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A Study of the Steel Pan: A Guide to Two Tenor Pan Etudes

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Abstract

This project will be a presentation of the research, processes, and results of composing two etudes for the tenor steelpan. The difficulty and applications of the accompanying etudes vary, but they are primarily intended for high school students or intermediate pannists. The purpose of this research project is twofold: to provide a brief description of the history of the steelpan and its integration into the United States education system in order to illustrate the need for original compositions and to serve as a guide to the teaching process of each composition provided. This paper will also give a detailed explanation of the emulation process in composing original exercises for the instrument as well as the technique and prior musical knowledge required to perform each etude. Although the research paper itself is not intended for students, it will aid in the teaching of the steelpan and will be used as a supplement for beginning pan educators.

A Study of the Steelpan: A Guide to Two Tenor Pan Etudes

Despite being one of the youngest instruments of modern time, the steelpan has influenced the educational systems of its birthplace, Trinidad and Tobago, and the United States. The spread of this instrument is the result of a network of educators who, through passing down traditions, historical knowledge, and techniques for both playing and teaching the instrument, have created a culture of their own. However, even with the support of this community, the instrument still faces many challenges including a lack of solo repertoire. This paper will approach this problem by providing two original compositions proceeded by an informational primer for the beginning instructor.

Construction and Application

The subgroup of percussion instruments referred to as the steelpans (also known as steel drums, pans, or in large groups steel bands or steel orchestras) consists of a variety of drums typically built from fifty-five-gallon oil barrels whose tops and bottoms have been tuned using a process called “sinking.” This process involves hammering the metal into the shapes and sizes necessary to produce specific pitches when struck with sticks or mallets. The length of the barrel, known as the skirt, is then cut to suit the intended resonance for whatever type of drum is being created. (Thomas, 1990)

The sections of a steel band are divided similarly to those of a choir starting with the bass pans which, due to the size of the dents needed to create lower pitches, usually consist of six barrels. The cello, guitar, and double second pans fill out the middle range of the band much like the baritones and tenors in a choir, and typically play a rhythmic “strum” pattern as well as an

occasional melody. Lastly, the double tenor and single tenor pans (also referred to as lead or soprano pan) make up the alto and soprano sections respectively, and play the melody lines. The term "tenor" is used to describe these pans due to the fact that early steel bands were exclusively male until the 1940s. (Stuempfle, 1995) Although the instrument began as a way of accompanying the festivities of Carnival, it has since expanded to other genres such as classical, jazz, and pop as it has gained an international appeal.

While the steel band is still one of the primary settings in which the steelpan is played, the soloistic potential of the instrument has been explored in recent years. While each type of drum has the potential to be performed in a solo manner, the tenor pan is the most common due to its range and practicality of playing on one pan. Alongside this, the tenor pan has seen the most standardization of tuning and note layout, which allows composers to write for the instrument without the risk of composing unplayable passages.

Despite its growing popularity, the list of published solo repertoire for the steelpan is minuscule in comparison to other instruments. This is likely due to its origins in mainly "rote taught" music as well as its age. According to a database provided by Kieth Lienert and the National Society of Steel Band Educators (NSSBE), a compiled list of all existing original works for the steelpan includes only seventy-seven solos with fifty-five being for the tenor pan. (Lienert, 2020) Most of the solo works found on this list are appropriate for late high school to early college skill levels, making them difficult to approach for younger students. Aside from these solos, method books, such as Liam Teague's *Hal Leonard Steelpan Method* make up the existing literature written for the instrument, primarily for beginners. This gap between difficulty levels is thus filled by etudes or other musical exercises that assist in the learning of certain techniques on a given instrument.

History and Cultural Significance

As a precursor to teaching the etudes provided, it is important to briefly address the history of the steelpan in order to convey the importance of sharing or publishing original compositions such as these. A more detailed history can be found in Appendix E, as it is not necessary for playing the instrument, but does allow for a deeper understanding and appreciation of its cultural significance to the people of Trinidad and Tobago.

