progression of macrophrases in what may be viewed, or better, heard as alternations of solo and *ripieno*, differentiated dynamically, registrally, and texturally.<sup>22</sup>

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<sup>21</sup> Joseph Strauss, “Listening to Babbitt.” *Perspectives of New Music* 24, no. 2 (spring - summer, 1986) : 10-24.

<sup>22</sup> Babbitt, *Concerto Piccolino* (1999).

Using this brief but insightful information can help form a framework that will guide a performer in choosing an interpretation for the multiple domains of this work. Employing what was previously mentioned about having an “atonal” perspective of form, not determined by a hierarchy of pitch content, a performer can search for patterns which mark these sections mentioned by Babbitt (*solo, ripieno*), in two of the most obvious domains of this piece, rhythm and dynamics. First, a determination has to be made of how the boundaries of these two contrasting sections of are defined. With very few exceptions, creating an analysis of used vs. unused registers will help to create a background where rhythms and dynamics can begin to be compartmentalized and compared, illuminating patterns between the solo and *tutti* sections. For analytical reasons, solo sections will be defined as sections that contain material sounding in two or more registers of the instrument. *Tutti* sections will be defined as sections containing material sounding in all three registers of the instrument.

**Table 5.1: Sounding registers of *Concerto Piccolino*, measures 1-24.**

|            |    |    |    |     |     |    |
|------------|----|----|----|-----|-----|----|
| mm.        | 1  | 2  | 3  | 4   | 5   | 6  |
| High F4-E5 | X  | X  | X  | X   | X   | X  |
| Mid F3-E4  | X  | X  | X  | X   | X   | X  |
| Low F2-E3  | X  | X  | X  | X   | X   | X  |
| Solo/Tutti | T  | T  | T  | T   | T   | T  |
| mm.        | 7  | 8  | 9  | 10  | 11* | 12 |
| H          | X  | ○  | ○  | X   | X   | X  |
| M          | ○  | ○  | ○  | X   | X   | X  |
| L          | X  | X  | X  | X   | ○   | X  |
| S/T        | S  | S  | S  | T   | T   | T  |
| mm.        | 13 | 14 | 15 | 16  | 17  | 18 |
| H          | X  | X  | X  | X   | X   | X  |
| M          | X  | X  | X  | X   | X   | X  |
| L          | X  | X  | X  | X   | X   | X  |
| S/T        | T  | T  | T  | T   | T   | T  |
| mm.        | 19 | 20 | 21 | 22* | 23  | 24 |
| H          | ○  | ○  | ○  | X   | X   | X  |
| M          | X  | X  | X  | X   | ○   | ○  |
| L          | ○  | ○  | ○  | X   | X   | X  |
| S/T        | S  | S  | S  | S   | S   | S  |

Table 5.1 shows three rows representing the registers of the vibraphone and when each register sounds for the first twenty-four measures of the piece. The asterisk marks when it is determined that bar lines do not sufficiently mark the boundary between solo and *tutti* material or analysis by register was secondary to evidence in other domains.

After seeing the defined boundaries of register, connections can be made in the area of rhythm and dynamics. Table 5.2 documents rhythmic vocabulary, dynamic markings and comments relating to the musical character found between the contrasting sections.

At the outset of the piece, there are distinct differences between the rhythmic vocabulary and dynamic range (number of dynamic markings). Measures 1-6 are strictly duple while containing four different dynamic levels changing at a fast rate. In measure 7, new rhythmic vocabulary appears, which creates a sense of *rubato*, one that would be common during the entrance of a soloist in a concerto. The *rubato* affect is carried out by the change from duple rhythm articulated in thirty-second notes to dotted quarters creating a triple meter feel. There is also a feeling of slower articulated rhythm; this first solo section is the first use of real “space” that is heard. Along with a contrasting metric quality, there is an increased appearance of metric “fillers” which also contribute to a sense of instability. Essentially, these fillers are longer durations within a rhythmic modulus that are “filled” with faster subdivisions. These fillers appear frequently in this work and will be discussed in greater detail later in this study. The dynamics also become static in this first solo section, staying at a level of mezzo forte for three measures.



Table 5.2: Analysis of solo and *tutti* sections based on register.

| Measures | Orchestration | Rhythm         | Dynamics         | Comments   |
|----------|---------------|----------------|------------------|--|
| 1-6      | Tutti         | Duple          | pp, p, mp, mf    |  |
| 7-9      | Solo          | Triple/Fillers | mf               | Metric Rubato/Slower Rate                            |
| 10-18    | Tutti         | Mostly Duple   | pp, p, mp, mf    |  |
| 19-24*   | Solo          | Triple/Fillers | pp, p            | Metric Rubato/Slower Rate                            |
| 25-33    | Tutti         | Triple/Fillers | mp, f            | Ens. functions like the solist here/Dynamics extreme |
| 34-40*   | Solo          | Triple/Fillers | pp, p, mp, mf, f | Extremely dense/active rhythmic material             |
| 41-47    | Tutti         | Triple/Fillers | pp, p, mf, f     | Extremely dense/active rhythmic material             |
| 48-51    | Solo          | Triple/Fillers | pp, p, mp, mf, f | Extremely dense/active rhythmic material             |
| 52-59*   | Tutti         | Mostly Duple   | pp, p, mp, mf    | 2 dynamics until the end of phrase                   |
| 60-65*   | Solo          | Mostly Duple   | pp, f            | Most extreme dynamic contrast                        |
| 66-68    | Tutti         | Mostly Duple   | p, mp, f, ff     | First fortissimo in piece                            |
| 69-72    | Solo          | Mostly Duple   | p, mp, f, ff     | First use of the high F (highest note on Vibraphone) |

In the middle sections of the piece, the *tutti* passages seem to continue the character that was introduced by the solo section, containing less dynamic markings, but creating an extreme contrast, almost signaling a development-like section. This section also includes a more active rhythmic quality as well. On a structural level, an arch form is created by the density of rhythms that are at their highest point in this middle section. One can see from table 5.2 that both rhythmic material and the rate of change in dynamic markings are maximized here.

In the final sections of the piece, marked by the most dramatic of all the solo sections, begins in m. 60. Here, the most disparities in dynamic markings appear for the entire piece. Along with using two extreme ranges of the vibraphone (highest and lowest register), the material changes quickly from *pianissimo* to *forte*. Following this solo section is the last *tutti* section with the first appearance of the *fortissimo* dynamic marking thus far. The piece ends with a solo section containing a mix of both duple and triple based rhythmic material as well as using the highest note on the vibraphone for first time in the work (F4).

Once these sections can be clearly defined, performers can construct an informed foundation on which an interpretation can be crafted. Ideally, this interpretation creates a hearing that is beyond a literal reproduction of the rhythmic and pitch material. It is here that the player will have an opportunity to artistically communicate the self-referential character of this work by means of exploiting all of the idiosyncrasies of the vibraphone.

## CHAPTER 6

### INTERPRETATION

The discussion of how to interpret twelve-tone music is not as ubiquitous as the discussion questioning its validity. Because of the density and difficulty of merely creating a literal reproduction of twelve-tone music, most critics of the genre do not believe composers have left the performer or the listener room to create or hear artistic interpretation. However, by studying the writings of performers, theorist and musicologists specializing in this genre, one can find a spectrum of interpretation ranging from literal, precise reproductions to loose renditions that borderline on improvisation. The genesis of twelve-tone music was founded on freedom of structure, and moved away from the diatonic tonal hierarchy to create a “liberation of pitches”. It is for this reason that interpretation needs to be tied to the music’s unique structure. Ultimately, the success in communicating a “hearable” interpretation is as much the responsibility of the *performer* as it is the listener. A full discussion of musical perception is beyond the scope of this paper, but certain justifications for guiding interpretive choices need to be discussed and recommended.

