

BUILDING TECHNICAL FACILITY IN TUBA AND EUPHONIUM PLAYERS  
THROUGH THE TUBA-EUPHONIUM QUARTET

by

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## **ABSTRACT**

In current tuba and euphonium writing there is considerable gap in technical difficulty between tuba-euphonium quartet literature and wind band literature for the secondary and collegiate musician. As the tuba and euphonium profession becomes ever more challenging, there is a great need to establish a curriculum for building technical facility. The importance of chamber music as a pedagogical tool is well documented and has been shown to develop technique, musicianship, and many other skills. There are a number of researchers whose work demonstrates the numerous benefits of including chamber music to students' education. However, because of the lack of small ensembles for tuba and euphonium players there is a need to utilize the tuba-euphonium quartet. This study provides a brief history of the tuba-euphonium quartet to give context to one of music's newer chamber groups. Selected works for both wind band and tuba-euphonium quartet are graded with a rubric to assign an appropriate difficulty level. An analysis of the selected works gives educators examples of how to take advantage of each work's unique technical aspects. Included in the appendices are grading breakdowns of fifty wind band compositions and forty-three tuba-euphonium quartet works.

## INTRODUCTION

A survey of current tuba-euphonium quartet literature reveals a growing number of compositions for the tuba-euphonium quartet that are increasingly more challenging technically for young musicians than standard wind band literature. It is critical to explore and institute more effective means of building technical facility due to the increased competition level in the tuba and euphonium world. A greater need exists to develop a player's facility and avoid a playing deficit that can result from developing technique solely through wind band playing. This study will demonstrate that the inclusion of the tuba-euphonium quartet into a student musician's curriculum is essential to building a technically proficient musician. Through the use of tuba-euphonium quartet music, a student's technical playing will improve by addressing the following specific musical techniques: tempo, range, rhythm, dynamics, syncopation, harmonic/melodic understanding, multiple tonguing, and extended technique. How the tuba-euphonium quartet literature specifically addresses these aspects in tuba-euphonium quartet literature, and how they help develop technique, will be discussed in detail later in the document. Together, these aspects combine to form the foundation of a technically proficient tuba/euphonium player. Additionally, as with any small ensemble, the tuba-euphonium quartet can instill, "a competitive spirit [that] arises when several people are trying to do the same things at the same time."<sup>1</sup> Boredom may develop among tuba/euphonium players, due to the limited demands placed on them by the current standard wind band literature.

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<sup>1</sup> Denis Wick, *Trombone Technique* (London: Oxford University Press, 1971), 108. Here the author is talking about the competitiveness of a trombone studio; however, that same competitiveness can be transferred among different instruments.

Denis Wick goes on to state, “Small ensembles like the brass quintet do offer opportunities of musical expression to trombonists that bigger groups often deny.”<sup>2</sup> The same can be stated for tuba/euphonium. The tuba-euphonium quartet offers tuba and euphonium students the opportunity to play in small ensembles. An additional benefit to the tuba-euphonium quartet is the ability to build such a quartet with the euphonium and tuba players found in the standard instrumentation of wind band literature. While in many cases the brass quintet is a great option for brass players, the low brass player is only one member of the ensemble. In addition, the euphonium in many cases is left out of the brass quintet and other brass ensembles of various sizes because either there is not a part written or the parts are covered by other trombone players. It is the author’s opinion that the tuba-euphonium quartet provides an important opportunity to a larger number of tuba and euphonium students that are looking for small ensemble experience. Furthermore, in a large tuba-euphonium ensemble where parts can be doubled, a student can be far less prepared and remain unnoticed during rehearsals and performances; musical sections with a greater technical demand can be concealed by the more accomplished players in the tuba ensemble, covering any unlearned techniques. A tuba-euphonium quartet revolves around one player per part. One student per part can lead to students learning and preparing their music for a number of reasons. The first is that the student learns the part correctly and in a timely manner, because he or she is the only person playing the part; without it the quartet would be missing a voice.

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<sup>2</sup> Ibid., 102.

Second, the student can see and hear the preparedness of the other members of the quartet. Not wanting to let down the group can lead students to hone their musical and technical skills. Third, the student has a personal stake in the making of the music and all the pertinent related decisions.

## **THE TUBA-EUPHONIUM QUARTET; BACKDROP FOR PEDAGOGY**

There is long history of instrumental music programs in high schools and colleges in the United States of America. One ensemble that has been at the forefront of the instrumental music programs in the United States is the wind band and its literature. While this paper will make no attempt to change this culture or its literature, it will attempt to give supplementary tools to music educators to improve their tuba and euphonium players' musical and technical abilities, both at the secondary and collegiate levels.

It is the opinion of the author that the nature of the parts for tuba and euphonium in most wind band literature tends to limit the development of technical facility in tuba and euphonium players, who solely rely on wind band literature to improve their technique. As the study will demonstrate, tuba and euphonium parts, in standard wind band literature, tend to lack syncopation and use simple rhythms and chord progressions, especially in compositions common in secondary education settings. While technical demands change depending on the given work, selected examples of this technical disadvantage will be discussed later in the document, through a selected study. When tuba and euphonium parts only include the simplest rhythms, there rarely are figures that would require multiple tonguing, because they are not difficult enough to be needed.<sup>3</sup> Tuba players, in wind band literature, often play the roots of chord progressions with the occasional fifth in the basses to fill out the harmony. Secondary level compositions often find euphoniums doubling other voices without unique voice for the instrument. The lack of advanced harmony for young tuba and euphonium players leads to shortcomings in

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<sup>3</sup> The simpler rhythms are shown in the grading breakdown of wind band works of this document.

aural skills. The shortcomings of the student musician will need to be overcome before progressing on par with other students. As with the differences between compositions, each will have specific demands for either the tuba or euphonium player. A student with a lack of rhythmic experience will need to overcome his or her playing deficiencies by either diligent rhythmic practice or advanced studies with a private instructor. Other skills that can be deficient because of the lack of difficult wind band parts are syncopation and complex rhythms. The tuba-euphonium quartet provides opportunities to improve these deficits and build stronger technically proficient students.

## SELECTION OF TUBA-EUPHONIUM QUARTET LITERATURE

The literature for the tuba-euphonium quartet has grown considerably over recent years. The latest *Guide to the Tuba Repertoire: The New Tuba Source Book*, 2006, has listed over 1,200 compositions for the four-part ensemble.<sup>4</sup> Compositions of varying quality for the tuba-euphonium quartet continue to be published around the world. For this document, the research will focus on two publishers that are actively bringing new works to print for the tuba-euphonium quartet: Potenza Music and Editions Bim. These two publishers were chosen because they are selective of the music they publish and their publications are often found on the required music lists of international music competitions. Two tuba and euphonium competitions that regularly use compositions by Potenza and Editions Bim are the Leonard Falcone International Euphonium and Tuba Festival and the International Tuba and Euphonium Conference. Examples are found on each required music section of their websites.<sup>5</sup> Although these two publishers have published only a small number of compositions, they are considered a source of outstanding works.

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<sup>4</sup> R. Winston Morris and Daniel Perantoni, *Guide to the Tuba Repertoire: The New Tuba Source Book* (Bloomington: Indiana University Press, 2006). These works are listed as four-voice so that the compositions can be either for tuba ensembles or tuba-euphonium quartets.

<sup>5</sup> Leonard Falcone International Euphonium and Tuba Festival, "Required Music," accessed February 6, 2016, <http://www.falconefestival.org/index.php/festival-competition/the-competition/2016-required-music>. International Tuba and Euphonium Conference, "Competitions," accessed February 6, 2016, <http://www.iteaonline.org/conferences/ITEC2016/?page=Competitions>.

Potenza Music is located in Louisville, Kentucky and founded to develop outstanding music and quality compositions.<sup>6</sup> Editions Bim is located in Vuarmarens, Switzerland and publishes compositions from around the world. A search of both companies' libraries (1972-2014) produced a total of forty-three works written for the tuba-euphonium quartet by twenty-nine different composers that met the research criteria.

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<sup>6</sup> Potenza Music Publishers, "About Us," accessed December 4, 2015, <http://www.potenzamusic.com/about-us-118198.cfm>. Potenza Music was established in 2004 to bring quality music to musicians everywhere through sheet music and recordings. We strive to create the finest products available to the musical world. We believe that quality should be affordable and also lasting. Every item that bears the Potenza Music name has been quality tested by leading professionals – our motto is simple: if it isn't great, we simply don't make it.

## CRITERIA FOR TUBA-EUPHONIUM QUARTETS

The compositions selected for analysis in this research were chosen based upon the following criteria: they must be original compositions for the tuba-euphonium quartet; they can contain any combination of euphoniums and tubas; and they must be able to be performed without a conductor. Selected works require only four voices. This excludes compositions that have split voices within a given euphonium or tuba part. Specifying that a composition be original is to ensure work with tuba and euphonium parts written specifically for the instrument without any changes of the parts through transcription or arranging. Compositions not requiring a conductor are specified because one of the main arguments for this research is to build technical facility in students especially in the two of areas of rhythm and tempo. Having a conductor removes partial responsibility by a student in those two areas. The purpose of limiting the compositions to four voices is to use works composed specifically for the tuba-euphonium quartet and to emphasize the ability to pull two euphonium and two tuba players directly from the wind band instrumentation. With regard to voice division, additional players would be needed to cover those *divisi* sections undermining the point of the four-part selections.<sup>7</sup> For the purposes of this research, the compositions may call for additional instruments, but they must be optional and not critical to the performance of the composition.

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<sup>7</sup> *Divisi* for the purpose of this study is any division of a given musical part. For example, a first tuba divided into parallel 5ths or 8vas would be considered a *divisi* section.

## TUBA-EUPHONIUM QUARTET HISTORY

The history of the tuba-euphonium quartet and its use in the collegiate setting is relatively short compared to other quartet ensembles or small chamber groups.<sup>8</sup> The beginnings are rooted in the tuba ensembles at the Tennessee Technological University, the University of Miami, and Indiana University.<sup>9</sup> These ensembles began in the late 1960s with R. Winston Morris, Constance Weldon, and William Bell, respectively, playing a very limited repertoire.<sup>10</sup> The first professional tuba quartets were formed in the 1970s with groups such as the New York Tuba Quartet, the Mighty Tubadours, and the Los Angeles Tuba Quartet.<sup>11</sup> These groups included some of the top professionals and educators in the tuba and euphonium world including Toby Hanks, Sam Pilafian, John Stevens, Jim Self, Tommy Johnson, and Roger Bobo.<sup>12</sup> The early tuba-euphonium quartets relied on a limited number of original compositions, arrangements and transcriptions that were composed or arranged by the members of the quartet.

The Mighty Tubadours were one of the early tuba quartets that emerged on the music scene in the early 1970s. The group was comprised of Frank Berry, Scott Lycan, Ron Davis, and Bert Harclerode and formed in the fall of 1975 in order to perform at the

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<sup>8</sup> For example, original brass quintet literature dates to composers such as Victor Ewald in the year 1890.

<sup>9</sup> Bradley Bryant Boone, "The Evolution of the Tuba Quartet and its Repertoire" (DMA diss., Louisiana State University, 2011), 30-31.

<sup>10</sup> *Ibid.*, 31.

<sup>11</sup> *Ibid.*, 161-162.

<sup>12</sup> *Ibid.*, 161-162.

Disneyland Resort in California.<sup>13</sup> The group played light literature that appealed to a large audience. They even appeared on the *Gong Show* in the late 1970s.<sup>14</sup> The group did record and release two albums in 1978 and 1984 on Crystal Records.<sup>15</sup>

The New York Tuba Quartet formed in the 1970s comprised of freelance musicians Toby Hanks, John Stevens, Tony Price, and Sam Pilafian.<sup>16</sup> It was for the New York Tuba Quartet that John Stevens began composing while completing his master's at Yale University, under the study of Toby Hanks, composing the works *Power, Music 4 Tubas*, and *Dances*. The ensemble recorded *Dances* on its *Tubby's Revenge* album.<sup>17</sup> John Stevens recently retired from the University of Wisconsin Madison where he served as professor from 1985-2014. In addition to teaching he is an active composer and arranger with many of his compositions becoming standard repertoire.<sup>18</sup> Toby Hanks is former principal tuba with the San Antonio, Puerto Rico, and Minneapolis Symphonies and is well known as a member of the New York Brass Quintet.

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<sup>13</sup> Ibid., 41.

<sup>14</sup> Ibid., 40.

<sup>15</sup> Crystal Records, Inc., "Tuba and Euphonium Recordings," accessed December 14, 2014, <http://www.crystalrecords.com/tuba.html>.

<sup>16</sup> Boone, 162.

<sup>17</sup> Boone, 37.

<sup>18</sup> Editions-Bim International Music Publishing, "Composers John Stevens," accessed December 15, 2014, <http://www.editions-bim.com/composers/stevens-john>.

He is also the former chair of the Brass Department at the Manhattan School of Music where he started in 1973.<sup>19</sup> Sam Pilafian is a founding member of the Empire Brass Quintet and current member of the Boston Brass. He has held previous teaching positions at Arizona State University and the University of Miami where he had great success developing excellent euphonium and tuba studios, as evidenced by the success of his students, many of whom hold professional performing and teaching positions.

The Los Angeles Tuba Quartet formed in 1978 with Roger Bobo, Jim Self, Tommy Johnson, and Don Waldrop. There is no recorded history of the group's output. Jim Self currently teaches at the University of Southern California. Tommy Johnson was a freelance musician in the Los Angeles area and can be heard on a great number of movie scores, where he was in great demand. Roger Bobo is well known for playing with the Los Angeles Philharmonic Orchestra. Roger Bobo, possibly best known for his *Tonight Show* with Johnny Carson appearance, has been in great demand as a private instructor and clinician in the United States, Europe, and Japan.

In the early stages of the development of tuba-euphonium quartets were actually just tuba quartets, comprised of four tubas and no euphoniums. The New York Quartet did try to lighten its sound by adding a euphonium from time to time, but never on a consistent basis. As John Stevens states, there was "very little going on in the northeast with euphoniums although we began playing them ourselves to lighten the sound of the quartet."<sup>20</sup> It was this instrumentation, four tubas, John Stevens wrote for in works like

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<sup>19</sup> Windsong Press Limited, "Brass Legends- Toby Hanks," accessed December 15, 2014, <http://www.windsongpress.com/CD/toby/toby.htm>.

<sup>20</sup> Christopher Lair, "A Historical Overview of the Development of Collegiate and Professional Tuba-Euphonium Ensembles in the United States" (DMA diss., Florida State University, 2010), 87.

*Power, Dances, and Manhattan Suite*. The Alchemy Quartet is one of the early American tuba-euphonium quartets that used the two euphonium and two tuba instrumentations that would become the standard for many years.<sup>21</sup>

The Alchemy Quartet, formerly known as the Atlantic Quartet, formed from members of the United States Coast Guard Band in 1976 from the two euphoniums and two tubas of the band. The members included David Werden and Gary Buttery.

Two European tuba-euphonium quartets that have contributed to and continue to advance the tuba-euphonium quartet legacy are the British Tuba Quartet and Melton Tuba Quartett. The British Tuba Quartet from the United Kingdom was founded in 1991. The quartet was comprised of Steven Mead, Michael Howard, Stuart Birnie, and Richard Sandland.<sup>22</sup> The quartet released a number of recordings. Among those recordings are the *In at the Deep End* (1991) and *March to the Scaffold* (1997).<sup>23</sup> The most recognizable member of the British Tuba Quartet outside of the United Kingdom is Steven Mead. He is professor of euphonium at Royal Northern College of Music where he has taught since 1991.<sup>24</sup> He is also featured on over 65 recordings placing him among the most recorded brass players today.<sup>25</sup> The Melton Tuba Quartett was founded in 1987 and was the first ensemble of its kind in Germany, consisting of four tuba players: Hartmut Müller, Heiko

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<sup>21</sup> Boone, 38.

<sup>22</sup> Boone, 159.

<sup>23</sup> *Ibid.*, 210.

<sup>24</sup> Royal Northern College of Music, "Meet Our Staff- Steven Mead," accessed March 8, 2015, <http://www.rncm.ac.uk/people/steven-mead/>.

<sup>25</sup> Euphonium.net, "Press Kit," accessed March 8, 2015, [http://euphonium.net/press\\_kit.php](http://euphonium.net/press_kit.php).

Triebener, Jörg Wachsmuth, and Ulli Haas.<sup>26</sup> The group recently released the recording *Grand Concerto 4 Tubas* (2013), which contains a tuba-euphonium quartet concerto by John Stevens of the same name.<sup>27</sup> The concerto is the first written for the tuba-euphonium quartet. Both of these quartets helped to establish the tuba-euphonium quartet on the European continent.