The earliest forms of the steelpan can be traced back to the tamboo bamboo bands of the 1930s where the banging of metal objects eventually resulted in the creation of the “ping pong” pan. (Hill, 1993) After several innovations in the tuning and arranging of the notes within the pans, the early steel bands of the 1940s began learning the popular music of their time and gained popularity among the middle and upper classes. This music was traditionally taught by rote, meaning it was passed down aurally without the use of written notation. (Stuempfle, 1995)

In 1949, the steelpan was introduced to the United States by Rudy King and by the 1960s the instrument had gained enough international appeal to inspire the founding of several steel bands across the country. (Tiffe, 2007) These bands, like their counterparts in Trinidad, also taught their music by rote, which is still a common practice in the pan community today. The shift towards music notation was brought about in the 1970s with the growing popularity of collegiate level steel bands in Trinidad and the founding of the first collegiate steel band in the United States: the Northern Illinois University steel band. NIU became responsible for the spread of the university steel band movement across the United States, having influenced around fifty other collegiate groups. (Tiffe, 2006) According to a directory provided by Brandon Haskett and

the NSSBE, there are currently 819 collegiate and K-12 level steel bands in the United States. (Haskett, 2020)

With this influx of pannists in mind, the increasing popularity of pan within a soloistic setting is on the rise and thus brings about the need for new musical exercises and solo repertoire for the instrument. Due to the limited available repertoire, however, intermediate pannists are left to fill these gaps in inefficient ways such as playing exercises often intended for other instruments or attempting to play compositions that lie outside their current capabilities. This obstacle may arise for the developing pannist, but it can be overcome by creating a space to explore the instrument through the active participation of the pan education community. The following work is a minor contribution, but a necessary one, nonetheless; pan educators have the ability to add a great deal to the existing repertoire for solo lead pan should they also share their original compositions created with the student in mind.

Analysis of Existing Etudes

While pan educators have their own diverse means of teaching both basic and advanced techniques on the steelpan, including etudes written for the sole purpose of aiding a specific difficulty their students may face, the publication and sharing of these musical exercises is imperative to the community's growth. Organizations such as the NSSBE have compiled resources and attempted to standardize the approach to teaching the instrument, but new intermediate compositions, as well as new teaching guides for the beginning pan educator, remain a scarcity.

In writing an etude for the tenor pan, one must first ask, "what techniques are imperative to teach a student?" followed by, "how does one account for this in a musical setting so that a

student may practice said techniques?" By analyzing existing etudes for the marimba, an instrument that most percussionists are familiar with, the process of identifying a technique and composing a musical exercise around it can be emulated on the pan. For the purpose of this paper, an analysis of two contrasting etudes will be conducted: one to be performed as an exercise and the other to be performed as a solo. These analyses will then support the writing of two original etudes that will provide a means of teaching techniques that are generally accepted as imperative to playing the tenor pan.

Morris Goldenberg's *Modern School for Xylophone, Marimba, (and) Vibraphone* features an extensive array of etudes for mallet players of all levels. A majority of these etudes aid in the teaching of difficult modes, stickings, and musical phrases while providing a moveable-repetitive pattern that allows the student to explore the full range of the instrument. In Goldenberg's etude entitled *XXXV* (Appendix A), little is left to the student's interpretation aside from musical phrasing within the given dynamics, tempo, and rhythms. The passage opens with a forte section that is idiomatic as it begins in the lower range of the instrument (which produces a louder pitch with less effort in comparison to the upper range) and decreases in volume as the upper range is explored. The music then indicates that the player crescendo while once again descending into the lower range of the instrument in measures one through twelve. This concept is put to use in both Etude #1 and #2 (Appendix C and D, respectively) as the tenor pan features similar idiosyncrasies. After introducing dynamics in the previous setting, Goldenberg then inverses the roles of range and dynamics, forcing the student to make adjustments to the way they approach each note, playing both the upper and lower range of the instrument while alternating between piano and forte dynamic markings. The final phrase then explores the entire range of the work,

beginning very softly at measure twenty-five and gradually crescendoing until a tonic accent is reached in measure thirty-one and carried out until the end of the piece.