Joseph Straus quotes Babbitt, as he answered a question regarding the ability of a listener to hear twelve-tone structure: “Of course you can hear it, but it’s not a matter of hearing. It’s a matter of how you think it through conceptually with your musical mind; it’s a matter of how you conceptualize, how you conceive it”.<sup>23</sup> The common perception among critics regarding performances of Babbitt’s pieces describe the music as cold, disconnected, random and lacking a hearable structure. Although there are many questions regarding the

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<sup>23</sup> Straus, “Listening to Babbitt”, 12.

perceptiveness of the listener, this may also be a result of the performance itself, not the composition. Babbitt in "*On Relata I*" comments on the performers inability to simply realize the written page:

The performance was a profoundly unsatisfactory representation of the work; in the last of the three public performances, the most "rehearsed", only about 80 percent of the notes composition were played at all, and only about 60 percent of these were played rhythmically accurate, and only about 40 percent of these were played with any regard for dynamic values.<sup>24</sup>

Maximizing the levels of contextuality in Babbitt's music cannot be achieved by simply producing an "accurate" rendition of the written page. As Babbitt commented, this will not yield a particularly satisfying or enlightening performance.<sup>25</sup>

One can see similarities between what scholars have said about *hearing* Babbitt and make connections to ways a performer should attempt to interpret and ultimately *perform* Babbitt's works. In Edward Cone's essay "On Two Modes of Esthetic Perception", he describes how most studies of musical form pertaining to performance focus on what he calls *synoptic comprehension*.<sup>26</sup> Cone describes this is an observer's ability to perceive an object as where it *was*, where it *is* and where it *will be*. In other words, this is the act of creating structural unity in time and place, and assigning the present events into a larger structure. In tonal music, this is how composers utilize motivic material, and even at a more basic level, how we conceptualize tonality in the diatonic system. However, even as most of Cone's essay discusses music performance as it relates to synoptic comprehension, he also suggests that two simultaneous

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<sup>24</sup> Milton Babbitt, *Words About Music*. Madison, WI: University of Wisconsin Press, 1987.

<sup>25</sup> Ciro Scotto, "Preparing a Performance of Babbitt's *Arie da Capo*." *Perspectives of New Music* 26, no. 2 (summer 1988) : 16-24.

<sup>26</sup> Edward Cone, *Musical Form and Musical Performance*. New York, NY Norton, 1968, 97.

kinds of hearing needs to be achieved to truly experience a piece of music. The other necessary mode of perception Cone discusses is *immediate apprehension*. This is described as an approach that allows us to observe surface details, as they are given to us as strings of sounds, containing tension and release. Cone argues that listening with these modes acting simultaneously creates an “ideal” hearing.<sup>27</sup> Marylyn Fisher, in her article “Listening to Music: What is an idea Hearing?”, contests Cones’ description of the ability to simultaneously use both modes of hearing. She argues, “The receptivity of immediate apprehension differs markedly from the scope and degree of mental activity when engaging in synoptic comprehension. The former requires the listener to await the sounds quietly; the latter requires the mind actively to create the structure of the entire work”.<sup>28</sup> Whether the modes can be perceived simultaneously or not, both agree that two modes are required to conceptually digest all facets of a piece.

Since listener perception is so tied to performance practice, it would make sense to connect these two modes from the listening realm to the realm of performance. This connection essentially prescribes that a performer should be aware of the structure and the surface (simultaneously or not) when interpreting a work. John Rink writes in *Rethinking Music*, “While playing, the performer engages in a continual dialogue between the comprehensive architecture and the ‘here and now’, between some kind of goal –directed impulse at the upper most hierarchical level and subsidiary motions extending down to beat or sub-beat level”.<sup>29</sup> Therefore, performers are not only recommended, but also obligated to understand the

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<sup>27</sup> Cone, *Musical Form*.

<sup>28</sup> Marilyn Fisher, “Listening to Music: What is an Ideal Hearing.” *The Journal of Aesthetic Education* 24, no. 2 (summer 1990) : 116.

<sup>29</sup> John Rink, “Translating Musical Meaning.” In *Rethinking Music* 1999, edited by Nicholas Cook and Mark Everest, 217-238. New York, NY : Oxford, 2001.

structural strata of a given work, and use these findings in their interpretive choices. Cone provides a reference to the “sensuous” medium of the surface and comments how most performers get fixated in these details, with minimal regard to the structural elements. However, he does state that the unique surface material in the artistic medium is what separates music and math. Cone states, “Mathematics, unlike art, fails to respond to immediate apprehension”.<sup>30</sup> As for many critics of Babbitt’s music, that is precisely how they describe his pieces, works of *math*, not art. Therefore, a performer of Babbitt’s works has an obligation to not only communicate the structural elements of form (synoptic comprehension), but to also artistically realize the details of the surface (immediate apprehension), which in the music of Babbitt, are numerous. There is no question that the difficulty of realizing the correct pitches in any work of Babbitt is by itself, a difficult endeavor. But a sterile, one-dimensional interpretation of the pitch content, without containing an expressive element would not convey the facets of a Babbitt composition. As Babbitt was known for multi-dimensional serialism, a performer’s interpretation, internalization and performance practice must be multi-dimensional as well. Pitch classes heard by themselves, without meticulous detailing of the dynamic domain as well as their durational quality is not a true realization of Babbitt’s innovative procedures. It is in this detailed approach that an ideal hearing, as prescribed by Cone, can be achieved.

In Joel Lester’s article “Notated and Heard Meter”, he disputes the possibility of actually hearing serialized rhythmic compositions.<sup>31</sup> His contention is that in the absence of a metric

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<sup>30</sup> Cone, *Musical Form*, 98.

<sup>31</sup> Joel Lester, “Notated and Heard Meter.” *Perspectives of New Music* 24, no. 2 (Spring - Summer, 1986) : 120.

grid, or what he calls to a “yardstick”, a listener cannot perceive a metric hierarchy that is necessary for conceptualizing meter.

The result is the absence of a metric hierarchy in a sense that such a hierarchy is presented on tonal music. Impulses occur, marking off time-points. But without sufficient regularity in any set of impulses, there are too few cues that resonate within the listener to enable him or her to establish a metric grid.<sup>32</sup>

Lester states that in atonal music, pitches relate to each other, not because of a hierarchy of tonality like that in tonal music, but because of their relationship to each other intervallically. Different permutations of the aggregate can still be conceptualized because pitches are “discrete and identifiable entities”.<sup>33</sup> But with meter, in the absence of a heard pulse, subdivision, or place on the “yardstick”, rhythms are seen as irrelevant. In response to Lester, one can refer back to Babbitt’s comments on musical perception on two occasions. First, Babbitt suggested that we consider not what we “hear”, but how we conceptualize what we hear, commenting on a listener’s ability to comprehend.<sup>34</sup> Second, he has been quoted in commenting on how a listener lacking at least a rudimentary knowledge of the written score has almost no chance of conceptualizing the music.<sup>35</sup> Babbitt speaks of this challenge of music perception, and the necessity of a listener, at least minimally being aware that this is unlike conceptualizing tonal music:

Imagine you’re listening to a tape of a language that you have never heard in your life and of which you know nothing. It has no relation to any language that you know at all, so you cannot possibly extrapolate in any way whatsoever from any of your past language knowledge or habits. You’re asked just to define the segmentations of this language, to discover when words end, or what are the phonemes of the language, or

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<sup>32</sup> Ibid, 118.

<sup>33</sup> Lester, “Notated and Heard Time”, 127.

<sup>34</sup> Strauss, “Listening to Babbitt”, 22.

<sup>35</sup> Babbitt, *Words about Music*, 253.

any of the primitive building blocks of the language. Just imagine the problem involved and imagine either the kind of approaches you might take to hearing it, or the approaches a person might take in order to finally get some notion of the purely syntactical nature (not, of course, the semantic nature) of this particular language.<sup>36</sup>

It is also appropriate to argue that Babbitt does not intend a listener to perceive a heard pulse. Although Babbitt's own system of serialized rhythm depends on a steady, consistent modulus whereas time-points are articulated, in this particular work Babbitt uses countless rhythmic "fillers" that do not create a clear time-point/modulus relationship. Because of the countless levels of separation from the serialization of the rhythm in the written as well as heard meter, an interpretation of rhythmic values should be chosen from other elements of Babbitt's compositional material, not the time point relationships. Lester is correct in assuming we will not hear a silent "click-track" that he refers to in his performance of Babbitt, but what we can hear is different densities and textures in a performer's overall interpretation of rhythmic content. Therefore, guided with knowledge of the compositional structure (boundaries of used/unused registers), combined with an adjusted sense of listening (an absence of pulse, listening for density/texture) the listener will have the ability to hear the structural elements.