Today, three quartets are considered by many in the field examples of high quality tuba-euphonium quartet playing in the United States: Sotto Voce, Eufonix, and Off Bass Brass. Sotto Voce formed while its members were attending the University of Wisconsin in 1996, where John Stevens taught. The members are Mike Forbes, Nat McIntosh, Mark Carlson, and Demondrae Thurman. Eufonix Quartet, founded in 2008, comprises Patrick Stuckemeyer, Danny Helseth, Aaron Tindall, and (until 2015) Kelly Thomas. The group wanted to develop a new type of tuba-euphonium quartet. All the musicians are originally euphonium players but several can double on tuba allowing the group to be very versatile in its use of instruments, creating different timbres and textures through different combinations. This in turn lends a unique sound quality to the group, from light and nimble to the dark rich sonorous sound one typically finds in the tuba-euphonium quartet. Sotto Voce, like the Eufonix Quartet, has members that are comfortable doubling, which allows them to change their instrumentation depending on what the music dictates or requires musically.

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<sup>26</sup> Melton Tuba Quartett, "Ensemble," accessed March 8, 2015, [http://www.meltontubaquartett.com/?page\\_id=573&lang=en](http://www.meltontubaquartett.com/?page_id=573&lang=en).

<sup>27</sup> Premiered in Duisburg, Germany on November 09, 2011 by the Melton Tuba Quartett and the Duisburg Philharmonic Orchestra under the direction of Carl St. Clair.

The Off Bass Brass Tuba Quartet was founded in 2004 by Mark Jenkins, Ryan McGeorge, John Cradler, and Tom Holtz, all of whom are current or former members of “The President’s Own” United States Marine Band. The Off Bass Brass has released two audio recordings, *Knock Yourself Out* and *Tubacus Galacticus*.

## LITERATURE SUPPORTING USE OF CHAMBER MUSIC

There is significant literature and study on the effectiveness of chamber groups for the individual musician. One of the earliest examples is in Fredrick Martens' *String Mastery: Talks with Master Violinists, Viola Players and Violoncellists* from 1923.<sup>28</sup> Martens discusses the importance of the quartet in building skills in musicians.<sup>29</sup> He suggests that while early string quartet music did have an overly simplistic bass [violoncello] voice, this had been overcome with more modern compositions for the string quartet. He states, "little by little, the composers, augmenting the technical resources of quartet-writing, have added largely to the difficulties of the four instruments."<sup>30</sup>

While there is ample scholarship on the benefits of chamber music generally, there is limited research devoted to how chamber music should be specifically used as a pedagogical tool. There is no direct research that suggests the advantage of using the tuba-euphonium quartet for low brass instruction; hence the motivation for this paper.

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<sup>28</sup> Frederick H. Martens, *String Mastery: Talks with Master Violinists, Viola Players and Violoncellists* (New York: Fredrick A. Stokes Company, 1923).

<sup>29</sup> *Ibid.*, 217.

<sup>30</sup> *Ibid.*, 213.

Kevin Sanders, professor of tuba and euphonium at University of Memphis' Rudi E. Scheidt School of Music, cited in his dissertation "Chamber Music in Secondary Schools: Rounding Out the Low Brass Player" a number of studies that point to the importance of chamber music in the high school setting. The research displays that building well-rounded students includes being technically proficient as a key pillar to successful musicianship.

Kevin Sanders' work centers on a very similar scope of research, the use of the brass quintet to develop tubist's technique. Dr. Sanders used the brass quintet because there is a large source of material written for the ensemble. As is the case with the tuba-euphonium quartet, each voice is important. Each voice carries harmonies, melodies, and leadership parts that require young musicians to grow skills and technical abilities. "At some point measures must be taken to counter the student's shortcomings. Without addressing these challenges, students can progress through high school with these deficiencies, resulting in potential negative ramifications for the professional aspirations of a future music performer or educator."<sup>31</sup> Through the use of the tuba-euphonium quartet, educators have another tool to address possible deficiencies in music students. In secondary and collegiate studies, the limitation of using brass quintets is that they can only address the issues of one tuba player, whereas the tuba-euphonium quartet can provide greater opportunity to a greater number of euphonium and tuba players. Dr. Kevin Sanders' research shows the benefits of chamber music for high school tuba and euphonium students as one source that can directly supplement the challenges not

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<sup>31</sup> Kevin M. Sanders, "Chamber Music in Secondary Schools: Rounding Out the Low Brass Player" (DMA diss., Michigan State University, 2010), 6.

presents in wind band repertoire. He states, "low brass students [can't] adequately prepare themselves for their future musical needs."<sup>32</sup> He goes on to define the areas in which these low brass students are lacking: "aural skills, not experiencing harmony, and with diminished technique," from, "typical band parts for this age group [that] are technically and melodically simplistic, root position harmony."<sup>33</sup> Dr. Sanders sums up the situation that young euphonium and tuba players find themselves in:

Instruments are no longer equal within the large ensemble, but are divided into traditional roles of technique and harmony. While this is necessary for the large ensemble, this often creates gaps in a low brass student's education by enabling their technical and musical expectations to be controlled by their limited role in the ensemble. The students must have musical experiences outside of the large ensemble to counter their artistically diminutive role.<sup>34</sup>

Kevin Sanders goes on to state, "I will explore this educational gap and argue that participation in chamber music can counter the large ensemble deficiencies and dissolve the limiting stereotypes that traditional instrumental roles can create."<sup>35</sup> In his research, Dr. Sanders argues that participation in chamber ensembles can improve the playing of student musicians through chamber music. Sanders' argument can then be applied in the same way with the tuba-euphonium quartet. Dr. Sander's also argues that chamber music for the high school tubist helps to level the technical and musical playing field between musical instruments.

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<sup>32</sup> Ibid., 9.

<sup>33</sup> Ibid., 10.

<sup>34</sup> Ibid., ii. Dr. Sanders is stating that the "traditional" roles, especially for young tuba players, can include overly simple baselines and chord roots in harmonic progresses.

<sup>35</sup> Ibid., ii.

Harvey Phillips was one of the first proponents of the tuba ensemble and tuba-euphonium quartet. Harvey Phillips and Norlan Bewley presented the benefits of incorporating low brass ensembles to music educators in the early 1990s. Harvey Phillips and Norlan Bewley presented the topic at the Midwest Clinic. Since 1946, the Midwest Clinic has provided a yearly platform for musicians, educators, and music-minded people to exchange and experience thoughts and ideas. In 1995 Harvey Phillips and Norlan Bewley presented at the Midwest Clinic "Improving the Low Brass Section with the Low Brass Ensemble."<sup>36</sup> The premise of the presentation was that rehearsing and performing music for low brass ensembles improved the overall musicality of the students, including improving technique. They laid out a set of goals for low brass sections in elementary, middle, and high schools. Each level of schooling had its own warm-up, low brass technical considerations, and chamber music. At the elementary level, the presenters required the students to play duets as an ensemble: first by playing Part A altogether, then playing Part B together, and finally splitting the ensemble to play each part equally. This continued through each level of school with the ensemble going from duet, to trio, and then to four-part playing. The presentation focused on students' coordination, tone production, fingering/hand position, lip slurs, rhythm, dynamics, and sound matching.<sup>37</sup> The overarching idea of this presentation was that small chamber work can greatly increase a student's music proficiency in a number of skills including technique.<sup>38</sup>

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<sup>36</sup> Harvey Phillips and Norlan Bewley, "Improving the Low Brass Section with the Low Brass Ensemble." *The Midwest Clinic* (December 2005): 1-19.

<sup>37</sup> *Ibid.*, 3.

<sup>38</sup> A list of techniques covered by this research is on page 30.

The presentation showed that the added challenge and level of engagement required in low brass ensemble can help students improve as complete musicians. This can then lead to proactive and engaged students that will perform with the wind band on a more active level. Phillips and Bewley observed that students applied the benefits of chamber music study to their large ensembles, improving the quality of the large ensemble's low brass section. The authors sum up their thoughts this way:

Low Brass Ensemble is a useful motivator for students at this age [middle school]. They are shifting from always playing the melody in the beginner book to sheet music that is often mostly whole notes. Most feel neglected musically, and without supplemental challenges, will be ill prepared for the demands of High School music. Feeling overlooked and unimportant within the band leads many (often brighter students) to quit, so scrutinize the low brass and demand high performance skills from them to build their confidence and sense of worth. Consider programming more low brass features or have the low brass ensemble play at concerts.<sup>39</sup>

Additionally, a study by Jay Zorn, former Chairman of the Music Education Department at the University of Southern California Thornton School of Music, found that students would be more likely to remain in music if there were more of a personal role in the music process, i.e., chamber music as opposed to solely large ensemble.<sup>40</sup> The study found chamber music parts provided performers, "with an equally important and challenging part," which students would not be afforded in large ensemble playing.<sup>41</sup> The students in the study had reason to practice their parts and therefore, became better musicians as a whole; students then agreed with the statement, "the more you know about

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<sup>39</sup> Ibid., 3.

<sup>40</sup> Jay D. Zorn, "The New Breed of Band Directors Thinks Imaginatively," *Music Educators Journal* 57, no. 3 (November 1970): 37.

<sup>41</sup> Ibid., 39.

music, the more you enjoy it."<sup>42</sup> The research by Jay Zorn identified three areas that often lead to the highest dropout rate among high school students participating in band programs: lack of interest, scheduling conflicts, and the inability to achieve satisfactory results.<sup>43</sup> This research lays the groundwork for validating the use of chamber music within the music education curriculum to help develop music students that are ready for further study in post-secondary education.

It is important to note that there are a number of pedagogues looking for ways to increase musicians' overall skills. The previously cited works concentrate on different avenues to achieve the same results and retain students, however, each uses chamber music as a primary pedagogical tool and notes that learning solely through participation in large ensembles is inadequate. Dr. Kevin Sanders looks to improve student tuba players through the use of brass quintet literature. Harvey Phillips and Norlan Bewley look to improve a number of skills through the use of a low brass ensemble that includes trombones, euphoniums, and tubas, allowing the large ensemble director to engage many students in the ensemble.

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<sup>42</sup> Ibid., 37.

<sup>43</sup> Ibid., 37.

## TUBA-EUPHONIUM QUARTET VERSUS TUBA ENSEMBLE

The tuba-euphonium ensemble often draws literature from the music of the tuba-euphonium quartet and vice versa, doubling or even quadrupling parts depending on the size of the ensemble. There are compositions written specifically for the tuba-euphonium ensemble, for example *Tubular Octad* by Fisher Tull and *The Furies* by Neal Corwell.<sup>44</sup>

One example of an exceptionally well-developed tuba ensemble is the solely undergraduate ensemble at the Tennessee Technological University under the direction of R. Winston Morris. He was one of the original developers of the tuba ensemble as a teaching tool in the 1960s, R. Winston Morris, along with two other teachers Constance Weldon and William Bell (University of Miami and Indiana University, respectively). Indiana University continues its strong tuba ensemble program today under the guidance of Dan Perantoni; and R. Winston Morris continues the ensemble tradition he began at Tennessee Technological University. Like Indiana University and Tennessee Technological University, the University of Miami continues to maintain a tuba-euphonium ensemble.

The tuba ensemble and tuba-euphonium quartet libraries of literature are not mutually exclusive when it comes to compositions written for one another. While normally the tuba ensemble is a large group of students consisting of the tuba-euphonium studio at a university or school of music, the literature is commonly for four or more parts. The four-part compositions for tuba ensemble can be used by a tuba-euphonium quartet by simply having one musician per part. In this instance the music is the same for

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<sup>44</sup> Fisher Tull, *Tubular Octad* (United States: Boosey & Hawkes, 1980). Neal Corwell, *The Furies* (Clear Spring, MD: Nicolai, 1995).

both tuba ensemble and tuba-euphonium quartet; however, there is a greater necessity for a student player to be highly proficient at the part in order not to deprive the tuba-euphonium quartet of an entire voice. Students can then hold themselves to a higher standard when their professors and fellow quartet members are counting on them to prepare and perform at a high level. In the tuba ensemble, if not carefully attended to, learning through rehearsing, and learning by rote can pervade through the ensemble. This is also a challenge that wind band directors will face. It is necessary that individual parts for the tuba-euphonium quartet be studied and well learned so that rehearsals can be devoted to individuals gaining an understanding of other parts within the tuba-euphonium quartet. Depending on studio size, doubling, tripling or even quadrupling of parts in tuba-euphonium ensemble is not uncommon. A large ensemble can find itself in a play-to-learn precedent, which can be very difficult to reverse once students realize that they can get by with the status quo. The tuba-euphonium quartet by contrast leaves little room for a student to be unprepared. Like other chamber groups, the tuba-euphonium quartet meets on a limited basis with their instructor/mentor for chamber ensemble coaching. With this limited time the tuba-euphonium quartet then relies on self-coaching and assessment. This can lead to group members taking ownership in their progress and setting a higher standard for their progress.

"It is known that playing in a group setting can have many benefits to the student. Increased sight-reading, musicality, and overall musicianship."<sup>45</sup> Playing in small chamber groups can have an increased impact on a young musician more so than a wind ensemble or concert band.

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<sup>45</sup> Pierson A. Wetzel, "The Pedagogical Benefits of Duet Playing: A Vannetelbosch Companion" (DMA diss., Ohio State University, 2007), 2.

There are a number of studies that show duos, trios, and other chamber groups improving a student's musicianship and overall enjoyment. The purpose of this document is to give music educators an effective avenue to improve technique.

One can see that since the early 1970s pedagogues have been using chamber music to challenge their low brass sections due to the general lack of similarly difficult low brass parts in band literature. The tuba-euphonium quartet is the next logical step for this purpose, since the increased repertoire for this ensemble is a recent development. Zorn argues that challenging students leads to not only student retention but to musically satisfied students that continue to develop musical skills, techniques, and experiences. Even though each study focuses on different solutions to the same problem, and with a different group of students, it is important to understand the undercurrent that ties all together. Few low-brass players can be taught strictly through large ensemble instruction.<sup>46</sup> While many musicians playing other instruments may find the ability to grow musically through their large ensemble parts, there is a clear disconnect for the low brass player.<sup>47</sup> It is hoped that working with the processes cited above, that the results of this research can make a positive impact on young euphonium and tuba players, engaging and sparking their technical language.

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<sup>46</sup>Collegiate tuba and euphonium players are most likely receiving private instruction from professors, and that high school students might also be receiving private lessons. What is important in this research is that the music of larger ensembles often lacks technical difficulty that leads to improvement from simply working on an individual's large ensemble part. For instance, clarinet or saxophone players see on a far greater percentage difficult musical scale patterns or melodic passages that would require practice of one's part.

<sup>47</sup> Those large ensemble parts may be difficult enough that technical skills can be learned by simply practicing them. This research will show wind band literature will not offer that luxury to young euphonium and tuba players.

## SELECTION OF WIND BAND LITERATURE

Observing the disparity in large ensemble composition parts for tuba and euphonium compared to tuba-euphonium quartets parts can demonstrate why attention needs to be paid to young euphonium and tuba players and their development technically at all stages of education: high school, undergraduate, and graduate levels. While the tuba-euphonium quartet literature was selected from two prominent publishers in the field, the large ensemble music was chosen differently, because of the sheer volume of literature written for the medium. For the purposes of this research, the first volume of *Teaching Music through Music Performance in Band* is used to provide a group of compositions for the large ensemble medium.<sup>48</sup> This text was selected because it is used as a go-to for large ensemble directors for research and finding works to play with their ensembles. For this reason, the works found within its volumes constitute a “standard” of wind ensemble literature from which music directors can program.

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<sup>48</sup> Larry Blocher, Ray Cramer, Eugene Corporon, Tim Lautzenheiser, Edward S. Lisk, and Richard Miles, eds., *Teaching Music through Performance in Band* (Chicago: GIA Publications, 1997).

## **GRADING FOR THE TUBA-EUPHONIUM QUARTET AND WIND BAND**

For this study, a rubric has been created to grade wind band and tuba-euphonium quartet works so they can be directly compared. The rubric is based on the grading scale that the International Tuba and Euphonium Association uses to grade compositions in the review of new materials in its quarterly journal.<sup>49</sup> In addition to the International Tuba Euphonium Association's grading scale, sections were added to increase the scope of the rubric in the lecture document. When the rubric is applied to the performance literature that this research covers, the five grades of musical difficulty relate to specific levels in secondary school, undergraduate, and graduate studies in the following manner:

- Grades I and II - early and late secondary school curriculum of technical and musical difficulty; in most cases this means between a year or two of playing the instrument.
- Grade III - literature of the freshman/sophomore college students.
- Grade IV - college upperclassmen.
- Grade V - graduate level or professional ensemble.