Aside from dynamics, this exercise also teaches unnatural stickings (those that differ from alternating right and left) to allow for more fluid motion and better musical phrasing. This can first be seen between measures one and two where the right hand is doubled in order to keep the left hand playing notes that are closer together. This concept is then seen throughout the remainder of the piece with both the left and right hand doubling notes in close proximity to one another. Emulation of this is used in both Etudes #1 and #2 as well, as the layout for the tenor pan often leads to unnatural stickings that require close attention before approaching faster tempos.

The second etude, Clair Omar Musser's *Etude Op. 11, No. 4* (Appendix B), is a popular two-mallet marimba solo that not only teaches a number of technical skills but also allows the student to experiment more with their personal interpretations of musical phrases. The first instance of any required technical skill can be seen at the very beginning of the piece, where the student must play even sixteenth notes with accents on each downbeat. At measure three this concept is then coupled with a hairpin crescendo-decrescendo, which requires the accented and unaccented notes to gradually increase and decrease in volume while remaining "even" among themselves. Musser then continues to make room for musical expression by inserting a ritardando followed by phrases such as "gradually increase" juxtaposed with more hairpin decrescendos. The etude continues to layer dynamic changes with gradual tempo changes until finally introducing words of expression like *deliberate* in measure twenty-one and *agitato* in measure thirty, thus giving the student multiple examples of expression markings that may at first appear synonymous throughout the piece. These concepts are introduced in both Etudes #1

and #2, but the layering of different terms of expression is reserved for Etude #2, as this etude is an emulation of one that doubles as a solo work, meaning it focuses on more musical experimentation and student interpretation.

In addition to allowing the student to interpret the range of dynamics within certain passages of the piece, Musser's etude continues to stretch the realm of possibilities beginning in measure fifty-one, where the piece calls for two measures of expressive playing, allowing the student to show off the furthest limits of their technical ability on the instrument with an accelerando sixteenth-note run followed by separated rolls with fermatas. The penultimate phrase in the work is a final showcase of the student's full range in terms of expressive playing (increasing both speed and dynamics) until the final measure where a musical "period" is played in the form of an arpeggio on the tonic at the softest dynamic possible.

Precursory Information

Before a student is introduced to these etudes, they must first have a developed understanding of reading and playing music. This includes being able to read in treble clef, count in a 6/8 and 3/4 time signature, and play eighth note, sixteenth note, and dotted quarter note rhythms. While an understanding of concepts beyond this is recommended, such as the key signatures Eb and F, expression markings like those listed above, and musical phrasing, these concepts don't necessarily need to be fully solidified as they can be applied and strengthened with the etudes in question.

Along with an understanding of the music itself, a student must also grasp the concepts of playing the tenor pan. One of the many advantages of the steelpan, like most idiophones, is that a beginning student and an accomplished student have the same capabilities in range. The

difficulty in playing the steelpan thus lies in the control over the tone quality of each note, as they may all react differently to various stroke types and an undesirable sound can occur when overplayed. Even if a student has been playing for a significant amount of time, it is important to constantly remind them of the basic techniques on the instrument in order to produce the best tone possible and avoid the development of poor habits. The following techniques are a synthesis of those described by several pan educators as well as those found on the NSSBE website.

To achieve a desirable tone, one should instruct the student to begin with their posture: situate the pan at a comfortable height, stand with feet shoulder-width apart, and have the knees bent slightly to allow for small movements from side to side depending on the passage being played. Next, instruct the student to focus on their grip of the mallets, holding them near the bottom between the thumb and the first and second fingers. If a student has been brought to the steelpan from an instrument outside of the percussion family, careful attention should be given to grip and stroke, as the use of mallets as an extension of the player's hands has not been previously established. However, if a student is brought to the pan from marimba, it will be imperative that they understand not to strike the notes as one would on a mallet instrument. The student should then be instructed to use small strokes originating from the flicking of their fingers as opposed to larger movements initiated from the wrist or arm. (Teague, 2014; Tanner, 2020)