Another factor of rhythmic interpretation is an unavoidable human element that will arise from a performer recreating Babbitt's sophisticated rhythmic structures. Lester related his experience in learning Babbitt's rhythmic material to "jazzy" and syncopated. He commented on how his part was a composite of other parts in his quartet as well as how his rhythms "played off" of his imaginary click-track, necessary for him to simply perform the written page.

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<sup>36</sup> Babbitt, *Words about Music*, 171-172.



Rink also writes of an “artistic prerogative” that is inevitably included when we filter our analysis through our own interpretive process.<sup>37</sup> These stylistic elements are the subconscious, intuitive, spontaneous and even accidental shades a performer may include to create their own authentic version of a work.<sup>38</sup> Quality time spent internalizing and performing *Concerto Piccolino* and other Babbitt compositions will most certainly yield an individualized, “jazz-like” interpretation of these serialized, seemingly cold, mathematical rhythmic structures.

After defining a clear role of the performer of Babbitt’s music, one could again ask, what is the responsibility of the listener? As mentioned before, in each of Babbitt’s pieces he creates new systems of organization that are only relevant to that piece. This is not to say that he does not reuse certain broad organizational elements in multiple pieces such as multi-part all-partition arrays, or certain background structures that have previously been used as compositional foundations. However, each piece is organically crafted from foundation to surface, and yields entirely unique pieces. It is for this reason that Babbitt recommends a fundamental “knowledge of the printed score and ultimately an auditory intimacy with the performed score”<sup>39</sup>. So how should one deliver a performance of Babbitt? Should the performer conduct a pre-performance lecture about the intricacies of the structural elements, or pass out copies of the score? As stated before, discussing the musical perception and cognition of twelve-tone music is beyond the scope of this study, however it could be argued that an informed performance of Babbitt’s music would be artistically satisfying across all listeners, which will most likely contain varying abilities of theoretical comprehension.

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<sup>37</sup> John Rink, “Translating Musical Meaning.”, 118

<sup>38</sup> Ibid, 119.

<sup>39</sup> Babbitt, *Words About Music*, pg 253

This chapter has thus far discussed the challenges with twelve-tone interpretation, creating a performance that would create an “ideal” hearing, as well as how musical perception is of equal responsibility between performer as well as listener. After summarizing the background analysis of the structure, as well as highlighting the importance of interpreting both structure and surface and the relationship they create, we can now recommend a framework of interpretation for *Concerto Piccolino*. Turning again to Babbitt’s program notes for this work, interpretive choices can be made by highlighting part of his description of the piece. Babbitt states the work is “the progression of macrophrases in what may be viewed, or better, *heard* as alternations of solo and *ripieno*...” The use of the word “heard” leads us to believe that Babbitt believes it is of primary importance that the listener can discern these two distinct sections. Defined by the combinations of the three registers of the vibraphone, as shown earlier, sections of solo and *tutti* can be realized and articulated through parameters of rhythm, dynamics and duration. What follows are interpretive recommendations for the aforementioned parameters.

### Rhythmic Relativism

In Daphne Leong’s article “Virtuosity in Babbitt’s *Lonely Flute*”, she discusses how theoretical analysis and performance practice can merge to have “parallel journeys” in creating the highest level of realization of Babbitt’s music.<sup>40</sup> The co-author of this article, Elizabeth McNutt, lecturer and director of the NOVA new music ensemble at the University of North Texas, also describes her process for learning Babbitt’s *None but the Lonely Flute*, for

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<sup>40</sup> Leong, “Lonely Flute”

unaccompanied flute.<sup>41</sup> As discussed earlier, Babbitt's time-points are often hidden, as in this work for flute as well as *Concerto Piccolino*. Leong describes this as a certain distance between time-points, notated meter and musical surface. Disputing Lester's suggestion that notated time-points cannot be heard, Leong states: "We propose however, that the perceptual impact of these various rhythmic levels derives not from a one-to-one correspondence, but from fluctuations in their degree of correspondence".<sup>42</sup> These points of correspondence were important markers for McNutt, especially in the beginning stages of creating rhythmic interpretation. "She (McNutt) decided that convergences of rhythm and meter indicate important musical markers, and that divergences suggest freer and more fluid interpretation".<sup>43</sup>

Leong and McNutt essentially recommend two distinct styles of rhythmic interpretation; one where the time-points, written meter and surface elements are at the least distance, and the other where this distance is greater. They label the sections with the *least* distance a "square" interpretation, where McNutt uses "breath, accents, vibrato, timbre and varied tonguing to emphasize downbeats".<sup>44</sup> The sections that contain the *most* distance were interpreted as more free, or "also requiring rhythmic clarity, but in a manner that sounds spontaneous."<sup>45</sup> This distinction between literal and free interpretation puts tremendous demands on the performer to portray a difference in an extremely complex rhythmic environment. Leong and McNutt also state that their recommendation helps remedy the

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<sup>41</sup> Leong, "Lonely Flute"

<sup>42</sup> Ibid

<sup>43</sup> Ibid

<sup>44</sup> Ibid

<sup>45</sup> Ibid

stereotypes of Babbitt's music containing a "rigor that does not leave room for artistic expressivity or freedom of interpretation."<sup>46</sup> This idea of illuminating time adjustments on the surface, according the formal elements of the work also coincide with Cone's idea of an ideal hearing, simultaneously giving attention to *synoptic comprehension* and *immediate apprehension*.

Andrew Mead, in recommending a path to interpretation, warns performers of trying to fit interpretive choices from one Babbitt piece into another.<sup>47</sup> As mentioned before, because of Babbitt's self-referential character of contextuality, an interpretation for one piece, although tempting, will not necessarily work with another piece. The interpretive choices made by Leong and McNutt (strict vs. free) can be achieved because of the idiosyncrasies and monophonic character of the flute. However, when considering Babbitt's piece for vibraphone, a performer will not have enough occurrences of monophonic material to achieve a perception of strict vs. free. In performing *Concerto Piccolino*, the rates at which textures change from monophonic to polyphonic are too quick and too inconsistent to use this interpretive approach as a parameter for marking structural boundaries. What is recommended however, for this piece, is an approach to the rhythmic vocabulary that is extremely accurate, with the intent of highlighting the differences between duple, triple, polyrhythm, metric fillers and other elements that will create structural boundaries. This will create a hearing of the material as going back and forth from a feeling of steadiness to a feeling of written *rubato*, which was referred to earlier. Following a progressive learning process and pushing the boundaries of a literal rhythmic

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<sup>46</sup> Leong, "Lonely Flute"

<sup>47</sup> Andrew Mead, Interview by author. Phone Interview. Chicago, IL, October 8<sup>th</sup>, 2018.

interpretation can achieve these contrasting characters. It is also important, while pushing these boundaries, to perform with a consistent pulse, creating a perceived rhythmic grid, previously mentioned in the writings of Lester. Though not easily achieved, this fine line will separate an artistic interpretation from a mathematical reproduction. Recommendations for these approaches will be given in the internalization portion of this study.

### Dynamic Profiles

The question in the performance practice of Babbitt's music seems to be what separates his pieces on an interpretive level. Separating those of which were written for electronics and those written for human performance. If an accurate, literal recreation of the written page is the goal (which Babbitt has spoke about many times, referring to electronic music) what then, is left to the interpreter? Romig asked this exact question of Babbitt:

Oh there's a great deal (left to the performer). The dynamics are very important in (the piece) in all the pieces, as you know, because dynamics, after all, are not absolutes. We can't scale dynamics the way we can scale pitch, but relative dynamics are of the greatest importance and usually serve to project some other dimension of the music. So the difference are how the performers decide, again the total scale of the dynamics, the relative scales within the dynamics, and of course the modes of sound production between the two. <sup>48</sup>

Having merely six standard dynamic markings (*pianissimo* through *fortissimo*), the idea of relative dynamics should be a concept that every experienced performer has encountered. Dynamics are determined by function, and in the case of Babbitt, if the functions of structural, formal and surface elements are not identified, informed decisions cannot be made. In the case of *Concerto Piccolino*, Babbitt creates clear sections of solo and *tutti* that can serve as

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<sup>48</sup> Babbitt, Romig Interview.

boundaries while considering dynamics. Having already defined sectional boundaries signaled by the use of the registers of the vibraphone in Table 5.1, a performer can create a series of what will be called dynamic profiles. Each of these profiles will create contrasting characters for each section. The goal of the performer is to illuminate these differences as recorded in Table 5.2. The use of dynamic relativity should be considered while creating different profiles, as absolute dynamic qualities will not create a contrasting character between solo and *tutti* passages. Specific progressions will be discussed in the internalization section of this study and recommendations will be provided to concatenate series of alternating sections.