The grading rubric that was used for the tuba-euphonium quartet music will also be used on the selected standard band literature. To maintain consistent grading, the individual tuba and euphonium parts from band literature are combined and averaged, just as they are in the tuba-euphonium quartet compositions, to allow for direct comparison of the parts. However, the appendices contain the scoring breakdowns in the grading of each composition.

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<sup>49</sup> A complete graph of the grading rubric can be found in Appendix A.

Differences can be seen between the euphonium and tuba scores, and not just the average difficulty of both parts. The grades assigned to the band literature are compared to that assigned in *Teaching Music through Music Performance in Band*.

In Volume One of *Teaching Music through Music Performance in Band*, Larry Blocher and the other collaborating authors compiled 100 large-ensemble works that are standard repertoire among band directors. The volume provides an annotation for each composition presented. The elements addressed in each annotation are roughly composer history, compositional background, historical perspective, technical considerations, stylistic considerations, musical elements, and form/structure. Also included are selected references for further study, if desired. This is a standard source used by band directors to help program concerts for their large ensembles, and therefore makes an excellent source to derive a list of works to compare to the tuba-euphonium compositions used in this study.

The selection of works for contrast to the tuba-euphonium compositions were from each of the five sections presented in the first volume of *Teaching Music through Performance in Band: Grade II, Grade III, Grade IV, Grade V, and Grade VI*.<sup>50</sup> These grade levels correspond roughly with the grade levels found in the grading rubric, though the text does not clearly define the skills of the grade levels. Under each grade level heading there are twenty compositions that meet that grade's criteria, totaling one hundred compositions. From these, one hundred compositions, ten compositions were selected for analysis by the grading rubric. This allows a comparison with the tuba and euphonium parts from the tuba-euphonium quartet compositions. To ensure unbiased

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<sup>50</sup> Blocher, vi-ix.

selection the page numbers from each composition found in the table of contents were compiled by grade level, for a total of twenty compositions, and entered into a randomizer to select a completely random group of compositions.<sup>51</sup> Once all twenty compositions from each grade level were ordered, the first ten in the random list were selected for research.<sup>52</sup> The individual euphonium and tuba parts were then graded according to the grading rubric.<sup>53</sup> The two grade levels that each part received were then averaged to get the mean grade for the large ensemble composition in a similar fashion to the tuba-euphonium quartet compositions.

Throughout the use of the grading rubric and research of the works included in this document, annotations are included for thirty of the quartets by the applicable publishing companies and are marked on the spreadsheet of the compositions used.

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<sup>51</sup> This insures that the compositions weren't unfairly selected because of familiarity. The website Random.org was used to build the random lists of wind band literature selected. <https://www.random.org/lists>

<sup>52</sup> See Appendix B for the compiled list of the wind band literature randomized.

<sup>53</sup> See Appendix A.

## EXPLANATION OF TECHNIQUES

The skills that this document addresses and uses to build a student's technical facility include the following:

- Dynamic Range
- Tempo
- Tonal Range
- Syncopations
- Harmony/Melody Language
- Multiple Tonguing
- Rhythms
- Intonation
- Time Signatures
- Extended Techniques

Each of these technical aspects are addressed separately in the grading rubric of each of the tuba-euphonium quartets and the wind band literature. The complete rubric is discussed in the grading of each work later in this document.<sup>54</sup> A short discussion is given here on each of the technical aspects.

### **Dynamic Range**

Dynamic range put simply, is how loud and soft a given composition is. However, dynamics can contain a great deal of detail and nuance, which is why the grading rubric has five different levels of dynamics, as well as the dynamics' involvement in the composition. Level one of the dynamic rubric contains only simple dynamic markings.

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<sup>54</sup> See Appendix A.

This simple kind of markings might be just *p*, *mp*, *f* without *crescendo*, *decrescendo* or other advanced marking. Level two can contain greater detail in dynamics, such as the use of *crescendo*, *decrescendo*, or a rapid/sudden dynamic change to either side of the dynamic spectrum. At this level, however, extreme dynamics *ppp* or *fff* are not present. Level three continues the advancement of the prior two levels of dynamics. This level can contain a dynamic range from *pp* to *ff* without any extreme changes or rapid changes. Crawford Gates' *Tuba Quartet, Op. 59* from mm. 22-27 shows an example of this.

Musical Example 1. *Tuba Quartet, Op. 59*, mm. 22-27

The musical score consists of four staves labeled E 1, E 2, T 1, and T 2. Each staff shows a dynamic progression from *f* to *pp* over five measures. The E 1 and E 2 staves are in bass clef, while T 1 and T 2 are in bass clef with an 8va marking. The dynamics are marked as *f*, *mf*, *mp*, *p*, and *pp* across the measures.

There are a great number of dynamic changes as well as stark contrasts to the dynamic.<sup>55</sup> Level four sees increased difficulty in the composer's use of dynamics. This level requires a musician to refine the control of the use of dynamic range. Examples of this include being able to sustain a *crescendo* over an extended period of time, being able to play hairpin *crescendo/decrescendos* that are perceptible by an audience, and having the ability to sustain a given dynamic without losing tone or quality.

<sup>55</sup> Crawford Gates, *Tuba Quartet, Op. 59* (Louisville: Potenza, 2011).

Level five contains all of the preceding dynamic usage but also any other dynamic creation that a given composer can conceive, such as rapid changes, use of extreme dynamics, and *forzando pianos*.

### **Tempo**

The second technical skill can make an unassuming passage very difficult by simply speeding up the time in which a musician has to process the skill and execute the given task. The rubric divides tempo into five sections. Level one has no changes to the tempo; there is one tempo throughout the composition. Level two has simple changes in tempo. These changes can be different tempos to movements, or tempos that are easily doubled, or cut in half. For instance, this would include going from a metronome marking of quarter note equals sixty to quarter note equals 120 beats per minute. Level three can have time signature changes, but those changes must be between simple time signatures; for example, from common time signature that changes to a 3/4 time signature. Tempo changes can occur within a movement. At level four, the tempo continues in difficulty by adding the element of compound time. An example would be, the use of 7/8 measures in combination with common time or other simple time signature. The final level, five, is a combination of all the previous levels and time signatures but with more rapid transitions to increase the difficulty of reading and executing the composer's wishes. This can include rapid changes between simple and compound time but also includes the changes between different compound meters and rhythmic feels. For example, changes in the combination of the subdivision of the eighths in 7/8, whether it be [3+2+2], [2+3+2], or [2+2+3]. The meter maybe subdivided in anyway at the highest level.

## **Tessitura**

The tessitura of the rubric is very straightforward and easily applied without any judgment calls by the grader. Level one for the euphonium and tuba are B-flat2 to B-flat3 and B-flat1 to B-flat2 respectively. Level two ranges increase to F2 to F4 and A1 to E3. Level three continues to increase the ranges of both instruments while requiring the musician to play in a medium tessitura F2 to B4 and F1 to B3. Level four, like the others, increases the range of the instruments to B-flat1 to C5 and C1 to F4. This level also increases the musician's need to play an extended time in high tessitura. Level five includes the practical range of both instruments C1 to F5 and D-flat0 to F4 with a much higher demand on the high ranges of all players involved. This level can also include a great dependence on the pedal range of the second tuba player effectively to execute bass lines for the tuba-euphonium quartet.

## **Syncopations**

Syncopations are one element often not utilized significantly in euphonium and tuba parts in wind band literature. The tubist will often play the downbeat while the French horn plays the off beats or syncopations in a wind band composition. Therefore, it is important to provide a method for a student of the tuba or euphonium to develop the feel and understanding of playing syncopations. In the rubric, level one contains no syncopations at all, while level two only contains simple and very limited syncopations. This could simply be playing quarter notes off the beat. Level three increases the difficulty by increasing the duration of the syncopations. Instead of a simple measure in a composition, level three can be several measures in a composition. Level four increases the complexity of the syncopations. This could be accomplished by simply moving

quickly between on the beat and syncopations. Level five is the most difficult syncopation that a musician would come across, which can include increased duration or syncopations found throughout multiple sections of a composition.

### **Harmony/Melody**

Compositional style can have a great deal of influence on the musician's understanding of the composition with its harmonies/melodies progression. Levels one through three of the rubric are similar in that the composition must be tonal; however, levels two and three increase the difficulty by allowing the melody to skip to varying degrees. While level two can have small skips in the melody (less than an octave), level three can contain large interval skips (greater than an octave), which would be difficult for the younger musician to hear and comprehend. Greater interval skips can also address other techniques such as flexibility and range. Level four of the melody/harmony language is where the compositional style begins to leave simple melodies and harmonic progressions. This level can contain dissonances, have contemporary harmonies, such as jazz chords, or it can contain melodies that are contemporary such that one might find in compositions written post 1950. The fifth level is the most difficult of harmonic languages. The level can contain angular melodies, large interval skips in the melodic line, twentieth-century harmonic progressions, and jazz influenced chords and harmonies.

## **Multiple Tonguing**

Musicians use multiple tonguing to execute repeated articulated patterns or quickly articulated musical runs. The technique performed through the use of the tu-ku or du-ku syllables while articulating on the instrument.<sup>56</sup> Again, level one does not contain any multiple-tonguing sections. In level two there are simple and limited amounts of multiple tonguing. This could be simple rhythms such as four repeated sixteenth notes. Level three intensifies the difficulty by increasing the number of patterns to be multiple tongued, while also slowly increasing the duration. Level four's difficulty comes from the quantity of multiple-tonguing sections contained within a composition. Level five combines all other aspects of the previous multiple-tonguing levels and increases the length and duration of the multiple tonguing. Long sections of multiple tonguing, trading sections of multiple tonguing with other members of the tuba-euphonium quartet, and having to match styles, are examples of this level of multiple tonguing.

## **Rhythm**

Correct reading and execution of rhythmic figures is a fundamental skill for any musician. For this reason, instructors need to teach rhythm just as much as sound production. Level one contains subdivisions of eighth notes or larger. Level two contains simple rhythms that can contain sixteenth notes within them. Level three contains sixteenth notes but also triplets and an increased number of these rhythms. Level four finds greater rhythmic complexity and the use of multi-metric rhythms.

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<sup>56</sup> In addition to simply executing multiple tonguing, importance should be placed on acquiring the ability to play with clarity and definition in the tuba-euphonium quartet.

This can contain sections with rhythms crossing over into and returning from compound time signatures. Level five is of the greatest rhythmic difficulty containing and increasing the difficulty of all previous levels.

### **Extended Technique**

The use of extended technique can enhance a performance but also provide an additional tonal color for a composer. The first two levels of the rubric contain no use of extended technique.<sup>57</sup> Level three contains a small number of techniques such as trills or glissandi—techniques that are fairly easy to learn and apply in the musical situation. Level four contains fluttering tonguing and multiphonics. Fluttering tonguing can be achieved by either growling while playing or producing the same sound one would use to "roll his/her Rs" in the Spanish language. Players accomplish multiphonics by humming a pitch while buzzing a different pitch, thereby producing two distinct pitches through the instrument. Level five contains all other twentieth and twenty-first century techniques, such as using the horn as a percussive instrument and the use of improvisation by one or more members of the tuba-euphonium quartet.

Each of the sections of the rubric contains elements that a student may be learning in private lessons or through *étude* books. However, the tuba-euphonium quartet provides a platform for applying and refining these elements while in a group setting that demands a high level of execution from each member of the ensemble.

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<sup>57</sup> In the case of extended technique in levels one and two, since they contain no extended technique, a one is given to the composition during grading.

Through the application of these skills a student will learn the elements correctly and at an earlier point than they would by simply playing in the wind band that many schools require of their students. By using the rubric, appropriate literature can be chosen for students to tackle weak technical skills and improve student satisfaction by playing more demanding material.

## RESULTS OF GRADING OF SELECTED WORKS

Though the difference is not great in the overall numbers of the graded tuba-euphonium quartets and wind band literature, great margins seen in the detailed grading of each work found in appendices C & D. The average grades for tuba-euphonium quartets and wind band literature is 2.79 (III) and 1.93 (II) respectively.<sup>58</sup> There are instances where individual parts are of greater difficulty than the other parts in the tuba-euphonium quartet. An example of this is in *Tubacus Galacticus* by Ryan McGeorge, of the tuba-euphonium quartet Off Bass Brass; the first euphonium part has a higher difficulty grade because it includes a greater use of range and rhythm than the other three parts.<sup>59</sup>

Table 1. Grades by Part of *Tubacus Galacticus*

Title	Tubacus Galacticus- Ryan McGeorge			
	Part I	Part II	Part III	Part IV
Tempo	IV	IV	IV	IV
Range	(A2-F5) V	(F2-B-flat4) III	(D2-E-flat4) IV	(D1-B3) III
Rhythm	IV	III	III	II
Dynamic	IV	IV	IV	IV
Syncopation	III	III	II	II
Harmony/Melody	IV	IV	IV	IV
Multiple Tonguing	II	II	II	II
Extended Technique	III	III	II	II
Total	3.625	3.25	3.125	2.875
Average	3.22 (III)			

For this particular, difficult section, the teacher can decide what strategy to use to tackle a student's rhythmic or range challenges. The teacher can ask a student experiencing difficulty with playing complex rhythms to play the first euphonium part in *Tubacus Galacticus*, while the other three players build a solid rhythmic foundation. Or, the

<sup>58</sup> All grades for each category were added together and then averaged to reach the grade level for each part and the grade level of the composition.

<sup>59</sup> Ryan McGeorge, *Tubacus Galacticus* (Louisville: Potenza Music, 2011).

inverse can be done; ask the rhythmically weaker player to play the second euphonium part cohesively to create a solid rhythmic foundation with the other two parts. It is in the first euphonium part that one can find challenges in rhythm such as that found in musical example 2.

Musical Example 2. *Tubacus Galacticus*, mm. 28-31, All parts in Bass Clef

Tuba 1

Euphonium 1

*Prelude, Siciliano, and Rondo* by Malcolm Arnold<sup>60</sup> and Kenyon Wilson's *Dance No. 2*<sup>61</sup> for tuba-euphonium quartet graded at the same level of II, with average grades of 2.13 and 2.16 respectively.

Table 2. Grades by Part of *Dance No. 2*

Title	<i>Dance No. 2</i> - Kenyon Wilson			
	Part I	Part II	Part III	Part IV
Tempo	IV	IV	IV	IV
Range	(A3-C5) IV	(E-flat3-G4) II	(F2-G3) III	(F1-C3) II
Rhythm	II	II	II	II
Dynamic	II	III	III	II
Syncopation	II	II	II	II
Harmony/Melody	II	II	II	II
Multiple Tonguing	I	I	I	I
Extended Technique	I	I	I	I
Total	2.25	2.125	2.25	2
Average	2.16 (II)			

<sup>60</sup> Malcolm Arnold, *Prelude, Siciliano and Rondo* (New York: Carl Fischer, 1979).

<sup>61</sup> Kenyon Wilson, *Dance No. 2* (Louisville: Potenza Music, 2009).

Table 3. Grades by Part of *Prelude, Siciliano, and Rondo*

Title	<i>Prelude, Siciliano, and Rondo</i> - Malcolm Arnold/ Paynter	
	<b>Euphonium</b>	<b>Tuba</b>
Tempo	IV	IV
Range	(F2-F4) II	(F1-G3) III
Rhythm	II	II
Dynamic	II	II
Syncopation	III	II
Harmony/Melody	II	II
Multiple Tonguing	I	I
Extended Technique	I	I
Total	2.125	2.125
Average	2.13 (II)	

While both compositions score evenly for tempo, harmony, use of multiple tonguing, and use of extended technique, there are areas where differences become apparent. The first euphonium part of the *Dance No. 2* has a higher degree of difficulty of range than the other three parts in either the tuba-euphonium quartet or the tuba and euphonium parts in *Prelude, Siciliano, and Rondo*. Musical example 3 provides an example of the greater difficulty when the first euphonium reaches a C5 at the very end of the composition. In addition to this singular high note, the tessitura of the first part is high compared to that in Malcolm Arnold's work. Musical example 4 (mm. 40-43) provides an example where the first euphonium never descends below B-flat3. Furthermore, throughout the entire piece it does not descend below A3. In the case of the first part, a student can be working on the upper range and on endurance in the higher tessitura. This case of greater higher difficulty of range also applies to the first tuba part, which, though not as extensive as the first euphonium, has a range of F2 to G3 putting it into the medium tessitura for the tuba. The second euphonium and first tuba have a greater range of difficulty of dynamic changes than the two other parts, as shown by the composer's use of the *pp* to *ff* at the

conclusion of the composition. The composer requires each performer to develop and maintain *crescendos* while other parts are not doing the same. Here the student/teacher can address work on dynamic understanding while playing with an ensemble. While the two compositions, *Prelude, Siciliano, and Rondo* and *Dance No. 2* are similar in overall grading, these particular difficulties provide student and teacher the opportunity to address topics that would not arise in wind band literature.