### Durational Considerations

When discussing the role of duration in the music of Babbitt, we are discussing a central element of his compositional practice. Babbitt's own time-point system for creating serialized rhythm, as well as the method in which aggregates are paced throughout a composition are controlled through durational elements. Cross-referencing of elements also occurs by controlling the dynamic of certain duration, one that is missing in music written for percussion or piano. Babbitt comments here on his disdain for rolling on percussion instruments and missing this ability of duration:

I hate that (rolling)... It's nothing more than that it's a kind of cliché. I must confess that I miss that ability to change the dynamic of a sound in its duration. That is something I miss very much. Of course you have it in the piano, too, and I've written a lot of piano music. It's simply one of the aspects that constitutes a boundary condition for a particular kind of instrument, and for the particular kinds of compositions that result.<sup>49</sup>

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<sup>49</sup> Babbitt, Romig Interview.

Once again, Babbitt's comments on durational control highlight how his compositional style, even with this "boundary condition" can be more utilized on the vibraphone, an instrument that has controlled duration, not requiring a roll to sustain. Although the ability to control and color a single duration are not present with the vibraphone, there are ways a performance of the *Concerto Piccolino* can be interpreted to communicate the already defined structure of solo vs. *tutti*. During the sections of the work that are active in all registers, which often include the heaviest rhythmic counterpoint, most density and largest range, it is recommended to prioritize rhythmic clarity and potential dynamic variation over durational control. This approach will facilitate the hearing of the counterpoint between registers. In addition to being an artistic choice, it is often impossible to individually control the duration of a single register during these sections. However, if it is possible to employ mallet dampening, to increase clarity of polyrhythmic material, it is highly recommended. Having one dampening pedal as well as only four mallets to perform the pitch material does not allow the performer to customize the different registers to their duration. Contrastingly, during some of the sections of solo material (one or two registers sounding simultaneously) it becomes more of a possibility for the performer to craft an interpretation that would highlight the different durations of the opposing registers. This approach will create a clean hearing of the dense rhythmic material of the *tutti* sections, while still providing artistic freedom, as is normally granted, in the solo sections of a standard concerto. Specific examples of durational manipulation will be given in the *internalization* portion of this study.

## CHAPTER 7

### INTERNALIZATION

After considering the background structure of *Concerto Piccolino*, followed by creating interpretive choices, what follows are recommendations of how to internalize the artistic choices made by the performer.

Like Babbitt's work written for solo piano, (as opposed to a more monophonic approach with other solo instruments) realizing a literal rendition of *Concerto Piccolino* is an enormous task, even before considerations of interpretation. The close relationship of the surface material and the underlying structure require the performer to be obsessed with the details of melodic and rhythmic reproduction as a starting point. Only a progressive, methodically laid out learning approach will yield an informed foundation to then interpret the levels of multi-faceted counterpoint that is contained in this work.

Learning the material according to the different compositional domains, a single layer at a time, is required to internalize not only the layers in themselves, but also how interpretational edits or omissions may be necessary. This study will recommend learning the domains in this order: rhythmic material, dynamics, followed by duration.

#### Internalizing Rhythm

In the initial stages of learning the rhythmic material in *Concerto Piccolino*, a percussionist can turn to the kinesthetic properties of striking an instrument to aid their internalization. The act of striking a surface has a distinct kinesthetic response that can heighten conceptualization for working muscle groups. For this reason, drumming can be used



to internalize the motions needed to perform some of the advanced rhythmic vocabulary of this solo. Removing the element of pitch and moving away from the keyboard instrument can help focus kinesthetic receptors and internalize the movements, to then be returned to the keyboard. For this reason, taking the material measure by measure through the following three steps will ensure internalization of the rhythms.

First, on a drum pad or any other non-pitched surface, learn the rhythmic material as non-pitched entities. While internalizing these movements, using a metronome, take into account dyads, triads, and four note chords that occur and realize them as double stops. This is an important distinction to develop accurate muscle memory. Later in this section, adding subdivisions to longer durations in the learning phase will also be used to help internalize pulse in extremely advanced passages. Second, returning to the vibraphone, internalize the pitch material by *gesturing* (out of time) motions, and generating a “choreography” that will be used. Finally, begin to synthesize the rhythmic motions in time. Connect the learned *muscle memory* from the drumming stage and the *choreography* of learning the pitch material without the sustain pedal (*secco*). This will help the performer focus on the rhythmic material only, not dynamic or duration. It is at this point that sticking choices will arise, mostly out of necessity. Following these steps in the first stage of learning the rhythmic material will ensure a thorough understanding of how pulse, subdivision and meter all indicate important compositional boundaries for Babbitt.

As mentioned, performing the rhythmic vocabulary of Babbitt obligates the player to understand the figures from a conceptual standpoint. The rhythmic language needs to be understood as compositional materials appearing in any given order or form, beyond how they

simply appear in context. The kinesthetic “blueprints” that are learned from internalizing these motions in time can be used in an exponential fashion. This will speed up the learning process as well as increase the player’s overall rhythmic vocabulary for future works. The rhythmic material of *Concerto Piccolino* could be described as containing the following: advanced subdivisions, subdivisions within subdivisions, “offset” rhythms, polyrhythm and advanced sequences of augmentation and diminution. What follows are examples from the piece, in each of these categories and a recommended strategy for internalization.

### Advanced Subdivisions

The written rhythmic figures in *Concerto Piccolino* require the performer to have an extremely advanced sense of subdivisions. First, because of the relatively slow tempo marking (quarter note equals sixty), the figures as they appear, are not common. Care needs to be taken to simply ensure you are creating attack points at the correct time. Second, because of the nature of Babbitt’s serialized rhythmic vocabulary, there are no repetitive motives to gravitate to. Every articulation of time is new material, which lives in its own time and place, not adhering to any kind of rhythmic hierarchy defined by its reoccurrence. As one can see in Figure 7.1, mm. 6-10, the performer is asked to internalize a variety of subdivisions, changing at an extremely fast rate.

By creating a single-line, non-pitched version of the rhythmic material, one can better conceptualize the quickly changing underlying subdivisions. Referenced earlier, to conceptualize subdivisions, a common occurrence in percussion pedagogy is adding subdivisions to longer durations, to account for the space in a kinesthetic manner. Once the

space is accounted for, the subdivisions can be removed. Figure 7.2 is an example of how to implement this internalization tool in the phrase above.

Figure 7.1: Milton Babbitt, *Concerto Piccolino*, mm.6-10.<sup>50</sup>



Figure 7.2: Added subdivisions for mm.6-10.



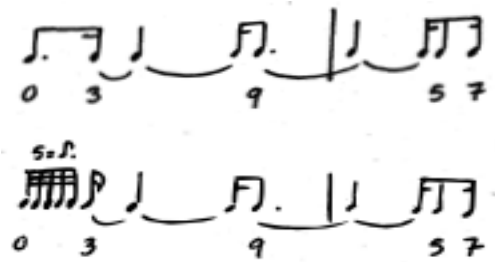
<sup>50</sup> Babbitt, *Concerto Piccolino*.

After internalizing the rhythmic material above, the next step would be to reinsert the longer durations, while still conceptualizing the subdivisions.

### Subdivisions within Subdivisions

Another part of Babbitt's rhythmic vocabulary in *Concerto Piccolino* requires the performer to fit certain subdivisions of a phrase with the marked number attacks that are written. In other words, Babbitt notates a specific number of notes (mostly in different forms of triplets) in the space of a subdivision of the beat. Daphne Leong refers to this as "filler" which simply fills a longer duration in the time point. However, these fillers usually appear as a different durational unit of the modulus and should not be accounted for in the time-point aggregate.<sup>51</sup> This concept is shown in the figure 7.3 from Daphne Leong's class notes.