Musical Example 3. *Dance No. 2*, mm. 69-71, All Parts in Bass Clef

The image shows a musical score for four parts in bass clef, spanning measures 69 to 71. The score is written on four staves. The top staff has a melodic line with many slurs and accents. The second and third staves have similar melodic lines with accents. The bottom staff has a rhythmic accompaniment. All parts end with a dynamic marking of *ff* (fortissimo) at the end of measure 71. The score is enclosed in a double bar line.

Musical Example 4. *Dance No. 2*, Euphonium I, mm. 40-42

The image shows a musical score for Euphonium I, spanning measures 40 to 42. The score is written on a single staff in bass clef. The music features a melodic line with slurs and accents. The score ends with a measure number 43 in a box at the end of the line.

*Canzona* by Peter Mennin<sup>62</sup> and *Four Little Pieces* by Thomas Stevens<sup>63</sup> both graded at the same level II with 2.13.<sup>64</sup>

Table 4. Grades by Part of *Four Little Pieces*

Title	<i>Four Little Pieces</i> - Thomas Stevens			
	Part I	Part II	Part III	Part IV
Tempo	II	II	II	II
Range	(F2-F4) II	(D2-D4) III	(F1-D4) IV	(F1-D-flat4) IV
Rhythm	I	I	I	I
Dynamic	III	III	III	III
Syncopation	II	II	II	I
Harmony/Melody	IV	IV	IV	IV
Multiple Tonguing	I	I	I	I
Extended Technique	I	I	I	I
Total	2	2.125	2.25	2.125
Average	2.125 (II)			

Table 5. Grades by Part of *Canzona*

Title	<i>Canzona</i> - Peter Mennin	
	Euphonium	Tuba
Tempo	I	I
Range	(F-sharp2-F4) II	(F-sharp1-B-flat2) III
Rhythm	II	II
Dynamic	III	III
Syncopation	III	II
Harmony/Melody	IV	IV
Multiple Tonguing	I	I
Extended Technique	I	I
Total	2.125	2.125
Average	2.13 (II)	

Both compositions have advanced harmonies and are equal with the degree of dynamic demand. Neither work uses multiple tonguing or extended technique. The one area that Peter Mennin's *Canzona* has greater technical difficulty is in the euphonium part with

<sup>62</sup> Peter Mennin, *Canzona* (New York: Carl Fischer, 1951).

<sup>63</sup> Thomas Stevens, *Four Little Pieces* (Vuamarens: Editions Bim, 2005).

<sup>64</sup> See Appendices C and D for the breakdown of each selected work. Each work shows its specific grades for each technical area.

syncopations. While Thomas Stevens' work does contain some syncopation, there is more in the *Canzona*. In terms of difficult rhythms, *Four Little Pieces* only contains subdivision up to and including eighth notes, while *Canzona* contains sixteenth notes in both the euphonium and tuba parts. The one area of the *Four Little Pieces* that can be useful for teaching technique is in the range of both tuba parts. The first tuba part has a range of F1 to D4 and the second tuba's range is F1 to D-flat4. The first tuba part stays mostly in the medium tessitura of the instrument, infrequently leaving the bass-clef staff, as shown in musical example 5. The third movement of *Four Little Pieces* provides an opportunity for the second tuba player to master two specific challenges. First, the range requirement for the contrabass tuba is higher than one might see in a typical quartet or in the *Canzona* by Peter Mennin.<sup>65</sup> The other opportunity is for the second tuba player to achieve a free and fluid quality to his/her sound while playing the eighth notes in musical example 6. Finally, these works can improve the development and execution of the high range in both the tuba one and tuba two parts. Though these two works are fairly close in difficulty, there are areas where they can be used to increase technical facility in younger musicians.

Musical Example 5. *Four Little Pieces*, Tuba I, Movement I, mm. 8-14



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<sup>65</sup> Peter Mennin's composition covers a range of F-Sharp<sup>1</sup> to B-Flat<sup>3</sup>.

Musical Example 6. *Four Little Pieces*, Tuba II, Movement III, mm. 1-6



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*George Washington Bridge* by William Schuman<sup>66</sup> and *Antepenultimate Tango* by Kenyon Wilson<sup>67</sup> are both graded at a III according to the grading rubric. Their individual average scores were 2.69 and 2.75 respectively.

Table 6. Grades by Part of *Antepenultimate Tango*

Title	<i>Antepenultimate Tango</i> - Kenyon Wilson			
	Part I	Part II	Part III	Part IV
Tempo	III	III	III	III
Range	(F3-B-flat4) III	(B-flat2-F4) II	(E-flat2-B-flat3) II	(D-flat1-F3) III
Rhythm	IV	IV	IV	IV
Dynamic	III	III	III	III
Syncopation	IV	IV	IV	IV
Harmony/Melody	II	II	II	II
Multiple Tonguing	II	II	II	I
Extended Technique	III	I	II	I
Total	3	2.625	2.75	2.625
Average	2.75 (III)			

<sup>66</sup> William Schuman, *George Washington Bridge* (New York: G. Schirmer, 1951).

<sup>67</sup> Kenyon Wilson, *Antepenultimate Tango* (Louisville: Potenza Music, 2013).

Table 7. Grades by Part of *George Washington Bridge*

Title	<i>George Washington Bridge</i> - William Schuman	
	<b>Euphonium</b>	<b>Tuba</b>
Tempo	III	III
Range	(D-flat2-D4) III	(A-flat1-B-flat3) III
Rhythm	II	II
Dynamic	IV	IV
Syncopation	III	III
Harmony/Melody	IV	IV
Multiple Tonguing	II	I
Extended Technique	I	I
Total	2.75	2.625
Average	2.69 (III)	

The two compositions compare closely in many of the eight categories used in the grading rubric, including tempo and range. As in the *Canzona* of the previous comparison, there are categories of technical challenges where the wind band literature has the higher level of difficulty. Those categories are the use of dynamics (William Schuman uses a large dynamic range during the composition), and the harmonic language of the composition (*George Washington Bridge* is an example of greater harmonic difficulty because of its bitonality whereas *Antepenultimate Tango* has a simpler harmonic structure). That leaves two areas where Wilson's composition can build strength in technical playing. Those two categories are the composer's use of rhythm and syncopation in *Antepenultimate Tango*. Musical example 7 illustrates an example of both the syncopation and rhythmic difficulties in *Antepenultimate Tango*.<sup>68</sup> Notice that the second tuba player has syncopated ostinato, m. 97, which has carried over from the transition to the *Allegro* section at m. 71.<sup>69</sup> Although it repeats itself through numerous

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<sup>68</sup> See Musical Example 7.

<sup>69</sup> See Musical Example 8.

intervals, the rhythm and time must stay consistent throughout. This provides a fine opportunity to increase a student's technical facility on an ostinato bass line while maintaining tempo in the ensemble setting. Musical example 7 also demonstrates the greater difficulty of rhythms for the upper three voices. The first tuba begins playing the syncopations in m. 90, then in unison with the other three players at m. 91. The rhythm of both euphoniums and the first tuba is in unison, which provides a check with each musician to ensure that each is correctly executing the written rhythm, and that individual practice is effective in producing correct rhythms. Musical example 9 indicates a situation with simpler rhythms for the ensemble, but a study for syncopation. This section requires each member of the tuba-euphonium quartet to know his/her part and how it fits into the overall rhythm of the composition. The lower three voices are trading syncopations with the first euphonium, playing quarter-note triplets over the top. This situation provides an opportunity to break the section apart, refine, and then put the pieces back together to develop a strong foundation for the solo line above. Though both compositions have similar difficulties in both harmonic language and syncopations, *Antepenultimate Tango* provides the opportunity to work and strengthen a musician's rhythm and syncopation skills in the small ensemble setting.

Musical Example 7. *Antepenultimate Tango*, mm. 97-99

Musical score for Musical Example 7, measures 97-99. The score is in bass clef with a key signature of two flats (B-flat and E-flat). It consists of four staves labeled E1, E2, T1, and T2. The time signature changes from 4/4 to 3/4 and back to 4/4. Measure 97 starts with a forte (*f*) dynamic. Measure 99 is marked with a box containing the number 99 and features a forte (*f*) dynamic in the E1 staff and a mezzo-forte (*mf*) dynamic in the E2 staff. The T1 staff has a forte (*f*) dynamic in measure 98 and a mezzo-forte (*mf*) dynamic in measure 99. The T2 staff has a forte (*f*) dynamic in measure 97 and a mezzo-forte (*mf*) dynamic in measure 99.

Musical Example 8. *Antepenultimate Tango*, Tuba II, mm. 71-72

Musical score for Musical Example 8, measures 71-72, for Tuba II. The score is in bass clef with a key signature of two flats (B-flat and E-flat). The time signature changes from 4/4 to 3/4. The music starts with a forte (*f*) dynamic.

Musical Example 9. *Antepenultimate Tango*, mm. 112-115, All Parts in Bass Clef

Musical score for Musical Example 9, measures 112-115, with all parts in bass clef. The score is in a key signature of two flats (B-flat and E-flat) and a 4/4 time signature. It consists of five staves. Measures 112-114 feature triplets in the top staff. Measure 115 is marked with a box containing the number 115 and features a forte (*f*) dynamic in the third staff. The bottom staff has a mezzo-forte (*mf*) dynamic in measure 114.

The next compositions that are compared are *Lincolnshire Posy* by Percy Grainger<sup>70</sup> and *Convalescence* by Drew Worthen.<sup>71</sup> A longstanding standard in the wind band literature library, *Lincolnshire Posy* is graded at a III (2.75), which places it at the top of all the selected wind band literature in difficulty. *Convalescence* was graded at a III also (2.75).

Table 8. Grades by Part of *Convalescences*

Title	<i>Convalescences</i> - Drew Worthen			
	Part I	Part II	Part III	Part IV
Tempo	III	III	III	III
Range	(F3-B4) IV	(D3-F4) II	(A1-B-flat3) III	(D1-E-flat3) III
Rhythm	IV	IV	IV	IV
Dynamic	III	III	III	III
Syncopation	III	III	III	III
Harmony/Melody	III	III	III	III
Multiple Tonguing	II	II	II	II
Extended Technique	I	I	I	I
Total	2.875	2.625	2.75	2.75
Average	2.75 (III)			

Table 9. Grades by Part of *Lincolnshire Posy*

Title	<i>Lincolnshire Posy</i> - Percy Grainger	
	<b>Euphonium (no baritone part)</b>	<b>Tuba</b>
Tempo	IV	IV
Range	(D2-G4) III	(D1-F3) III
Rhythm	IV	III
Dynamic	IV	IV
Syncopation	II	II
Harmony/Melody	III	III
Multiple Tonguing	I	I
Extended Technique	I	I
Total	2.75	2.625
Average	2.69 (III)	

<sup>70</sup> Percy Grainger, *Lincolnshire Posy* (Cleveland: Ludwig Music, 1987).

<sup>71</sup> Drew Worthen, *Convalescence* (Louisville: Potenza, 2011).

As with the comparisons above, there are areas where the wind band literature addresses technical difficulties for young tuba and euphonium player: tempo/time changes, dynamic contrast, and rhythm (especially in the euphonium part of *Lincolnshire Posy*). There are two areas of technical difficulty for which *Convalescence* is useful in teaching specific skills: syncopation and multiple tonguing. *Convalescence* is based on a "strict homorhythmic texture," that includes, "complex rhythms, vast meter changes, extreme dynamic contrast, and constantly varying articulations."<sup>72</sup> This composition provides ample opportunity to work on rhythm, syncopation, and multiple tonguing, as shown in musical example 10. One positive aspect of the homorhythmic nature of this composition is that it provides an excellent case study for consistent time and tempo throughout the tuba-euphonium quartet. With the homorhythmic texture there are potential difficulties for members of the ensemble, which can be solved by subdividing. Careful practicing and understanding of the rhythm is required to achieve the desired outcome in this case. Clarity and unanimity of articulation are possible areas of difficulty in this kind of homorhythmic texture. Slow group practice, or practice in pairs of instruments, allows group members to develop a unified approach to articulation in this example. Working together as a group, listening, and discussing this composition can lead to better overall technical and musical playing of the tuba-euphonium quartet; each member is engaged with a voice in every decision.

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<sup>72</sup> Ibid, program notes to composition written by the composer.

Musical Example 10. *Convalescence*, mm. 93-96

Frank Ticheli's *Postcard*<sup>73</sup> and Dan Kramer's *Brink* graded at III and II respectively.<sup>74</sup> Their average scores are closer than their grade level would suggest; *Postcard* has an average grade of 2.50 and *Brink* has an average grade of 2.47 according to the grading rubric. The one technical aspect that dropped *Brink* into the lower grade was the lack of any syncopation in the composition; *Postcard* has an extended amount of syncopation. Except for the first euphonium part in *Brink*, the two compositions averaged to the same level for the euphonium and tuba parts in *Postcard* and the lower three parts in *Brink*. On the other hand, there are a few areas where *Brink* is more difficult technically over Frank Ticheli's *Postcard*. The range of the tuba parts in *Brink* are wider than those found in Ticheli's composition; therefore, it would be an excellent opportunity to increase the range of both tuba players. Still, if the ensemble consists of three euphoniums and one tuba, a euphonium player that can play a solid D2 can easily cover the first tuba part. The rhythm of one eighth, two sixteenths, one eighth is repeated numerous times throughout the composition and passed between parts. It provides an opportunity, as in *Convalescence*, to discuss and come to the best conclusion of the style

<sup>73</sup> Frank Ticheli, *Postcard* (Brooklyn: Manhattan Beach, 1993).

<sup>74</sup> Dan Kramer, *Brink* (Louisville: Potenza, 2012).

needed for the repeated figure. This figure can also increase technical facility in a musician, because of its difficult slur pattern or lip flip, which can be very difficult when repeated multiple times; this type of pattern would then fall into the rhythm section of the rubric.<sup>75</sup> A musician must take time to develop the skill as well the ability to sustain the pattern over an extended period. Slow practice and a good ear are required to maintain a consistent style and articulation. Group practice of the figure by playing the rhythmic figure in unison can achieve this.

Musical Example 11. Example of Lip Flip from *Brink*, Part in Bass Clef



*La Fiesta Mexicana* by Alfred Reed<sup>76</sup> and *Vortex* by Lon Chaffin<sup>77</sup> both graded the same III (2.81). Each composition contains its own difficulties. However, the one area to focus on is the multiple tonguing demand of *Vortex*. Both the first and fourth movements contain extended sections of triple tonguing as well as double tonguing. Musical example 12 shows a mix of triple and double tonguing. The section will require clarity of articulation and a group consensus on style. Multiple recurrences of this triplet figure throughout the movement need to be consistent across all parts. There are no instances of multiple tonguing in *La Fiesta Mexicana*, although there are rhythmic

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<sup>75</sup> A lip flip is a termed on rapid slur or flexibility figures. An example of a lip flip can be found in musical example 11.

<sup>76</sup> Alfred Reed, *La Fiesta Mexicana* (New York: Mill's Music, 1954).

<sup>77</sup> Lon Chaffin, *Vortex* (Louisville: Potenza, 2012).

difficulties. Musical example 13 shows the continued multiple tonguing in all four voices of the tuba-euphonium quartet. A further example can be found in musical example 14; the rhythm is built by each voice entering in a pyramid style. Here, the ensemble should pay great attention to blending and listening to the style and entrance, before the conclusion with the second tuba's entrance in m. 29. *Vortex* provides an opportunity for the players to develop multiple tonguing, while also listening and blending articulations with the rest of the tuba-euphonium quartet.

Musical Example 12. *Vortex*, Movement I, mm. 35-37

Musical score for Musical Example 12, *Vortex*, Movement I, measures 35-37. The score is written for four parts: Euphonium 1 (E1), Euphonium 2 (E2), Tuba 1 (T1), and Tuba 2 (T2). The key signature is one flat (B-flat major/D minor) and the time signature is 3/4. The score features multiple tonguing patterns, indicated by the '3' above groups of notes, and various articulations such as accents and slurs. The Tuba 2 part begins at measure 35.

Musical Example 13. *Vortex*, Movement IV, mm. 8-10

Musical score for Musical Example 13, *Vortex*, Movement IV, measures 8-10. The score is written for four parts. The key signature is one flat (B-flat major/D minor) and the time signature is 3/4. The score features multiple tonguing patterns, indicated by the '3' above groups of notes, and various articulations such as accents and slurs. The dynamic marking is *mf* (mezzo-forte).

Musical Example 14. *Vortex*, Movement IV, mm. 27-29

Gustav Holst's *Second Suite in F*<sup>78</sup> and *Three Sketches* by Robert Beadell<sup>79</sup> both graded at II with a 2.38 and 2.31 averaged scores respectively.

Table 10. Grades by Part of *Second Suite in F*

Title	<i>Second Suite in F- Gustav Holst</i>	
	<b>Euphonium</b>	<b>Tuba</b>
Tempo	IV	IV
Range	(C2-G4) III	(E1-G3) III
Rhythm	III	III
Dynamic	III	III
Syncopation	II	II
Harmony/Melody	II	II
Multiple Tonguing	I	I
Extended Technique	I	I
Total	2.375	2.375
Average	2.38 (II)	

<sup>78</sup> Gustav Holst, *Second Suite in F* (London: Boosey & Hawkes, 1984).

<sup>79</sup> Robert Beadell, *Three Sketches* (Vuarmarens: Editions Bim, 1974).

Table 11. Grades by Part of *Three Sketches*

Title	<i>Three Sketches</i> - Robert Beadell			
	Part I	Part II	Part III	Part IV
Tempo	II	II	II	II
Range	(A <sup>2</sup> -B-flat <sup>3</sup> ) III	(A-flat <sup>2</sup> -G <sup>4</sup> ) III	(B-flat <sup>1</sup> -C <sup>4</sup> ) IV	(B-flat <sup>1</sup> -C <sup>4</sup> ) IV
Rhythm	III	III	III	III
Dynamic	II	II	II	II
Syncopation	II	II	II	II
Harmony/Melody	II	II	II	II
Multiple Tonguing	I	I	I	I
Extended Technique	III	III	III	III
Total	2.25	2.25	2.375	2.375
Average	2.31 (II)			

These two compositions grade evenly technically. *Second Suite in F* has more difficult technical passages because of tempo changes and dynamic contrast. On the other hand, *Three Sketches* has difficulty in the range used in the first and second tuba parts that exceed those found in Holst's composition. In addition, *Three Sketches* includes the use of extended technique in the form of a trill in every voice of the tuba-euphonium quartet. Holst's tempo changes along with dynamic usage and Beadell's difficulty in tessitura is an example of different technical aspects that are found in lower-graded compositions. The difficult areas might be in two or three different technical areas.

*Zion* by Dan Welcher is one case where the euphonium part is considerably more difficult than the tuba part in typical wind band literature.<sup>80</sup> The euphonium part is graded at a III (2.75) while the tuba part is graded at a II (2.13).

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<sup>80</sup> Dan Welcher, *Zion* (Bryn Mawr, PA: Elkan-Vogel, 1998).

Table 12. Grades by Part of *Zion*

Title	<i>Zion- Dan Welcher</i>	
	<b>Euphonium</b>	<b>Tuba</b>
Tempo	IV	IV
Range	(A-flat <sup>2</sup> -C <sup>5</sup> ) IV	(F <sup>1</sup> -C <sup>3</sup> ) III
Rhythm	III	I
Dynamic	III	II
Syncopation	I	II
Harmony/Melody	IV	IV
Multiple Tonguing	I	I
Extended Technique	I	I
Total	2.75	2.125
Average	2.44 (II)	

Table 13. Grades by Part of *Auburn is the Colour...*

Title	<i>Auburn is the Colour...- Mike Forbes</i>			
	Part I	Part II	Part III	Part IV
Tempo	II	II	II	II
Range	(E <sup>3</sup> -C <sup>5</sup> ) IV	(D <sup>3</sup> -A <sup>4</sup> ) III	(G <sup>2</sup> -E <sup>4</sup> ) IV	(G <sup>1</sup> -D <sup>4</sup> ) IV
Rhythm	III	III	III	III
Dynamic	III	III	III	III
Syncopation	II	II	II	II
Harmony/Melody	IV	IV	IV	IV
Multiple Tonguing	I	I	I	I
Extended Technique	I	I	I	I
Total	2.5	2.375	2.5	2.5
Average	2.47 (II)			

The differences are that the euphonium part has an increased range, more difficult rhythms, and greater dynamic contrast requirements than the tuba part. In contrast, Mike Forbes' *Auburn is the Colour...* is more consistent across all four parts of the tuba-euphonium quartet.<sup>81</sup> It demands a greater range from each musician than the range needed for the tuba part in Dan Welcher's composition.<sup>82</sup> While *Auburn is the Colour...* is evenly matched across all parts, it does demand a greater range from the first and second

<sup>81</sup> Mike Forbes, *Auburn is the Colour...* (Vuarmarens: Editions Bim, 1995).

<sup>82</sup> See Appendix D.

tuba players. This composition, a slower melodic type, is an excellent opportunity to develop the tuba player's light, transparent, and blended sound with the other members of the tuba-euphonium quartet. The quartet also demands greater control of rhythmic playing than the wind band example. As seen in musical example 15, *Auburn is the Colour...* requires a great deal of rhythmic stability. The other difficulty of this section for the tuba-euphonium quartet (again, shown in musical example 15) is that all of the voices are above or at the top of the staff together, creating a close voicing of the chords in the composition. Members of the tuba-euphonium quartet need to address all three areas of intonation, clarity, and musicality.

Musical Example 15. *Auburn is the Colour...*, Tuba II, mm. 37-40



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The next two compositions have been included in this analysis because of their use of improvisation. While both pieces did pair up with a wind band composition with a similar score on the rubric, *Symphony No. 6* by Vincent Persichetti (2.63)<sup>83</sup> and *Piece of Mind* by Dana Wilson (3.00)<sup>84</sup>, the one technical difficulty that made each of the tuba-euphonium quartet compositions grade at a III was the improvisation section in each. In Mike Forbes' *Bass is Loaded* (2.53)<sup>85</sup>, the first euphonium and first tuba have improvised sections.

Musical Example 16. *Bass is Loaded*, Euphonium I, mm. 60-86

**Solo Section**  
Euphonium 1 and/or Tuba 1 improvised solo.  
Play background (printed music) when not soloing

60 *f* *sfz* *p* *p*

66 *Fm7* *Bb7* *Cm7* *Bb7* *Cm7*

74 *Fm7* *Cm7* **E** *mf*

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The section repeats so that the improvisation section is played twice. The composer calls for either the first euphonium or first tuba to play both times. In addition, the composer includes percussive hits for the other members of the tuba-euphonium quartet. The second composition that includes an improvisational section is John Stevens'

<sup>83</sup> Vincent Persichetti, *Symphony No. 6* (Bryn Mawr, PA: Elkan-Vogel, 1958).

<sup>84</sup> Dana Wilson, *Piece of Mind* (Cleveland: Ludwig, 1988).

<sup>85</sup> Mike Forbes, *Bass is Loaded* (Vuarmarens: Editions Bim, 2007).

*Diversions*.<sup>86</sup> In this case, the improvisation is written for the second euphonium and first tuba. The tuba has an improvised section in the first movement, while the second euphonium has one in the second movement. These compositions provide an opportunity to introduce students to improvisation, or to develop their skills further. In either case, close study of recordings can provide excellent source material for the solo sections. Students might even find it useful to consult with a jazz teacher on the best way to develop their ideas in the improvisation section. Improvisation is a skill that is not often called for in euphonium and tuba playing; however, it is an excellent time to instruct musicians on how to improvise properly a section that they might encounter in the future with a musical understanding and musical approach.

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<sup>86</sup> John Stevens, *Diversions* (Vuarmarens: Editions Bim, 1978).

## CONCLUSION

The research develops and provides a breakdown of skills that should be used by band directors in the secondary school setting, by private instructors, or by college professors to build a student's technique in tuba and euphonium. For secondary school music directors, inserting a tuba-euphonium quartet into their curriculum either during or after school can be beneficial. Again, here is a great solution for wind bands with larger tuba and euphonium sections to allow for more students to become involved in chamber ensembles and develop their technical skills as musicians. Not only can playing in a tuba-euphonium quartet build technique in younger students lacking private instruction, but it also gives students that are normally deprived of musical opportunities something that can also inspire musicianship and creativity. Fostering chamber groups in secondary school requires extra time from the music teacher, but over time, groups can learn to self-coach with instruction and mentoring. Once the precedent is built the secondary music director can act more as a guide to the tuba-euphonium quartet and allow the quartet to converse musically together. This will allow students to develop their technical facility in the tuba-euphonium quartet closing the gap of technical skills that wind band literature neglects. The additional benefit of building and maintaining tuba-euphonium quartets in secondary education is that it will lead to students who are more involved and lead to greater retention of students as stated by Zorn.<sup>87</sup>

Private instructors with large studios can use the tuba-euphonium quartet in the same manner as in the secondary education setting. The tuba-euphonium quartet can be used by the private instructor to build bonds among students who would not normally

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<sup>87</sup> Zorn, 28.

meet each other because they attend different schools. The quartet can also lend a social aspect to an often solitary practice. In addition, parents of students can experience directly the capability of their children through a tuba-euphonium quartet performance. By highlighting skills that students have learned, such as technique, parents can observe the progress their children have achieved through private instruction.

For the collegiate professor, the tuba-euphonium quartet can produce all the benefits from both the secondary education students and private instruction students. For the collegiate professor, greater independence by the tuba-euphonium quartets allows the professor to oversee the development of the quartet but from a weekly coaching viewpoint. The professor can focus on overarching ideas and concepts, while the quartet members work on the technical aspects of the tuba-euphonium quartet literature. As the grading of the tuba-euphonium quartet literature shows, the tuba-euphonium quartet can reinforce technical concepts first learned in private instruction.

An observation from the grading of the tuba-euphonium quartet and wind band literature is that while many of the compositions grade similarly, there are still areas where the tuba-euphonium quartet can increase technical facility in young euphonium and tuba players. There are still areas, such as rhythmic difficulty, difficult syncopations, and increased use of extended range in both instruments, in which the tuba-euphonium quartet excels in presenting technical challenges for students. It is up to the teacher to find and use these areas to his or her advantage. This research has provided insights into developing technically proficient tuba and euphonium players through the use of the suggested works.

### APPENDIX A—GRADING RUBRIC

	Grade I	Grade II	Grade III	Grade IV	Grade V
Tempo	No changes	Simple changes	More complex changes (changes between simple meters)	Advanced tempo changes (simple and compound meters)	High degree of difficulty of meter changes
Range	Euphonium: About Octave (B-flat2 to B-flat3) Tuba: About Octave (B-flat1 to B-flat2)	Euphonium: F2 to F4 Tuba: A1 to E3	Euphonium: F2 to B4 Tuba: F1 to B3  Moderate tessitura	Euphonium: B-flat1 to C5 Tuba: C1 to F4  Higher tessitura	Euphonium: C1 to F5 Tuba: D-flat0 to F4  Extended use of high register
Rhythm	No subdivision greater than eighth note	Simple sixteenth note patterns	Greater rhythmic complexity Sixteenth note patterns and triplets	Greater rhythmic complexity/ multimetric	Greatest degree of difficulty of rhythms
Dynamic	Limited dynamics	Use of basic dynamics	Use of greater dynamic range	Dynamic control and extremes	Great changes in dynamics with rapid changes/contrast
Syncopation	No syncopation	Simple/limited syncopations	Extended syncopations	Increased complexity	Greatest use of syncopation multiple sections or extended

					length
Harmony/Melody	Tonal	Tonal/no large interval skips	Tonal with large interval skips	Dissonances/ contemporary harmonies, contemporary melodic lines	Angular melodic lines, large skips in melodic line, 20th Century harmonies
Multiple Tonguing	No Multiple tonguing	Simple/limited multiple tonguing	Extended use of multiple tonguing patterns	Multiple tonguing used in greater quantity	Greatest demand for multiple tonguing
Extended Technique	No extended technique	No extended technique	Few extended techniques: i.e.; trills and glissando	flutter tonguing and multiphonics	Use of 20th Century extended techniques and improvising.

## APPENDIX B—RANDOMIZED LIST

### Grade II

1. 132 *Portrait of a Clown* Frank Ticheli (Unavailable)
2. 122 *Mini Suite* Morton Gould
3. 92 *Greenwillow Portrait* Mark Williams
4. 70 *Ancient Voices* Michael Sweeney
5. 100 *Kentucky 1800* Clare Grundman
6. 112 *Little Suite for Band* Clare Grundman
7. 128 *Peace Song* Timothy Broege
8. 85 *A Childhood Hymn* David Holsinger
9. 139 *The Red Balloon* Anne McGinty
10. 136 *Prospect* Pierre La Plante
11. 104 *Korean Folk Rhapsody* James Curnow
12. 144 *Snakes!* Thomas Duffy
13. 77 *The Battle Pavane* Tielman Susato/Margolis
14. 117 *Llwyn Onn* Brian Hogg
15. 148 *Soldiers Procession and Sword Dance* Bob Margolis
16. 108 *Linden Lea* R. Vaughan Williams/Stout
17. 88 *Down a Country Lane* Aaron Copland/ Patterson
18. 74 *As Summer Was Just Beginning* Larry D. Daehn
19. 96 *The Headless Horseman* Timothy Broege
20. 81 *Carpathian Sketches* Robert Jager

### Grade III

1. 207 *Toccata for Band* Frank Erickson
2. 191 *Overture for Winds* Charles Carter
3. 198 *Prelude and Fugue in B-flat* J.S. Bach/Moehlmann
4. 157 *Australian Up-Country Tune* Percy Grainger/Bainum
5. 154 *Air for Band* Frank Erickson
6. 194 *Plymouth Trilogy* Anthony Iannacone (unavailable)
7. 160 *Belle Qui Tien Ma Vie* Bob Margolis/Arbeau (unavailable)
8. 204 *Three Airs from Gloucester* Hugh Stuart (unavailable)
9. 170 *Chant and Jubilo* W. Francis McBeth (unavailable)
10. 185 *Little English Suite* Clare Grundman (unavailable)
11. 201 *Symphonie for Band* Louis E. Jardin/Schaeffer

12. 188 *On a Hymnsong of Philip Bliss* David Holsinger
13. 173 *Come Sweet Death* J.S. Bach/Reed
14. 182 *Ginger Marmalade* Warren Benson
15. 176 *Court Festival* William P. Latham
16. 210 *Two Grainger Melodies* Percy Grainger/Kreines
17. 166 *Cajun Folk Songs* Frank Ticheli
18. 163 *Blessed Are They* Johannes Brahms/Buehlman
19. 179 *Flourish for Wind Band* R. Vaughan Williams
20. 214 *Yorkshire Ballad* James Barnes

#### Grade IV

1. 241 *English Folk Song Suite* R. Vaughan Williams
2. 229 *Chorale and Alleluia* Howard Hanson
3. 263 *Night Dances* Bruce Yarko
4. 259 *Liturgical Music for Band, Op. 33* Martin Mailman
5. 218 *Allerseelen* Richard Strauss/Davis
6. 234 *Chorale and Shaker Dance* John Zdechlik
7. 276 *Prelude, Siciliano, and Rondo* Malcom Arnold/Paynter
8. 286 *Second Suite in F* Gustav Holst
9. 282 *Scenes from The Louvre* Norman Dello Joio
10. 238 *Chorale and Toccata* Jack Stamp
11. 304 *Variations on a Korean Folk Song* John Barnes Chance
12. 300 *Sinfonia V* Timothy Broege
13. 255 *Irish Tune from County Derry* Percy Grainger
14. 247 *Fantasia in G Major* J.S. Bach/Goldman/Leist
15. 267 *Old Home Days* Charles Ives/Elkus
16. 222 *Amazing Grace* Frank Ticheli
17. 271 *Pageant* Vincent Persichetti
18. 251 *First Suite in E-flat* Gustav Holst
19. 225 *Caccia and Chorale* Clifton Williams
20. 294 *Shadows of Eternity* Thomas Stone

#### Grade V

1. 309 *Canzona* Peter Mennin
2. 326 *George Washington Bridge* William Schuman
3. 361 *Symphony No. 6* Vincent Persichetti
4. 365 *Symphony No. 3* Vittorio Giannini
5. 341 *Overture to 'Candide'* Leonard Bernstein/Grundman