**Figure 7.3: Leong class notes showing rhythmic filler of longer durations of a time-point.<sup>52</sup>**



These fillers occur frequently in *Concerto Piccolino*. The challenge for the performer is that these figures rarely show up on strong beats of the measure, mostly appearing on weak beats or even subdivisions of the beat. Figure 7.4 shows how Babbitt has filled a longer duration of a sixteenth note, which is the modulus, with thirty-second note triplets.

<sup>51</sup> Leong Class Notes

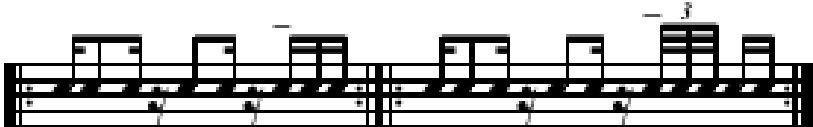
<sup>52</sup> Daphne Leong, Class notes from Post-Tonal Theory course. Shared with author with permission. July 18<sup>th</sup>, 2017.

Figure 7.4: Thirty-second note filler appearing on a subdivision. Milton Babbitt, *Concerto Piccolino*, m. 12.<sup>53</sup>



As shown with advanced subdivisions, it is recommended to internalize on a single surface first. However, in the case of conceptualizing these more complex “fillers”, instead of adding more subdivisions, it is recommended to start with a rhythmic shell or “skeleton” to account for the correct space of the longer duration. Then, by alternating back and forth between longer durations and filler material, the player can begin to place the “filler” material between attack points. Figure 7.5 shows this process applied to m. 12 (shown in figure 7.4).

Figure 7.5: Internalizing rhythmic filler.



In the following excerpt, one can see another case of rhythmic material that is clearly out of the context of the time-point modulus.

Figure 7.6: Milton Babbitt, *Concerto Piccolino*, m. 23.<sup>54</sup>

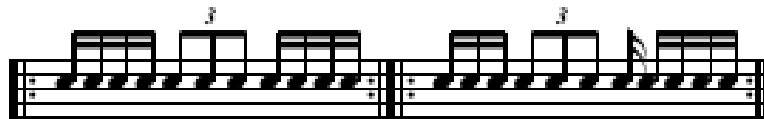


<sup>53</sup> Babbitt, *Concerto Piccolino*.

<sup>54</sup> Babbitt, *Concerto Piccolino*.

This particular triplet subdivision occurs for the length of a quarter note with an attack point articulated on the fourth partial of the first beat of the measure. This clearly does not match the meter or standard beaming of common vocabulary in triple meter. For this reason, extra steps need to be taken to conceptualize the measure. First, it is recommended that internalization of transitioning from eighth note triplets to sixteenth notes would be established before shifting such a rhythm to an uncommon attack point. Figure 7.7 shows how to first establish the subdivision on a strong beat, followed by moving it to the fourth partial.

**Figure 7.7: Internalizing m.23.**



#### Displaced or Offset Rhythms

Shown in figure 7.6, Babbitt does not only subdivide partials of the beat that do not coincide with the modulus, but because of the serialization of his rhythmic progressions, standard attack points in the measure or perceived meter are not common. Subdivisions or rhythmic fillers previously discussed frequently occur on partials of the beat that do not match the meter. From a performers aspect, quantizing these displaced or offset rhythms are extremely difficult. As stated in the last section, establishing the speed of the offset rhythm as it appears on a strong beat is recommended before trying to displace the figure to an offset partial. Figures 7.8 and 7.10 provide the rhythmic material as written, followed by the recommended progression to achieve internalization in figures 7.9 and 7.11.

Figure 7.8: Milton Babbitt, *Concerto Piccolino*, m. 30.



Figure 7.9: Internalizing m. 30.

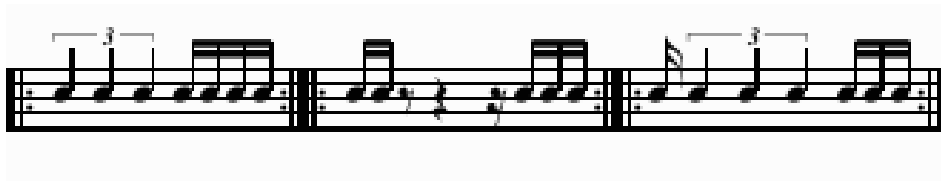


Figure 7.10: Milton Babbitt, *Concerto Piccolino*, m. 31.<sup>55</sup>



Figure 7.11: Internalizing m. 31.



### Polyrhythm

In Babbitt's music, registers are active, dynamic parameters of the composition that create identifiable boundaries for his serialization techniques. Because of this, polyrhythmic

<sup>55</sup> Babbitt, *Concerto Piccolino*.

material often results. In *Concerto Piccolino*, the time-points of contrasting lines create polyrhythm that is often realized with a combination of single notes and double stops (dyads). Figures 7.12 and 7.13 are examples of polyrhythmic material that appears, not only on a single one-to-one correspondence, but also in different combinations of single and double pitch class groupings.

Figure 7.12: Milton Babbitt, *Concerto Piccolino*, m. 51.<sup>56</sup>

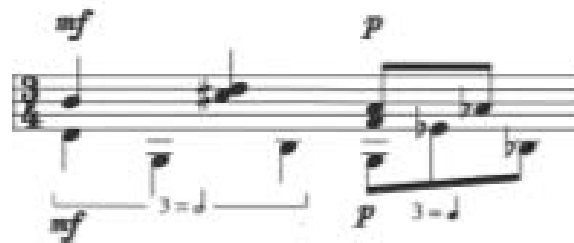


Figure 7.13: Milton Babbitt, *Concerto Piccolino*, m. 70.<sup>57</sup>



In learning these excerpts, it is again necessary to use a progressive system of learning that involves the layering of rhythmic material from a macro to micro level. For this polyrhythmic material, it would be best to start with a two-line exercise involving hand-to-hand coordination. In establishing which implements strike at the correct attack point we can create a foundation for adding pitch material and creating a feeling of independence between the

<sup>56</sup> Babbitt, *Concerto Piccolino*.

<sup>57</sup> Ibid.



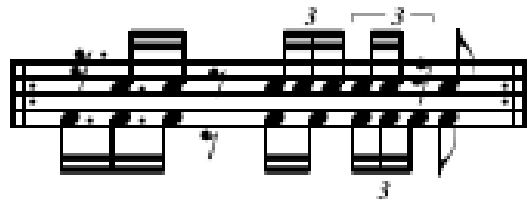
layers. Shown in figure 7.14, simple two against three patterns are employed with diminution on the last beat of the measure. The faster rhythms stay in the left hand, which will eventually become the lower register of the vibraphone.

**Figure 7.14: Hand-to hand internalization of m. 51.**



Even more difficult, shown in figure 7.13, the polyrhythm occurs on the second eighth note partial of beat two, (lasting the duration of two eighth notes), and releasing on the second eighth note partial of beat three. The act of coordinating the polyrhythmic material of this measure on an offset partial requires acute rhythmic awareness. Figure 7.15 shows again how using a two-line monotone surface to internalize rhythm is helpful.

**Figure 7.15: Hand-to hand internalization of m. 70.**



### Advanced Sequences of Augmentation and Diminution

Another common result of Babbitt's unique style of rhythmic vocabulary is the appearance of augmented or diminished durational values that signal a change in the modulus of the time-point. For the performer, it is necessary to understand these adjustments in duration first occurring on a strong beat before shifting them to the common placement of a

weak beat subdivision. Figure 7.16 shows obvious augmentation of the triplet figures that are introduced on the second eighth note of the measure.

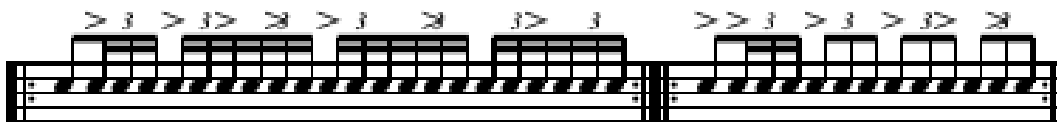
**Figure 7.16: Milton Babbitt, *Concerto Piccolino*, m. 29.<sup>58</sup>**



In measure 29, the modulus changes to either sixteenth note triplets or eighth note triplets. It is again recommended to internalize the attack points by realizing that rhythmic modulus.