6. 372 *Trauermusik* Richard Wagner/Votta/Boyd
7. 330 *La Fiesta Mexicana* H. Owen Reed
8. 369 *Tocatta and Fugue D minor* J.S. Bach/Leidzen (unavailable)
9. 319 *Divertimento* Vincent Persichetti
10. 337 *Overture Op. 24* Felix Mendelssohn-Bartholdy/Boyd
11. 345 *Sketches on a Tudor Psalm* Fisher Tull
12. 385 *William Byrd Suite* Gordon Jacob
13. 316 *Colonial Song* Percy Grainger
14. 334 *Overture in C* Charles Simon Catel/Goldman/Smith
15. 349 *Suite Francaise* Darius Milhaud
16. 378 *Variants on a Medieval Tune* Norman Dello Joio
17. 357 *Suite of Old American Dances* Robert Russell Bennett
18. 382 *Variations on America* Charles Ives/Rhoads
19. 323 *Fantasies on a Theme by Haydn* Norman Dello Joio
20. 313 *Children's March* Percy Grainger/Erickson

#### Grade VI

1. 390 *Armenian Dances Pt. 1* Alfred Reed
2. 444 *Piece of Mind* Dana Wilson
3. 441 *The Passing Bell* Warren Benson
4. 450 *Pastcard* Frank Ticheli
5. 488 *Zion* Dan Welcher
6. 429 *Passacaglia and Fugue in C minor* J.S. Bach/Hunsburger
7. 410 *Lincolnshire Posy* Percy Grainger
8. 461 *Sinfonietta* Ingolf Dahl
9. 407 *Heroes Lost and Fallen* David Gillingham
10. 415 *Masquerade* Vincent Persichetti
11. 435 *Passacaglia (Homage on B-A-C-H)* Ron Nelson
12. 456 *Sinfonia No. 4* Walter Hartley
13. 400 *Emblems* Aaron Copland
14. 465 *Symphony in B-flat* Paul Hindemith
15. 476 *Terpsichore* Bob Margolis after Michael Praetorius
16. 403 *Hammersmith* Gustav Holst
17. 469 *Symphony No. 4 "West Point"* Morton Gould
18. 394 *Carmina Burana* Carl Orff/Krance
19. 420 *Music for Prague 1968* Karel Husa
20. 482 *Theme and Variations* Arnold Schoenberg

### APPENDIX C—TUBA-EUPHONIUM QUARTET LITERATURE GRADING

<b>Composer</b>	<b>Title</b>	<b>Publisher</b>	<b>Date</b>	<b>Configuration</b>	<b>Grade</b>
Adler-McKean, Jack	Little Suite for Chubazz	Potenza	2013	2+2	IV (3.56)
Balmages, Brian	Wind Sketches	Potenza	2010	2+2+ Op. Perc	IV (3.88)
Beadell, Robert	3 Sketches	Editions Bim	1974	0+4	II (2.31)
Chaffin, Lon W.	Vortex	Potenza	2012	2+2	III (2.81)
Forbes, Michael	Auburn is the Colour	Editions Bim	1995	2+2	II (2.47)
Forbes, Michael	Bass is Loaded	Editions Bim	2007	2+2	III (2.53)
Forbes, Michael	Consequences	Editions Bim	1999	2+2	III (3.25)
Forbes, Michael	Cosmic Voyage	Editions Bim	2002	2+2	III (2.82)
Forbes, Michael	Four Miniatures	Editions Bim	2003	2+2	III (3.25)
Forbes, Michael	Go	Editions Bim	2002	4+0	III (2.78)
Gates, Crawford	Tuba Quartet, op. 59	Potenza	2010	2+2	III (2.66)
Gomez, Alice	El Bosque Verde	Potenza	2013	2+2	II (2.28)
Grant, James	Endgame	Potenza	2012	2+2	IV (3.94)
Grant, James	Whiplash	Potenza	2014	0+4	IV (3.88)
Guardia, Alejandro Jr	Excursions	Potenza	2012	2+2	II (2.29)
Guardia, Alejandro Jr	Overtown Throwdown: skr8 up rude	Potenza	2013	2+2	II (2.29)
Hightower, Matt	Divertimento	Potenza	2014	0+4	III (3.26)
Hutchinson, Terry	Tuba Juba Duba	Editions Bim	1972	0+4	II (1.91)
Ionel, Dumitru	Quartet	Editions Bim	1996	0+4	II (1.97)
Kibbe, Michael	Shadows, op. 199	Potenza	2014	2+2	II (2.59)
Kramer, Dan	Fanfare and Fantasy in E-flat Minor	Potenza	2011	2+2	II (2.47)
Kramer, Dan	Brink	Potenza	2012	2+2	II (2.47)
Lisjak, Vanja	Italian Suite	Editions Bim	2007	2+2	II (2.16)
Martin, Theresa	Cyclops	Potenza	2013	2+2	III (2.94)

McGeorge, Ryan	Tubacus Galacticus	Potenza	2011	2+2+ Op. Perc	III (3.22)
McMillan, Ben	Furious Apis	Potenza	2013	2+2	III (3.19)
Oberheu, Stephen	Kicking the Clutch, op. 248	Potenza	2011	0+4	II (2.22)
Snowden, Steven	Take This Hammer	Potenza	2011	2+2	IV (4.03)
Stevens, John	Diversions	Editions Bim	1978	0+4	III (2.97)
Stevens, John	Moondance	Editions Bim	1989	0+4	III (3.47)
Stevens, Thomas	Four Little Pieces	Editions Bim	2005	0+4	II (2.13)
Strukow, Valery	Tuba Quartet	Editions Bim	1984	0+4	II (2.25)
Szentpali, Roland	Birthday Quartet	Editions Bim	1995	0+4	IV (3.82)
Szentpali, Roland	Homework 4 Tubas	Editions Bim	2012	0+4	IV (3.63)
Taylor, Noah D.	Legends	Potenza	2013	2+2	III (3.40)
Wilson, Kenyon	Antepenultimate Tango	Potenza	2013	2+2	III (2.75)
Wilson, Kenyon	Dance No. 2	Potenza	2009	2+2	II (2.16)
Wilson, Kenyon	Dance No. 3	Potenza	2012	2+2	II (2.13)
Wilson, Kenyon	Quartet No. 2	Potenza	2014	2+2	II (1.97)
Wilson, Kenyon	Inertia	Potenza	2013	2+2	II (2.44)
Wilson, Kenyon	Triskaidekaphile	Potenza	2013	2+2	II (2.06)
Worthen, Drew A.	Convalescence	Potenza	2011	2+2	III (2.75)

### APPENDIX D—WIND BAND LITERATURE GRADING

<b>Composer</b>	<b>Title</b>	<b>Publisher</b>	<b>Date</b>	<b>Configuration</b>	<b>Grade</b>
Broege, Timothy	Peace Song	Murbo Music	1993	1+1	I (1.38)
La Plante, Pierre	Prospect	Bourne Co	1983	1+1	I (1.31)
Vaughan Williams, R.	English Folk Song Suite	Boosey & Hawkes	1924	1+1	II (2.19)
Curnow, James	Korean Folk Rhapsody	Jenson Publications	1988	1+1	I (1.25)
Persichetti, Vincent	Divertimento for Band	Oliver Ditson Co	1951	1+1	II (2.31)
Persichetti, Vincent	Masquerade for Band	Elkan-Vogal Co	1966	1+1	II (2.63)
Benson, Warren	Ginger Marmalade	Carl Fischer	1978	1+1	II (1.50)
Mailman, Martin	Liturgical Music for Band	Mills Music	1967	1+1	II (1.69)
Gould, Morton	Mini-Suite	G & C Music	1964	1+1	I (1.25)
Yurko, Bruce	Night Dances	Ludwig Music	1995	1+1	II (1.56)
Sweeney, Michael	Ancient Voices	Hal Leonard	1994	1+1	I (1.25)
Wilson, Dana	Piece of Mind	Ludwig Music	1988	2+2	III (3.00)
Holsinger, David	A Childhood Hymn	Wingert-Jones	1991	1+1	I (1.00)
Schuman, William	George Washington Bridge	G. Schirmer	1951	1+1	III (2.69)
Grainger, Percy	Australian Up-country Tune	G. Schirmer	1970	1+1	II (1.63)
Ticheli, Frank	Portrait of a Clown	Manhattan Beach	1989	1+1	I (1.19)
Dahl, Ingolf	Sinfonietta	Tetra Music	1969	1+1	III (2.50)
Williams, Mark	Greenwillow Portrait	Alfred	1988	1+1	I (1.25)
Dello Joio, Norman	Scenes from "The Louvre"	Edward B. Marks	1966	1+1	II (2.06)
Bach, J.S./ Hunsberger	Passacaglia and Fugue in C minor	G. Schirmer	1975	1+1	II (2.06)
Mennin, Peter	Canzona	Carl Fischer	1951	1+1	II (2.13)
Ginannini, Vittorio	Symphony No. 3	Warner Brothers	1961	1+1	III (2.50)

<b>Composer</b>	<b>Title</b>	<b>Publisher</b>	<b>Date</b>	<b>Configuration</b>	<b>Grade</b>
Erickson, Frank	Air for Band	Bourne Co	1966	1+1	I (1.44)
Schaefer, William	Symphonie for Band	Concert Works Unlimited	1963	1+1	I (1.44)
Mendelssohn, Felix/ Boyd	Overture for Winds	Ludwig Music	1981	1+1	II (1.75)
Carter, Charles	Overture for Winds	Bourne Co	1961	1+1	II (1.88)
Ticheli, Frank	Postcard	Manhattan Beach	1993	1+1	III (2.50)
Grundman, Clare	Kentucky-1800	Boosey & Hawkes	1987	1+1	II (1.63)
Arnold, Malcolm/ Paynter	Prelude, Siciliano, and Rondo	Carl Fischer	1979	1+1	II (2.13)
Bach, J.S./ Moehlmann	Prelude and Fugue in B Flat Minor	Warner Brothers	1955	1+1	I (1.38)
Gillingham, David	Heroes, Lost and Fallen	Composers' Editions	1991	1+1	III (2.63)
Reed, Alfred	Armenian Dances	Sam Fox	1974	1+1	III (2.56)
Hanson, Howard	Chorale and Alleluia	Carl Fischer	1955	1+1	II (1.81)
Reed, Alfred	Come, Sweet Death	Birch Island Music	1976	1+1	I (1.25)
Zdechlik, John	Chorale and Shaker Dance	Neil A. Kjos Music	1972	1+1	II (1.88)
Bernstein, Leonard/ Grundman	Overture to "Candide"	Boosey & Hawkes	1991	1+1	III (2.50)
Erickson, Frank	Toccata for Band	Bourne Co	1957	1+1	II (1.88)
Grundman, Clare	Little English Suite	Boosey & Hawkes	1968	1+1	II (2.00)
Welcher, Dan	Zion	Elkan-Vogel	1998	1+1	II (2.44)
Wagner, Richard/ Boyd	Trauermusik	Ludwig	1994	1+1	II (1.56)
Grundman, Clare	Little Suite for Band	Boosey & Hawkes	1957	1+1	I (1.44)
McGinty, Anne	The Red Balloon	Queenwood/ Kjos	1993	1+1	I (1.00)
Grainger, Percy	Licolnshire Posy	Ludwig Music	1987	1+1	III (2.69)
Strauss, Richard/ Davis	Allerseelen	Ludwig Music	1987	1+1	II (2.00)
Holst, Gustav	Second Suite in F	Boosey & Hawkes	1984	1+1	II (2.38)
Stamp, Jack	Chorale and Toccata	Neil A. Kjos Music	1993	1+1	II (2.38)
Persichetti, Vincent	Symphony No. 6	Elkan-Vogel	1958	1+1	III (2.63)
Reed, Alfred	La Fiesta Mexicana	Mill's Music	1954	1+1	III (2.81)
Holsinger, David	On a Hymnsong of Philip Bliss	TRN Music	1989	1+1	I (1.44)
Tull, Fisher	Sketches on a Tudor Psalm	Boosey & Hawkes	1973	1+1	III (2.69)

## APPENDIX E—TUBA-EUPHONIUM QUARTET GRADING RESULTS

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony/ Melody	Multiple Tonguing	Extended Technique	Total	Average
<i>Little Suite for Chubazz-</i> Jack Adler-McKean	Part I	IV	(F2-C5) IV	III	V	III	V	I	IV	3.625	3.56 (IV)
	Part II	IV	(D-flat2-B-flat4) IV	III	V	III	V	I	IV	3.625	
	Part III	IV	(G-flat1-F4) IV	III	V	III	V	I	IV	3.625	
	Part IV	IV	(B-flat0-B-flat3) IV	III	V	III	V	I	II	3.375	
<i>Wind Sketches-</i> Brain Balmages	Part I	V	(E3-C5) IV	IV	IV	IV	IV	III	III	3.875	3.88 (IV)
	Part II	V	(G2-B-flat4) III	IV	IV	IV	IV	III	III	3.75	
	Part III	V	(B2-G-flat4) IV	IV	IV	IV	IV	III	III	3.875	
	Part IV	V	(E1-E-flat4) V	IV	IV	IV	IV	III	III	4.00	
<i>Three Sketches-</i> Robert Beadell	Part I	II	(A2-B-flat3) III	III	II	II	II	I	III	2.25	2.31 (II)
	Part II	II	(A-flat2-G4) III	III	II	II	II	I	III	2.25	
	Part III	II	(B-flat1-C4) IV	III	II	II	II	I	III	2.375	
	Part IV	II	(B-flat1-C4) IV	III	II	II	II	I	III	2.375	
<i>Vortex-</i> Lon Chaffin	Part I	III	(C3-B-flat4) II	III	III	III	IV	III	I	2.75	2.81 (III)
	Part II	III	(B-flat2-A-flat4) II	III	III	III	IV	III	I	2.75	
	Part III	III	(C2-D-flat4) III	III	III	III	IV	III	I	2.875	
	Part IV	III	(G1-B-flat3) III	III	III	III	IV	III	I	2.875	
<i>Auburn is the Colour...-</i> Mike Forbes	Part I	II	(E3-C5) IV	III	III	II	IV	I	I	2.5	2.47 (II)
	Part II	II	(D3-A4) III	III	III	II	IV	I	I	2.375	
	Part III	II	(G2-E4) IV	III	III	II	IV	I	I	2.5	
	Part IV	II	(G1-D4) IV	III	III	II	IV	I	I	2.5	
<i>Base is Loaded-</i>	Part I	I	(C3-C5) IV	I	III	II	IV	II	V	2.75	2.53 (III)

<b>Title</b>	<b>Part</b>	<b>Tempo</b>	<b>Range</b>	<b>Rhythm</b>	<b>Dynamic</b>	<b>Syncopation</b>	<b>Harmony/ Melody</b>	<b>Multiple Tonguing</b>	<b>Extended Technique</b>	<b>Total</b>	<b>Average</b>
Mike Forbes	Part II	I	(C3-B-flat4) III	I	III	II	IV	II	I	2.125	
	Part III	I	(C1-F4) IV	I	III	II	IV	II	V	2.75	
	Part IV	I	(C1-E-flat4) IV	I	III	II	IV	II	III	2.5	
<i>Consequences-</i> Mike Forbes	Part I	III	(B-flat2-C5) IV	IV	IV	III	III	II	III	3.25	3.25 (III)
	Part II	III	(G2-G4) II	IV	IV	III	III	II	III	3	
	Part III	III	(C2-F4) IV	IV	IV	III	III	III	III	3.38	
	Part IV	III	(C1-C4) IV	IV	IV	III	III	III	III	3.38	
<i>Cosmic Voyage-</i> Mike Forbes	Part I	IV	(C3-C5) IV	III	IV	II	III	II	III	3	2.82 (III)
	Part II	IV	(A2-G4) II	III	IV	II	III	II	III	2.88	
	Part III	IV	(G1-C4) III	III	IV	III	III	II	I	2.88	
	Part IV	IV	(D1-G3) III	III	IV	II	III	I	I	2.5	
<i>Four Miniatures-</i> Mike Forbes	Part I	IV	(B-flat2-C5) IV	IV	IV	III	III	III	I	3.25	3.25 (III)
	Part II	IV	(D2-A4) III	IV	IV	III	III	III	I	3.13	
	Part III	IV	(C2-F4) IV	IV	IV	IV	III	III	I	3.38	
	Part IV	IV	(E-flat1-E-flat4) IV	IV	IV	III	III	III	I	3.25	
<i>Go –</i> Mike Forbes	Part I	III	(C3-D-flat5) IV	II	IV	II	IV	III	I	2.88	2.78 (III)
	Part II	III	(F-sharp2-B-flat4) III	II	IV	II	IV	III	I	2.75	
	Part III	III	(E-flat2-A-flat4) III	II	IV	II	IV	III	I	2.75	
	Part IV	III	(E-flat1-E4) III	II	IV	II	IV	III	I	2.75	
<i>Tuba Quartet-</i> Crawford Gates	Part I	II	(G2-C5) IV	III	IV	II	III	III	I	2.75	2.66 (III)
	Part II	II	(E2-G4) III	III	IV	II	II	III	I	2.5	
	Part III	II	(D1-F4) IV	III	IV	II	II	III	I	2.63	
	Part IV	II	(C1-E-flat4) IV	III	IV	II	III	III	I	2.75	
<i>El Bosque Verde-</i>	Part I	II	(C-sharp3-G4) I	III	II	II	III	II	I	2	2.28 (II)