Here, using our awareness of subdivisions to interpret longer durations will facilitate accurate attack points. The first recommended step would be playing the modulus for the entire measure while simultaneously adding accents for the attack points of the longer durations. One could also use the same process to internalize the measure using an eighth note triplet modulus. Both exercises are shown here in figure 7.17

**Figure 7.17: Internalization of m. 29.**



Another example of augmentation and diminution, and quite possibly one of the most difficult measures in the piece to internalize, occurs in measure 48, shown below in figure 7.18.

<sup>58</sup> Babbitt, *Concerto Piccolino*.

Figure 7.18: Milton Babbitt, *Concerto Piccolino*, m. 48.<sup>59</sup>



In this measure, multiple domains of Babbitt’s compositional process are changing at an extremely fast rate. With a different dynamic marking for each figure, this measure progresses through three different rhythmic rates, polyrhythmic material, combinations of doubles stops and single pitches (at very close intervals), as well as augmentation and diminution. Even more difficult, the ratios of polyrhythm change from middle to low register and back throughout the measure. This measure truly illuminates all of the previously discussed rhythmic procedures in this study: advanced subdivisions, subdivisions within subdivisions, offset rhythms, polyrhythm and augmentation/diminution. All of the internalization methods discussed above should be used to process this measure, as well playing to a quantized, digitized, version of the rhythms, to be discussed next.

#### Customized Click Track

In “Notated and Heard Meter”, Lester describes his process for internalizing Babbitt’s *Composition for Four Instruments*, “In effect I had memorized a silent click-track for the piece- a click track against which the rhythms played out their “jazzy” syncopations and cross

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<sup>59</sup> Babbitt, *Concerto Piccolino*.

rhythms”.<sup>60</sup> If not for this process happening in 1970, one is confident that, if available, Lester would have created exactly what is recommended, a customized click-track for internalizing Babbitt’s rhythms. With its accessibility, technology should now be a part of every performer’s paradigm throughout all the stages of learning a piece. *Concerto Piccolino*, as well as most of Babbitt’s works, can now be more literally realized with the aid of a customized click-track. Attempting to use a simple metronome for learning Babbitt’s rhythmic vocabulary does not suffice and is nearly impossible. By using notation software, performers can customize a practice track that facilitates internalization that will lead to artistically interpreting at an earlier stage, in turn, making it easier to create more expressive versions of Babbitt’s music. It is recommended to include some aural cues, or markers in creating the click-track that goes beyond a monotone “click” that marks correct time signatures. First, create a higher or lower pitched click on the downbeat of each measure, giving the performer an aural guide to the meters and bar lines that are sometimes elusive in Babbitt’s music. Second, if needed, notate rhythmic subdivisions or possibly full measures of rhythm to use as a checkpoint for rhythmic accuracy. Finally, away from the through-composed click-track, create a series of practice measures that aid the performer in realizing more difficult passages. These measures should use some of the methods discussed previously of subdividing longer durations, adding longer durations to offset rhythms and “filler” durations or adding accents to facilitate attack points. A recommended click-track is included in the appendix of this study.

Once these rhythms are realized to the best of the performer’s ability, in a literal sense, one can begin to think about how to artistically *interpret* and *internalize* expressive rhythmic

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<sup>60</sup> Lester, “Notated and Heard Meter.” p.117.

choices. In a work as dense and rhythmically active as *Concerto Piccolino*, the performer will find it difficult to create a feeling of a more “free” time interpretation like the approach suggested by Leong and McNutt for Babbitt’s *Lonely Flute*. In Babbitt’s piece for vibraphone, the constant activity of multiple registers, polyrhythm and density of rhythmic vocabulary, freedom to adjust the “feel” or adjust the interpretation of time, without sacrificing rhythmic accuracy is nearly impossible. It is for this reason that it is recommended to have a deep understanding of how the seemingly erratic progression of rhythmic material, is not erratic at all, but create clearly defined boundaries of contrasting sections. Figure 7.19 shows measures containing the boundary of the first two contrasting sections of the work.

**Figure 7.19: Boundary of solo vs. tutti. Milton Babbitt, *Concerto Piccolino*, m. 4 – m.9.61**



To highlight the change from the duple figures of the opening, to the triple, *rubato*-like figures of the first solo section, it is imperative that the performer realizes these modulations accurately. Beyond the proportional aspect of the modulatory elements, the performer could also use visualization techniques to help create a conceptual framework for the metric

<sup>61</sup> Babbitt, *Concerto Piccolino*.

adjustments. Creating a mental image of a more *angular* approach to the duple figures, while thinking of a more *round* approach to the triple figures will create a symbolic image that can stretch the levels of metric modulation, while still in the realm of duple to triple. This kind of shading can permeate to all levels of interpretation and create a unique character for each section. This will enable the performer as well as listener to perceive the necessary structural boundaries of the piece.

Without question, the rhythmic vocabulary of *Concerto Picollino* is the most difficult domain to realize. However, by creating a progressive system of learning the work, a performer can internalize not only the rhythmic attack points, but understand their subdivisions, how they relate to the marked meter, as well as a strategy for artistic interpretation.

#### Internalizing Dynamics

While conceptualizing a piece of tonal music, a performer can begin to build connections between the domains of rhythm, harmonic content, expression as well as compositional density and texture. These connections are a unifying element when creating an interpretation. As an interpretation for rhythm is chosen, it could easily relate to the dynamic content, which could easily relate to the texture and density of the pitch content, and so on. For the music of Babbitt, these layers/domains operate seemingly independent of each other, having some confluences randomly, but rarely have connection on the surface. Instead, they are created with the unifying unit of the aggregate, usually not easily heard, and transformed through classic operations that mask their connectivity. It is for this reason why a progressive approach to internalizing this material is of utmost importance.

As a performer begins internalizing the dynamic domain, it is recommended to delay the use of the vibraphone pedal. However, it is important to keep in mind that adjusting the length of some pitches (by realizing durations) will have an affect on dynamic levels. Even so, mapping the kinesthetic qualities of stroke and velocity at it relates to dynamics need to be internalized initially without having to focus on manipulating duration. This approach is also recommended because of the rhythmic density of this particular work. Opportunities for creating longer durations will be minimal and the pedal will be used sparingly.

Figure 7.20: Milton Babbitt, *Concerto Piccolino*, mm. 59-62.<sup>62</sup>

The image shows a musical score for two staves, measures 59 through 62. The music is written in treble clef with a 3/4 time signature. The score is characterized by frequent dynamic markings: *pp* (pianissimo), *mf* (mezzo-forte), *f* (forte), and *ppp* (pianississimo). There are also some markings like *(pp)* and *(f)*. The notation includes various rhythmic values, including eighth and sixteenth notes, and rests. A vertical bar line is present between measures 59 and 60. The score ends with a double bar line and a key signature change to one flat.

As mentioned earlier, the dynamic landscape of this composition is heavily based on the alternation of solo and *tutti* passages. Two suggestions were given in the interpretation section of this study to achieve clear boundaries of these sections. First, a performer should interpret the dynamic markings of each section as relative to their function in that given context, as opposed to an absolute volume level. In other words, again referring to Cones' idea

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<sup>62</sup> Babbitt, *Concerto Piccolino*.

of simultaneous demand, interpreters should be controlling the dynamics to preserve its purpose in relation to *adjacent material* as well as how it fits in to the overall structure of *adjacent sections*. Second, in defining these levels of relativity, the performer can create a series of dynamic profiles in which to audiate contrasting sections with some consistency. Figure 17.20 shows the transition to the penultimate solo section, containing the most extreme dynamic contrast in entire piece.

Included in the previous *tutti* section (m. 59) are markings of pianissimo, like the solo section that follows. However, in creating a different dynamic profile for each section, the performer should attempt to play the pianissimo material in the solo section as soft as possible to illuminate the extreme contrast from forte to pianissimo. Another level of difficulty lies in the shifting and velocity it requires to navigate the extreme ranges of the vibraphone in this passage. The performer should be cautious to absorb the velocity of a shift before attempting to create a pianissimo sound. This common challenge is one that needs to be overcome on most percussion instruments that require lateral movements when asked to move at a fast rate, with extreme changes in dynamics, touch and tone.