<b>Title</b>	<b>Part</b>	<b>Tempo</b>	<b>Range</b>	<b>Rhythm</b>	<b>Dynamic</b>	<b>Syncopation</b>	<b>Harmony/ Melody</b>	<b>Multiple Tonguing</b>	<b>Extended Technique</b>	<b>Total</b>	<b>Average</b>
Alice Gomez	Part II	II	(D2-G4) II	III	II	III	III	II	I	2.25	
	Part III	II	(D2-F-sharp4) IV	III	II	III	III	II	I	2.5	
	Part IV	II	(C-sharp1-A2) IV	III	II	II	III	II	I	2.38	
<i>End Game-</i> James Grant	Part I	III	(B-flat2-D-flat5) V	III	V	V	V	IV	III	4.13	3.94 (IV)
	Part II	III	(G2-B-flat4) III	III	V	V	V	IV	III	3.88	
	Part III	III	(G1-D-flat4) IV	III	V	V	V	IV	III	4	
	Part IV	III	(D-sharp1-G3) IV	III	V	IV	V	III	III	3.75	
<i>Whiplash-</i> James Grant	Part I	V	(C1-A-flat4) IV	IV	IV	II	V	III	IV	3.88	3.88 (IV)
	Part II	V	(C1-A-flat4) IV	IV	IV	II	V	III	IV	3.88	
	Part III	V	(C1-A-flat4) IV	IV	IV	II	V	III	IV	3.88	
	Part IV	V	(C1-A-flat4) IV	IV	IV	II	V	III	IV	3.88	
<i>Excursion-</i> Alejandro Jr Guardia	Part I	III	(E-flat3-B-flat4) III	III	II	II	III	II	I	2.38	2.29 (II)
	Part II	III	(C3-E-flat4) II	III	II	II	II	II	I	2.13	
	Part III	III	(B2-C4) IV	III	II	II	III	I	I	2.38	
	Part IV	III	(F1-F3) III	III	II	II	III	I	I	2.25	
<i>Overtown Throwdown: skr8 up rude-</i> Alejandro Jr Guardia	Part I	I	(C3-B-flat4) IV	II	III	II	II	II	V	2.63	2.29 (II)
	Part II	I	(G2-F4) III	I	III	III	II	I	III	2.13	
	Part III	I	(A-flat2-C4) III	I	III	III	II	I	III	2.13	
	Part IV	I	(C2-F3) III	II	III	III	II	I	III	2.25	
<i>Divertimento-</i> Matt Hightower	Part I	III	(G2-C5) IV	III	IV	IV	IV	II	III	3.38	3.26 (III)
	Part II	III	(C1-G4) IV	III	IV	IV	IV	II	III	3.38	
	Part III	III	(B-flat0-G4) IV	III	IV	IV	IV	II	I	3.13	
	Part IV	III	(B-flat0-E-flat4) IV	III	IV	IV	IV	II	I	3.13	
<i>Tuba Juba Duba-</i>	Part I	III	(D3-G4) I	II	II	II	II	I	I	1.75	1.91 (II)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony/ Melody	Multiple Tonguing	Extended Technique	Total	Average
Terry Hutchinson	Part II	III	(C-sharp3-C4) I	II	II	II	II	I	I	1.75	
	Part III	III	(C2-A3) III	III	II	II	II	I	I	2.13	
	Part IV	III	(C2-D3) II	III	II	II	II	I	I	2	
<i>Quartet-</i> Dumitru Lonel	Part I	II	(F2-F4) II	II	II	II	II	II	I	1.88	1.97(II)
	Part II	II	(F2-E-flat4) II	II	II	III	II	II	I	2	
	Part III	II	(C2-F-flat3) III	II	II	III	II	I	I	2	
	Part IV	II	(G1-G3) III	II	II	II	II	II	I	2	
<i>Shadows, op. 199-</i> Michael Kibbe	Part I	III	(B-flat2-G4) II	IV	II	II	IV	II	I	2.63	2.59 (III)
	Part II	III	(C3-E4) II	III	II	III	IV	II	I	2.63	
	Part III	III	(E-flat2-B-flat3) II	III	II	III	IV	II	I	2.63	
	Part IV	III	(F1-G-sharp3) III	III	II	II	IV	I	I	2.5	
<i>Fanfare and Fantasy</i> <i>in E-flat Minor-</i> Dan Krammer	Part I	II	(D-flat3-B4) III	III	IV	II	II	III	I	2.5	2.47 (II)
	Part II	II	(B-flat2-B4) III	III	IV	II	II	III	I	2.5	
	Part III	II	(F2-E-flat4) II	III	IV	II	II	III	I	2.38	
	Part IV	II	(D-flat1-G-flat3) III	III	IV	II	II	III	I	2.5	
<i>Brink-</i> Dan Krammer	Part I	IV	(C3-B-flat4) III	II	III	I	III	I	II	2.38	2.47 (II)
	Part II	IV	(B-flat2-B-flat4) III	II	III	II	III	I	II	2.5	
	Part III	IV	(D2-D4) IV	II	III	I	III	I	II	2.5	
	Part IV	IV	(B-flat0-Bflat3) IV	II	III	I	III	I	II	2.5	
<i>Italian Suites-</i> Vanja Lisjak	Part I	II	(F-sharp3-D5) IV	III	II	II	II	I	III	2.38	2.16 (II)
	Part II	II	(D3-A4) III	III	II	II	II	I	I	2	
	Part III	II	(B-flat1-C4) IV	II	II	II	II	I	I	2.13	
	Part IV	II	(A-flat1-F3) III	II	II	II	II	I	III	2.13	
<i>Cyclops-</i>	Part I	IV	(D2-E4) II	III	V	II	IV	II	I	2.88	2.94(III)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony/ Melody	Multiple Tonguing	Extended Technique	Total	Average
Theresa Martin	Part II	IV	(D2-E4) II	III	V	II	IV	II	I	2.88	
	Part III	IV	(B2-C-sharp4) IV	III	V	II	IV	I	I	3	
	Part IV	IV	(E-flat1-C-sharp4) IV	III	V	II	IV	I	I	3	
<i>Tubacus Galacticus</i> - Ryan McGeorge	Part I	IV	(A2-F5) V	IV	IV	III	IV	II	III	3.63	3.22 (III)
	Part II	IV	(F2-B-flat4) III	III	IV	III	IV	II	III	3.25	
	Part III	IV	(D2-E-flat4) IV	III	IV	II	IV	II	II	3.13	
	Part IV	IV	(D1-B3) III	II	IV	II	IV	II	II	2.89	
<i>Furious Apis</i> - Ben McMillian	Part I	III	(C3-C5) IV	IV	IV	III	IV	II	III	3.38	3.19 (III)
	Part II	III	(E-flat2-A-flat4) III	III	IV	III	IV	III	II	3.13	
	Part III	III	(A-flat1-D-flat4) IV	III	IV	III	IV	II	II	3.13	
	Part IV	III	(E-flat1-A-flat3) IV	III	IV	III	IV	II	II	3.13	
<i>Kicking the Clutch</i> , <i>op. 248</i> - Stephen Oberheu	Part I	IV	(B-flat2-A-flat4) II	III	III	II	II	I	I	2.13	2.22 (II)
	Part II	IV	(E-flat2-D4) III	II	III	I	II	I	I	2.13	
	Part III	IV	(F1-B-flat3) III	II	III	II	II	I	I	2.25	
	Part IV	IV	(B-flat0-D-flat3) IV	II	III	II	II	I	I	2.38	
<i>Take This Hammer</i> - Steven Snowden	Part I	III	(G-flat2-G-flat4) III	IV	V	V	IV	IV	IV	4	4.03 (IV)
	Part II	III	(E-flat2-G-flat4) III	IV	V	V	IV	IV	IV	4	
	Part III	III	(G-flat1-D4) III	IV	V	V	IV	IV	V	4.13	
	Part IV	III	(F1-D4) III	IV	V	V	IV	IV	IV	4	
<i>Diversions</i> - John Stevens	Part I	III	(C3-A-flat4) III	III	III	IV	II	II	III	2.88	2.97 (III)
	Part II	III	(C2-A-flat4) III	III	III	IV	II	II	V	3.13	
	Part III	III	(C2-D-flat4) IV	III	III	IV	II	II	V	3.25	
	Part IV	III	(G1-E-flat3) III	III	III	IV	II	II	I	2.63	
<i>Moondance</i> -	Part I	V	(C2-G-flat4) IV	IV	IV	IV	IV	I	II	3.5	3.47 (III)

<b>Title</b>	<b>Part</b>	<b>Tempo</b>	<b>Range</b>	<b>Rhythm</b>	<b>Dynamic</b>	<b>Syncopation</b>	<b>Harmony/ Melody</b>	<b>Multiple Tonguing</b>	<b>Extended Technique</b>	<b>Total</b>	<b>Average</b>
John Stevens	Part II	V	(C2-E-flat4) IV	IV	IV	IV	IV	I	II	3.5	
	Part III	V	(E-flat1-D-flat4) IV	IV	IV	IV	IV	I	II	3.5	
	Part IV	V	(E-flat1-E-flat4) IV	IV	IV	III	IV	I	II	3.38	
<i>Four Little Pieces-</i> Thomas Stevens	Part I	II	(F2-F4) II	I	III	II	IV	I	I	2	2.13 (II)
	Part II	II	(D2-D4) III	I	III	II	IV	I	I	2.13	
	Part III	II	(F1-D4) IV	I	III	II	IV	I	I	2.25	
	Part IV	II	(F1-D-flat4) IV	I	III	I	IV	I	I	2.13	
<i>Tuba Quartett-</i> Valery Strukow	Part I	II	(E-flat2-F4) II	III	II	II	II	II	I	2	2.25 (II)
	Part II	II	(E-flat1-F4) II	IV	II	III	II	III	I	2.38	
	Part III	II	(F1-E-flat4) IV	III	II	II	II	III	I	2.38	
	Part IV	II	(D1-E3) III	III	II	II	II	III	I	2.25	
<i>Birthday Quartet-</i> Roland Szentpali	Part I	III	(G2-G4) II	IV	V	IV	IV	IV	III	3.63	3.82 (IV)
	Part II	III	(E2-A4) IV	IV	V	IV	IV	IV	III	3.88	
	Part III	III	(A1-E-flat4) IV	IV	V	IV	IV	IV	III	3.88	
	Part IV	III	(C1-G3) IV	IV	V	III	IV	V	III	3.88	
<i>Homework 4 Tubas-</i> Roland Szentpali	Part I	IV	(G0-B-flat4) V	III	IV	II	IV	III	IV	3.63	3.63 (IV)
	Part II	IV	(B-flat0-F4) V	IV	IV	II	IV	III	IV	3.75	
	Part III	IV	(G1-B-flat4) IV	IV	IV	II	IV	III	IV	3.63	
	Part IV	IV	(B0-G4) IV	IV	IV	II	IV	II	IV	3.5	
Legends- Noah Taylor	Part I	IV	(G2-C5) IV	IV	IV	III	IV	IV	II	3.63	3.40 (III)
	Part II	IV	(A2-B-flat4) III	IV	IV	II	IV	IV	I	3.25	
	Part III	IV	(E2-E-flat4) IV	IV	IV	II	IV	IV	I	3.38	
	Part IV	IV	(F1-B-flat3) III	IV	IV	II	IV	IV	II	3.38	
<i>Antepenultimate Tango-</i>	Part I	III	(F3-B-flat4) III	IV	III	IV	II	II	III	3	2.75 (III)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony/ Melody	Multiple Tonguing	Extended Technique	Total	Average
Kenyon Wilson	Part II	III	(B-flat2-F4) II	IV	III	IV	II	II	I	2.63	
	Part III	III	(E-flat2-B-flat3) II	IV	III	IV	II	II	II	2.75	
	Part IV	III	(D-flat1-F3) III	IV	III	IV	II	I	I	2.63	
<i>Dance No. 2-</i> Kenyon Wilson	Part I	IV	(A3-C5) IV	II	II	II	II	I	I	2.25	2.16 (II)
	Part II	IV	(E-flat3-G4) II	II	III	II	II	I	I	2.13	
	Part III	IV	(F2-G3) III	II	III	II	II	I	I	2.25	
	Part IV	IV	(F1-C3) II	II	II	II	II	I	I	2	
<i>Dance No. 3-</i> Kenyon Wilson	Part I	IV	(G3-B-flat4) III	II	II	III	II	I	I	2.25	2.13 (II)
	Part II	IV	(B-flat2-G4) II	II	II	III	II	I	I	2.13	
	Part III	IV	(B-flat2-G3) I	II	II	III	II	I	I	2	
	Part IV	IV	(F1-B-flat2) II	II	II	III	II	I	I	2.13	
<i>Inertia-</i> Kenyon Wilson	Part I	II	(B2-B-flat4) III	II	III	II	II	I	I	2	1.97(II)
	Part II	II	(C3-F4) II	II	III	II	II	I	I	1.88	
	Part III	II	(C2-B-flat3) III	II	III	III	II	I	I	2.13	
	Part IV	II	(B-flat1-C3) I	II	III	III	II	I	I	1.88	
<i>Quartet No. 2-</i> Kenyon Wilson	Part I	IV	(B-flat2-A-flat4) II	II	III	II	IV	I	I	2.38	2.44 (II)
	Part II	IV	(G2-G4) II	II	III	II	IV	I	I	2.38	
	Part III	IV	(C2-B-flat3) III	II	III	II	IV	I	I	2.5	
	Part IV	IV	(F1-D3) II	II	III	III	IV	I	I	2.5	
<i>Triskaidekaphile-</i> Kenyon Wilson	Part I	IV	(C3-A4) III	II	II	II	II	I	II	2.25	2.06 (II)
	Part II	IV	(A2-E4) II	I	II	II	II	I	II	2	
	Part III	IV	(C2-F3) III	I	II	II	II	I	II	2.13	
	Part IV	IV	(B-flat1-B-flat2) I	I	II	II	II	I	II	1.88	
<i>Convalescence-</i>	Part I	III	(F3-B4) IV	IV	III	III	III	II	I	2.88	2.75 (III)

<b>Title</b>	<b>Part</b>	<b>Tempo</b>	<b>Range</b>	<b>Rhythm</b>	<b>Dynamic</b>	<b>Syncopation</b>	<b>Harmony/ Melody</b>	<b>Multiple Tonguing</b>	<b>Extended Technique</b>	<b>Total</b>	<b>Average</b>
Drew A. Worthen	Part II	III	(D3-F4) II	IV	III	III	III	II	I	2.63	
	Part III	III	(A1-B-flat3) III	IV	III	III	III	II	I	2.75	
	Part IV	III	(D1-E-flat3) III	IV	III	III	III	II	I	2.75	