By creating dynamic profiles that contain a level of relativity and not absolutes, a performer can continue to craft an interpretation that convinces the listener to perceive structural changes.

### Internalizing Duration

In the percussion instrument family, realizing the durational qualities of a musical line is achieved in a variety of ways. For the vibraphone, the use of a dampening pedal combined with



carefully chosen points of mallet dampening help to create clarity of line and help realize duration without the use of a roll. In *Concerto Piccolino*, the opportunities are scarce for consistent manipulation of durational values. For the performer, these opportunities will begin to present themselves after progressing through the internalization of rhythmic material, creating dynamic profiles, and finally finding ways to realize duration. This progression of internalization also creates a sense of prioritization when making artistic choices. This means dynamics should not hinder the rhythmic accuracy, and attempts to realize duration should not hinder rhythmic accuracy or the boundaries of previously created dynamic profiles. However, there are places in this work, clarity of pitch, rhythm and dynamic contrast can be achieved with durational manipulation in the form of pedaling or mallet dampening.

Figure 7.21: Milton Babbitt, *Concerto Piccolino*, m. 7 – m. 9.<sup>63</sup>



Figure 17.21 shows the first transition from *tutti* to solo material. By mallet dampening and pedaling portions of the solo section starting at m. 7, the listener is immediately given the perception of a cleaner, thinner texture, moving at a slower rate than the section previous. The

<sup>63</sup> Babbitt, *Concerto Piccolino*.

control gained in manipulating each pitch also helps the performer accentuate the now static dynamic of mezzo forte.

Figure 7.22 shows the last two measures of the second solo section. Pedaling and dampening in these measures improves clarity of the desired length of the longer durations while providing clarity for the pitches that change within those durations.

Figure 7.22: Milton Babbitt, *Concerto Piccolino*, m. 23 – m.24.<sup>64</sup>



By progressing through the steps of internalizing rhythms and dynamics followed by duration, performers can create heard boundaries as listeners conceptualize this work. This logical order will also create a natural prioritization, when deciding what to edit, omit or add in the learning stages. Again, this step of internalization holds no credibility or artistic merit unless an investigative, analytical framework as well as thoughtful, creative interpretive choices precedes it. These steps will ensure more than simply a mathematical reproduction of Babbitt's work for vibraphone.

## Conclusion

One of the most significant evolutionary trends in percussion composition has been the

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<sup>64</sup> Babbitt, *Concerto Piccolino*.

ability of composers to exploit the various idiosyncrasies of each instrument of the percussion family. Even from the time of Stravinsky, percussion was still considered merely a collection of sounds, grouped together as pitched/un-pitched or membranophones/idiophones. As the performer's ability to play these instruments became more sophisticated, composers of greater significance began to take notice. Elliot Carter's *Eight Pieces for Four Timpani*, and John Cage's *Composed Improvisation for Snare Drum*, now standard repertoire, both stand strong as examples of works written by historically significant composers, attempting to highlight the instrument's eccentricity. George Crumb's *Madrigals, Book I* (1965) stands out as a milestone in the development of literature for concert vibraphone. Although technically a chamber piece, Crumb's use of different timbres and implements helped solidify the vibraphone as an option for significant contemporary composers. However, it is through Babbitt's signature procedures, historical influence and instrument of choice that *Concerto Piccolino* will hold its place in standard percussion repertoire for generations to come.

## CHAPTER 8

### CONNECTION TO PEDAGOGY

By highlighting three distinct parameters of *Concerto Piccolino* (rhythm, dynamics, duration) this study has shown how internalizing a piece of great depth not only expands the performer's vocabulary, but also maximizes the efficiency in which a performer can artistically learn a piece. The obligation to transmit every detail in a Babbitt composition will create a zero tolerance approach to leaving out critical written and inherent details of a composition. James Romig comments on this obligation of the performer:

In classic music, it is generally the case that a misperformed dynamic or articulation will not do as much damage to a performance as a misplayed pitch or rhythm. In the case of Babbitt's music, misconstrual by a performer of any musical element might mortally wound the composition or, at the very least, obfuscate its intended meaning. The price paid for Babbitt's high degree of efficiency in composition is that it requires an identical degree of efficiency from performers. The entire musical meaning hangs on every musical inflection, for every musical inflection is an integral part of the entire musical meaning.<sup>65</sup>

From a pedagogical perspective, learning this music helps develop a sense of hyper-awareness of the compositional details. This kind of meticulous detail heightens a performer's communicable ability to connect the structure and surface on any piece of music. It is common for young players to ignore the rigor of analysis and skip immediately to what Joseph Strauss calls "Indulging ourselves in the abundant pleasures of the surface"<sup>66</sup>. In order for these surface materials to truly have meaning, the structure needs to be investigated, an interpretation needs to be formed and progressive internalization needs to take place. Scotto writes on how

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<sup>65</sup> James Romig, "Parametric Counterpoint: Babbittian Ideals In Composition and Performance". Accessed July 20, 2018. <https://www.jamesromig.com>.

<sup>66</sup> Strauss, "Listening to Babbitt", 11.

performers need to connect the surface to the structure, enabling the listener to have an opportunity to do the same. He writes:

If one hears the music as fragmented, one will certainly produce fragmented sounds. Each sound is compared to a bolt or screw in a great machine (possibly) having no awareness beyond its original function. In complex music such as Babbitt, which is filled with an enormous amount of local detail, it is easy to sometimes lose the forest for the trees.<sup>67</sup>

As performers go through this progressive process in a work by Babbitt, they are essentially as Cone states, “performing the structure”<sup>68</sup>. There are also obvious connections to other genres of music that involve this necessary awareness of structure. For example, when learning jazz improvisation, it is vital that knowledge of the structure (form/harmonic language) is solidified. Young performers that foster a sense of obligation to prioritize structural knowledge will have a deeper understanding of the music they are performing. It is this *requirement* of Babbitt’s music that makes preparing one of his works not only a performance accomplishment but a pedagogical one as well. When emotional, expressive connections are made in the music of Milton Babbitt, creativity is maximized. Mead speaks of how the performer creates an expressive performance of the music of Babbitt:

His music doesn’t tell you how you are supposed to feel; you get pitches, rhythms, articulations, dynamics and a metronome marking. There are no “expressive” markings such as *appassionato* or *dramatico* written. The performer has to figure out what the affective aspects of his music might be. You have to develop these connections as a creative artist. Just because they are not written, it does not mean that these aspects are not present.<sup>69</sup>

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<sup>67</sup> Scotto, “Preparing a Performance”, 18.

<sup>68</sup> Cone, *Musical Form*, 96.

<sup>69</sup> Mead, Interview with Author.

When a performer creates an original interpretation from something completely void of expressive guidelines or recommendations, true artistry is proven through the ability to make independent, creative choices. This interpretive freedom is something that helps define music performance as a *creative* art form and will eventually, because of the heightened sense of artistic independence, become habitual when learning any piece of music.

Another pedagogical element of learning the music of Babbitt is exposing performers to the self-referential contextuality of each work. Young performers often gravitate to music that is familiar. By default, every Babbitt composition is neither referring to other pieces, or within the piece, referring to itself; there are no motivic references. By exposing yourself to the freedom that Babbitt created, a performer is asked to maximize creativity in the areas of interpretation and artistic execution. Never has it been so important to expose students to new ideas that may initially create feelings of unfamiliarity and even discomfort. If a student's exposure to music is merely the algorithmic results that they mindlessly accept in their "recommended results", pieces like *Concerto Piccolino* will never arrive on their prescribed listening lists. Educators must create a culture of intellectual curiosity about all genres of music, including that of twelve-tone composers. Babbitt's vibraphone piece creates an amazing opportunity for performers to not only become proficient on the instrument but introduces the music of one of the most historically significant composers of this compositional style. In *Words About Music*, Babbitt comments on the foreign element of his work:

Just consider what is involved. It means that when you come (to hear) such a piece, you are listening to a piece which is going to use perhaps physical materials you are used to, but very little else that is familiar. You are going to have to proceed with this piece by a complete concentration, as its own piece. You're going to have very little that you can

carry with you from your memory of former pieces, very little that you can carry by way of your experience of past music.<sup>70</sup>

Although Babbitt was speaking here about *listening* to his music, the same could be said of how *performing* his music is so fundamentally different. It is this difference that creates growth in artistry and creativity, especially in performers that are used to living in the world of tonal music.

If thought of as a spectrum, the rate at which a performer internalizes music greatly varies according to how the music will function in any given performance. From a pedagogical point of view, it is important to develop musicians that possess the ability to realize music very quickly, using highly developed skills of sight-reading, improvisation and expressive intuitiveness, maximizing the *amount* of music a performer is exposed to. However, it is equally important, developmentally, to develop the ability to focus on a single piece, learning the work in a meticulous manner, over a long period of time. The music of Milton Babbitt and other twelve-tone composers lends itself to the latter approach. When elements of a composition are internalized in a progressive, deliberate manner, these learned elements and vocabulary can be utilized exponentially in future pieces. In other words, pieces that once seemed to lend itself to lengthy internalization will now have the ability to live in the improvisatory, or compositional world of a musician.

Finally, above the compositional and technical achievements of Milton Babbitt, one of his most vocal pursuits was that of the survival of serious music. He was a champion of the rights of composers as specialists and the need to create meaningful discourse about music.

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<sup>70</sup> Babbitt, *Words About Music*, 254.

Along with calling for the field of music to have specialists equal to that of science and mathematics, he also supported composition reaching beyond the boundaries of human performance potential into electronic music and pushing the boundaries of what could be heard. Above all, Babbitt was concerned with what Robert Morris called “responsible musical citizenship”.<sup>71</sup> In order for the music of Babbitt to survive, performers and educators must see the artistic value of his music and more importantly how serious music can help retain a compositional craft that makes us smarter performers and continues to push music performance forward. It is during true artistic endeavors such as music making where our brains will have a chance to slow down and allow room for creativity. Atonal, serial and especially twelve-tone music like that of Milton Babbitt force us to focus and spend quality time with a single work. Pieces like *Concerto Piccolino* are essential to not only the percussion community, but to the music education community as well. If not, we risk being caught in a cycle of familiarity and musical narcissism in which our highest level of musical achievement will resemble the world that currently plagues the everyday digital discourse of the younger generation.

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<sup>71</sup> Robert Morris, “What Babbitt Enabled.” *Music Theory Spectrum* 34, no. 1 (spring 2012): 20.



APPENDIX A

TABLE OF SOUNDING REGISTERS OF *CONCERTO PICCOLINO*

|                 | mm.      |    |     |    |    |    |    |    |    |     |     |     |  |
|-----------------|----------|----|-----|----|----|----|----|----|----|-----|-----|-----|--|
| Register        | 1        | 2  | 3   | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11* | 12  |  |
| H               | X        | X  | X   | X  | X  | X  | X  | O  | O  | X   | X   | X   |  |
| M               | X        | X  | X   | X  | X  | X  | O  | O  | O  | X   | X   | X   |  |
| L               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | O   | X   |  |
|                 | T        | T  | T   | T  | T  | T  | S  | S  | S  | T   | T   | T   |  |
|                 | 13       | 14 | 15  | 16 | 17 | 18 | 19 | 20 | 21 | 22* | 23  | 24  |  |
| H               | X        | X  | X   | X  | X  | X  | O  | O  | O  | X   | X   | X   |  |
| M               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | O   | O   |  |
| L               | X        | X  | X   | X  | X  | X  | O  | O  | O  | X   | X   | X   |  |
|                 | T        | T  | T   | T  | T  | T  | S  | S  | S  | S   | S   | S   |  |
|                 | 25       | 26 | 27  | 28 | 29 | 30 | 31 | 32 | 33 | 34  | 35  | 36* |  |
| H               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | X   | X   |  |
| M               | O        | O  | X   | X  | X  | X  | X  | X  | X  | O   | O   | X   |  |
| L               | X        | X  | X   | X  | X  | X  | X  | X  | X  | O   | O   | X   |  |
|                 | S        | S  | T   | T  | T  | T  | T  | T  | T  | S   | S   | S   |  |
|                 | 37       | 38 | 39  | 40 | 41 | 42 | 43 | 44 | 45 | 46  | 47  | 48  |  |
| H               | O        | O  | O   | X  | X  | X  | X  | X  | X  | X   | X   | O   |  |
| M               | X        | X  | X   | O  | X  | X  | X  | X  | X  | X   | X   | X   |  |
| L               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | X   | X   |  |
|                 | S        | S  | S   | S  | T  | T  | T  | T  | T  | T   | T   | S   |  |
|                 | 49       | 50 | 51  | 52 | 53 | 54 | 55 | 56 | 57 | 58* | 59* | 60  |  |
| H               | O        | O  | O   | X  | X  | X  | X  | X  | X  | O   | X   | X   |  |
| M               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | X   | X   |  |
| L               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | X   | X   |  |
|                 | S        | S  | S   | T  | T  | T  | T  | T  | T  | T   | T   | S   |  |
|                 | 61       | 62 | 63* | 64 | 65 | 66 | 67 | 68 | 69 | 70  | 71  | 72  |  |
| H               | X        | X  | X   | X  | X  | X  | X  | X  | X  | X   | X   | X   |  |
| M               | X        | O  | X   | X  | O  | X  | X  | X  | X  | X   | X   | X   |  |
| L               | X        | X  | X   | X  | X  | X  | X  | X  | O  | O   | O   | O   |  |
|                 | S        | S  | S   | T  | T  | T  | T  | T  | S  | S   | S   | S   |  |
| X =             | Sounding |    |     |    |    |    |    |    |    |     |     |     |  |
| O =             | Unused   |    |     |    |    |    |    |    |    |     |     |     |  |
| High Register   | F4-E5    |    |     |    |    |    |    |    |    |     |     |     |  |
| Middle Register | F3-E4    |    |     |    |    |    |    |    |    |     |     |     |  |
| Low Register    | F2-E3    |    |     |    |    |    |    |    |    |     |     |     |  |
| T =             | Tutti    |    |     |    |    |    |    |    |    |     |     |     |  |
| S =             | Solo     |    |     |    |    |    |    |    |    |     |     |     |  |

APPENDIX B

CUSTOM CLICK TRACK FOR *CONCERTO PICCOLINO*

Yakas

# Custom Click Track

## Concerto Piccolino

The musical score is presented on seven staves, each containing a sequence of rhythmic patterns. The time signatures vary throughout the piece, including 4/4, 3/4, 2/4, 3/8, 6/8, and 5/4. The notation includes quarter notes, eighth notes, and sixteenth notes, often grouped into triplets. Some notes are marked with accents (>). The score is divided into four pages: Page 1 (measures 1-6), Page 2 (measures 7-11), Page 3 (measures 12-23), and Page 4 (measures 24-40). A large, diagonal watermark reading "FOR REVIEW ONLY" is overlaid across the entire score.

2

Custom Click Track

44

Musical staff for measures 44-49. The staff contains a sequence of eighth notes. The time signatures are 3/4, 2/4, 3/4, 4/4, 3/4, and 5/16.

Pg. 5

50

Musical staff for measures 50-55. The staff contains a sequence of eighth notes. The time signatures are 5/16, 3/4, 2/4, 3/4, 4/4, and 3/4.

56

Musical staff for measures 56-61. The staff contains a sequence of eighth notes. The time signatures are 3/4, 5/4, 2/4, 3/4, and 4/4.

Pg. 6

62

Musical staff for measures 62-66. The staff contains a sequence of eighth notes. The time signatures are 4/4, 5/4, 3/4, 2/4, and 3/4.

67

Musical staff for measures 67-71. The staff contains a sequence of eighth notes. The time signatures are 3/4, 2/4, 3/4, and 2/4.

72

Musical staff for measure 72. The staff contains a single eighth note with a cross symbol above it.

73

Musical staff for measure 73. The staff contains a whole rest with the number 6 written above it.

Custom Click for measures 48-53

79

Musical staff for measures 79-81. The staff contains a sequence of eighth notes with triplets. The time signatures are 4/4, 3/4, and 5/16. A dynamic marking *f* is present.

82

Musical staff for measures 82-87. The staff contains a sequence of eighth notes with triplets. The time signatures are 5/16, 3/4, 2/4, 3/4, and a final measure with a double bar line.

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