**APPENDIX F—WIND BAND LITERATURE GRADING RESULTS**

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
<i>Prelude, Siciliano, and Rondo-</i> Malcolm Arnold/ Paynter	Euphonium	IV	(F2-F4) II	II	II	III	II	I	I	2.13	2.13 (II)
	Tuba	IV	(F1-G3) III	II	II	II	II	I	I	2.13	
<i>Passacaglia and Fugue in C minor-</i> J.S. Bach/ Hunsburger	Euphonium	II	(D2-A-flat4) IV	III	II	II	I	II	I	2.13	2.06 (II)
	Tuba	II	(F1-C3) III	III	II	II	I	II	I	2	
<i>Prelude and Fugue in B-flat minor-</i> J.S. Bach/ Moehlmann	Euphonium	II	(F2-E-flat4) II	I	I	II	I	I	I	1.38	1.38 (I)
	Tuba	II	(F1-B-flat2) II	I	I	II	I	I	I	1.38	
<i>Ginger Marmalade-</i> Warren Benson	Euphonium	I	(G2-D4) II	II	II	II	I	I	I	1.5	1.50 (II)
	Tuba	I	(G1-B-flat2) II	II	II	II	I	I	I	1.5	
<i>Overture to "Candide" -</i> Leonard Bernstein/Grundman	Euphonium	IV	(E2-A-flat4) III	I	III	III	IV	I	I	2.5	2.50 (III)
	Tuba	IV	(E1-E3) III	I	III	III	IV	I	I	2.5	
<i>Peace Song-</i> Timothy Broege	Euphonium	I	(G2-B-flat3) I	I	III	II	I	I	I	1.38	1.38 (I)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	I	(G1-G2) I	I	III	II	I	I	I	1.38	
<i>Overture for Winds</i> - Charles Carter	Euphonium	II	(A2-G4) II	III	III	II	II	I	I	2	1.88 (II)
	Tuba	II	(G1-D3) II	I	III	II	II	I	I	1.75	
<i>Korean Folk Rhapsody</i> - James Curnow	Euphonium	II	(G2-A-flat3) II	I	I	I	I	I	I	1.25	1.25 (I)
	Tuba	II	(A-flat1-C3) II	I	I	I	I	I	I	1.25	
<i>Sinfonietta</i> - Ingolf Dahl	Euphonium	IV	(F2-F4) II	II	III	II	IV	II	I	2.5	2.44 (II)
	Tuba	IV	(F1-A-flat3) III	I	III	II	IV	I	I	2.38	
<i>Scenes from "The Louvre"</i> - Norman Dello Joio	Euphonium	III	(D2-D4) III	II	III	II	I	II	I	2.13	2.06 (II)
	Tuba	III	(B-flat1-G3) III	II	III	II	I	I	I	2	
<i>Air for Band</i> - Frank Erikson	Euphonium	I	(A-flat2-C4) II	I	II	II	II	I	I	1.5	1.44 (I)
	Tuba	I	(B-flat1-E-flat3) II	I	II	I	II	I	I	1.38	
<i>Toccata for Band</i> - Frank Erikson	Euphonium	III	(G2-F4) II	I	III	II	II	I	I	1.88	1.88 (II)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	III	(A1-F3) II	I	III	II	II	I	I	1.88	
<i>Heroes Lost and Fallen-</i> David Gillingham	Euphonium	IV	(F-sharp2-A4) III	III	III	II	IV	I	I	2.63	2.63 (III)
	Tuba	IV	(F1-F3) III	III	III	II	IV	I	I	2.63	
<i>Symphony No. 3-</i> Vittorio Giannini	Euphonium	III	(E2-A-flat4) III	III	III	II	IV	I	I	2.5	2.5 (III)
	Tuba	III	(D1-F-sharp3) III	III	III	II	IV	I	I	2.5	
<i>Mini Suite-</i> Morton Gould	Euphonium	II	(F2-D4 ) II	I	I	I	I	I	I	1.25	1.25 (I)
	Tuba	II	(F1-B-flat2) II	I	I	I	I	I	I	1.25	
<i>Australian Up-Country Tune-</i> Percy Grainger/ Bainum	Euphonium	II	(C3-F4) II	II	II	I	II	I	I	1.63	1.63 (II)
	Tuba	II	(F1-C3) II	II	II	I	II	I	I	1.63	
<i>Lincolnshire Posy-</i> Percy Grainger	Euphonium	IV	(D2-G4) III	IV	IV	II	III	I	I	2.75	2.69 (III)
	Tuba	IV	(D1-F3) III	III	IV	II	III	I	I	2.63	
<i>Kentucky 1800-</i> Clare Grundman	Euphonium	II	(E-flat3- G4) II	II	II	I	II	I	I	1.62	1.62 (II)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	II	(B-flat1-E-flat3) II	II	II	I	II	I	I	1.62	
<i>Little English Suite</i> - Clare Grundman	Euphonium	IV	(C3-E-flat4) II	I	III	II	II	I	I	2	2 (II)
	Tuba	IV	(B-flat1- E-flat3) II	I	III	II	II	I	I	2	
Little Suite for Band- Clare Grundman	Euphonium	II	(C3-F4) II	I	II	II	I	I	I	1.5	1.44 (I)
	Tuba	II	(B-flat1-D-flat3) II	I	II	I	I	I	I	1.38	
<i>Chorale and Alleluia</i> - Howard Hanson	Euphonium	III	(E-flat3- G4) II	II	II	II	II	I	I	1.88	1.81 (II)
	Tuba	III	(F1-D3) III	I	II	I	II	I	I	1.75	
<i>A Childhood Hymn</i> - David Holsinger	Euphonium	I	(D3-E-flat4) I	I	I	I	I	I	I	I	1.00
	Tuba	I	(D-flat1-C3) I	I	I	I	I	I	I	I	
<i>On a Hymnsong of Philip Bliss</i> - David Holsinger	Euphonium	II	(A-flat2-A-flat3) I	I	II	I	II	I	I	1.38	1.44 (I)
	Tuba	II	(B-flat1-D-flat3) II	I	II	I	II	I	I	1.5	
<i>Second Suite in F</i> - Gustav Holst	Euphonium	iv	(C2-G4) III	III	III	II	II	I	I	2.38	2.38 (II)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	IV	(E1-G3) III	III	III	II	II	I	I	2.38	
<i>Prospect-</i> Pierre La Plante	Euphonium	I	(G2-F4) II	I	II	II	I	I	I	1.38	1.31 (I)
	Tuba	I	(F1-A-flat2) II	I	II	I	I	I	I	1.25	
<i>Liturgical Music for Band, Op. 33-</i> Martin Mailman	Euphonium	II	II	II	II	II	I	I	I	1.63	1.69 (II)
	Tuba	II	(F1-E-flat3) II	II	II	II	I	II	I	1.75	
<i>The Red Balloon-</i> Anne McGinty	Euphonium	I	(B-flat2-C4) I	I	I	I	I	I	I	I	1.0 (I)
	Tuba	I	(B-flat1-C3) I	I	I	I	I	I	I	I	
<i>Overture for Winds-</i> Felix Mendelssohn-Bartholdy/ Boyd	Euphonium	II	(G2-F4) II	II	II	II	I	II	I	1.75	1.75 (II)
	Tuba	II	(A-flat1-G3) II	II	II	II	I	II	I	1.75	
<i>Canzona-</i> Peter Mennin	Euphonium	I	(F-sharp2-F4) II	II	III	III	IV	I	I	2.13	2.07 (II)
	Tuba	I	(F-sharp1-B-flat2) II	II	III	II	IV	I	I	2	
<i>Divertimento-</i> Vincent Persichetti	Euphonium	III	(B-flat2-A4) III	I	III	III	IV	I	I	2.38	2.31 (II)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	III	(F-sharp1-A-flat3) III	I	III	II	IV	I	I	2.25	
<i>Masquerade-</i> Vincent Persichetti	Euphonium	III	(E2-A-flat3) III	III	III	II	IV	I	I	2.63	2.63 (III)
	Tuba	III	(F-sharp1-F-sharp3) III	II	III	II	IV	I	I	2.63	
<i>Symphony No. 6-</i> Vincent Persichetti	Euphonium	III	(C2-A4) III	III	IV	II	IV	I	I	2.63	2.63 (III)
	Tuba	III	(E-flat1-B3) III	III	IV	II	IV	I	I	2.63	
<i>Armenian Dances-</i> Alfred Reed	Euphonium	IV	(G2-G4) II	III	III	III	IV	I	I	2.5	2.56 (III)
	Tuba	IV	(G1-G3) III	III	III	III	IV	I	I	2.63	
<i>Come Sweet Death-</i> J.S. Bach/ Reed	Euphonium	III	(C2-A4) III	III	IV	II	IV	I	I	2.63	2.63 (III)
	Tuba	III	(E-flat1-B3) III	III	IV	II	IV	I	I	2.63	
<i>La Fiesta Mexicana-</i> Alfred Reed	Euphonium	IV	(F2-G4) II	III	IV	III	III	I	III	2.88	2.81 (III)
	Tuba	IV	(E-flat1-F-sharp3) III	III	IV	III	III	I	I	2.75	
<i>Symphonie for Band-</i> Louis E. Jadin/ Schaeffer	Euphonium	I	(F2-F4) II	II	II	I	I	I	I	1.38	1.44 (I)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	I	(F1-F3) III	II	II	I	I	I	I	1.5	
<i>George Washington Bridge-</i> William Schuman	Euphonium	III	(D-flat2-D4) III	II	IV	III	IV	II	I	2.75	2.69 (III)
	Tuba	III	(A-flat1-B-flat3) III	II	IV	III	IV	I	I	2.63	
<i>Chorale and Toccata-</i> Jack Stamp	Euphonium	II	(F2-E-flat4) II	III	IV	II	IV	I	I	2.38	2.38 (II)
	Tuba	II	(A-flat1-E-flat3) II	III	IV	II	IV	I	I	2.38	
<i>Allerseelen-</i> Richard Strauss/ Davis	Euphonium	I	(G2-A-flat4) III	III	III	II	II	I	I	2.13	2.0 (II)
	Tuba	I	(G1-G3) III	III	III	I	II	I	I	1.88	
<i>Ancient Voices-</i> Michael Sweeney	Euphonium	II	(A-flat2-B-flat3) I	I	II	I	I	I	I	1.25	1.25(I)
	Tuba	II	(C2-C3) I	I	II	I	I	I	I	1.25	
<i>Portrait of a Clown-</i> Frank Ticheli	Euphonium	I	(G2-C4) II	I	II	I	I	I	I	1.25	1.19 (I)
	Tuba	I	(B-flat1-C3) I	I	II	I	I	I	I	1.13	
<i>Postcard-</i> Frank Ticheli	Euphonium	IV	(G-flat2-A4) III	I	III	III	IV	I	I	2.5	2.5( III)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	IV	(G-flat1-B-flat3) III	I	III	III	IV	I	I	2.5	
<i>Sketches on a Tudor Psalm-</i> Fisher Tull	Euphonium	IV	(A-flat2-F4) II	III	III	II	IV	II	I	2.63	2.69 (III)
	Tuba	IV	(F1-F-sharp3) III	III	III	II	IV	II	I	2.75	
<i>English Folk Song Suite-</i> Ralph Vaughan Williams	Euphonium	III	(E-flat2-G4) III	III	III	I	II	II	I	2.25	2.19 (II)
	Tuba	III	(F1-D3) II	III	III	I	II	II	I	2.13	
<i>Trauermusik-</i> Richard Wagner/ Votta/ Boyd	Euphonium	II	(B-flat2-D4) II	I	II	II	II	I	I	1.63	1.57 (II)
	Tuba	II	(F1-Bflat2) II	I	II	I	II	I	I	1.5	
<i>Zion-</i> Dan Welcher	Euphonium	IV	(A-flat2-C5) IV	III	III	I	IV	I	I	2.75	2.44 (II)
	Tuba	IV	(F1-C3) II	I	II	II	IV	I	I	2.13	
<i>Greenwillow Portrait-</i> Mark Williams	Euphonium	I	(B-flat2-F4) II	I	II	I	I	I	I	1.25	1.19 (I)
	Tuba	I	(A-flat1-B-flat2) I	I	II	I	I	I	I	1.13	
<i>Piece of Mind-</i> Dana Wilson	Euphonium	IV	(G2-A4) III	IV	III	III	IV	II	I	3	3.0 (III)

Title	Part	Tempo	Range	Rhythm	Dynamic	Syncopation	Harmony /Melody	Multiple Tonguing	Extended Technique	Total	Average
	Tuba	IV	(G-sharp1-F-sharp3) III	IV	III	III	IV	II	I	3	
<i>Night Dances-</i> Bruce Yurko	Euphonium	II	(A-flat2-A-flat3) I	I	III	II	I	I	I	1.5	1.5 (II)
	Tuba	II	(G1-G2) I	I	III	II	I	I	I	1.5	
<i>Chorale and Shaker Dance-</i> John Zdechlik	Euphonium	II	(G2-E4) II	I	III	III	II	I	I	1.88	1.88 (II)
	Tuba	II	(G1-E3) II	I	III	III	II	I	I	1.88	

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Score: mm. 21-27 (7 measures)

*Tubacus Galacticus* for tuba-euphonium quartet by Ryan McGeorge

Tuba 1: mm. 28-31 (4 measures)

Euphonium 1: mm 28-31 (4 measures)

*Dance No. 2* for tuba-euphonium quartet by Kenyon Wilson

Score: mm. 69-71 (3 measures)

Euphonium 1: mm. 40-43 (4 measures)

*Antepenultimate Tango* for tuba-euphonium quartet by Kenyon Wilson

Score: mm.97-99 (4 measures)

Tuba 2: mm. 71-72 (2 measures)

Score: mm.112-115 (4 measures)

Convalescence for tuba-euphonium quartet by Drew Worthen

Score: mm. 93-96 (4 measures)

Brink for tuba-euphonium quartet by Dan Kramer

Euphonium 1: m. 1 (1 measure)

Vortex for tuba-euphonium quartet by Lon Chaffin

Score: movement 1, mm. 35-37 (3 measures)

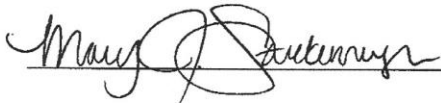
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Tuba 1 part: mvmt 1, 8-14mm (7 measures)  
Tuba 2 part: mvmt 3, 1-6 (6 measures)

*Auburn is the Colour...* by Mike Forbes

Tuba 2 part: 37-40 (4 measures)

*Base is Loaded* by Mike Forbes

Euphonium 1 part: 62-75 (solo changes) (14 measures)

Sincerely,  
Michael McLean

On Wed, Apr 6, 2016 at 12:51 AM, Sophie Rochat <[order@editions-bim.com](mailto:order@editions-bim.com)> wrote:

Dear Michael,  
Yes, please use this text.  
All the best,  
Sophie

Le 6 avr. 2016 à 00:27, Michael George McLean  
<[michaelmclean@email.arizona.edu](mailto:michaelmclean@email.arizona.edu)> a écrit :

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Thank you,  
Michael McLean

On Friday, January 9, 2015, Sophie Rochat <[order@editions-bim.com](mailto:order@editions-bim.com)>  
wrote:

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I stay at your disposal for possible question and I send you cordial greetings from Switzerland!

Sophie Rochat

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Le 8 janv. 2015 à 05:51, Editions Bim <[order@editions-bim.com](mailto:order@editions-bim.com)> a écrit :

Name: Michael McLean  
E-mail: [michaelmclean@email.arizona.edu](mailto:michaelmclean@email.arizona.edu)  
Telephone:

Comment: I am a doctoral student at the University of Arizona and I am working on my dissertation. I would like to include a number of excerpts from tuba-euphonium quartets that you publish. I am comparing large ensemble tuba and euphonium parts with that of tuba-euphonium quartet compositions. I am just wondering how I should fill out the machinical liscense to recieve rights to use the music excerpts?

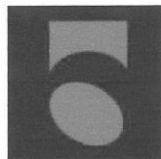
--  
Michael G. McLean  
918 S 8th Ave  
Tucson, AZ 85701  
[\(303\) 242-1510](tel:(303)242-1510)

--  
Michael G. McLean  
918 S 8th Ave  
Tucson, AZ 85701  
(303) 242-1510

Sophie Rochat <order@editions-bim.com>  
Reply-To:  
To: Michael George McLean <michaelmclean@email.arizona.edu>  
Cc:  
Ok for us as long as you add the following text under the excerpts:

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All the Best and have a lovely day!  
Sophie



Sophie Rochat-Mathez | order@editions-bim.com

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Le 6 avr. 2016 à 22:02, Michael George McLean  
<michaelmclean@email.arizona.edu> a écrit :

Sophie,

I accept the terms for the copyright use. Listed below are the compositions and measure numbers of the works I would like to use. Thank you and please let me know if there are any questions I can answer.

*Four Little Pieces* by Thomas Stevens

Tuba 1 part: mvmt 1, 8-14mm (7 measures)  
Tuba 2 part: mvmt 3, 1-6 (6 measures)

*Auburn is the Colour...* by Mike Forbes

Tuba 2 part: 37-40 (4 measures)

*Base is Loaded* by Mike Forbes

Euphonium 1 part: 62-75 (solo changes) (14 measures)

Sincerely,  
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All the best,  
Sophie

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<[michaelmclean@email.arizona.edu](mailto:michaelmclean@email.arizona.edu)> a écrit :

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Le 8 janv. 2015 à 05:51, Editions Bim  
<[order@editions-bim.com](mailto:order@editions-bim.com)> a écrit :

Name: Michael McLean  
E-mail: [michaelmclean@email.arizona.edu](mailto:michaelmclean@email.arizona.edu)  
Telephone:

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