Once proper posture and stroke technique are established, a student can then be instructed to focus on their touch. It is often stated that when playing the steelpan, one is *activating* the notes as opposed to *striking* them. This can be achieved by playing in the exact center, or slightly off-center depending on the note, with the rounded edge of the mallet. The student should be reminded constantly to practice slowly and develop their touch at a soft dynamic first, then

gradually increase both speed and volume as needed to fit a musical passage. This technique, provided by both Dr. Chris Tanner, president of the NSSBE, as well as Liam Teague in his book *Steelpan Method,* allows the student to pay close attention to where and how they are striking each note until it becomes habitual and they can play with consistent tone and control at faster speeds and louder volumes. (Tanner, 2020)

Lastly, before approaching the etudes it is important to note that while they are intended for fourths and fifths pans (otherwise known as "spider web" pans), they can be performed on any layout, so long as they have a range from D4 to Bb5.

Analysis and Teaching of Etudes

The inspiration for Etude #1, as stated above, comes from the idiomatic playing and doubled stickings of the Goldenberg etude and the emphasis on structured expression from the Musser etude. The steelpan, like the marimba, has a wide realm of possible dynamics and tempi, but requires more from a pannist than a marimbist due to the layout of the instrument. The beginning passage provides a foundation for consistency in dynamics. If a student is playing the beginning *forte* at a certain volume, all areas marked *forte* should then be as close to that volume as possible. Similarly, the remaining dynamic markings should be terraced based on that specific *forte* volume. The dynamics are also idiomatic, as the middle range is relatively consistent in terms of touch.

As the second musical phrase descends, the student must now play against the instrument's tendencies. The lower range (or the outside notes) are difficult to play quietly, thus requiring more attention to touch as the arpeggiated pattern continues to ebb and flow until the accents of measures twelve and thirteen. The piece then uses a diatonic run to return to the main theme before ending with a diminuendo which allows for open expression in terms of both

dynamics and tempo as the final musical statements drift away. Aside from the emphasis on expression at the end, structured dynamics (intentional dynamic markings, hairpins, and accents) paired with mood-based expression markings (*Playfully* and *Somber…)* give the student both the basic outline of how to phrase a passage and the musical liberties to interpret or add personal expression to the music outside of what is written on the page.

In terms of sticking, F major lends itself nicely to alternating patterns, so arpeggios should be played with relative ease. In the passages that feature diatonic runs, however, the student must be instructed to pay close attention to sticking and when to use doubles. When learning the longer diatonic passages such as measures sixteen through nineteen, the student should be instructed to start slowly and keep the dynamics below *mezzo forte.* Once they are able to play with consistent accuracy, the student should be able to recognize larger patterns in hand placement and a comfortable sticking will become clear. If the student has difficulty understanding what a "good" sticking looks like, they should be instructed to play the first measure of the piece with as many different stickings as possible. Ask the student which sticking requires the least amount of movement and instruct them to strive for that sticking throughout the remainder of the piece. Lastly, the tempo of this work is left ambiguous intentionally to allow the student to experiment with what sounds best to them, as opposed to attempting to reach a "goal tempo" for the sole purpose of meeting a requirement.

With Etude #2 the inspiration came primarily from Musser's etude, as it plays the role of both an exercise and a legitimate solo. The obvious emphasis of this piece is challenging the performer's musical expression with very little definitive structure given. The student should be instructed to play each passage again at a low volume and slow speed until they are comfortable with the sticking and placement of notes. Then the student may add the dynamics while still

playing at a slower tempo. The last step to learning this etude is adding the element of speed, as a performer may vary the tempo within the range of *Allegro* to fit the musical passage as they see fit only once they feel comfortable with the other elements of expression in use. Close attention should be paid to the student's separation of speed and volume. The interpretation of dynamic range should remain the same regardless of the tempo taken and a student should understand that the expressive intensity of a performance is not always contingent on the volume or speed.

On the technical side, this etude features frequent double stickings, sometimes several times over in close succession. The ascending and descending arpeggios are also used throughout the piece to force the student to think about what type of touch they will need for each note depending on the range. Balancing this with the varying dynamics will pose some difficulties for the student. To overcome this, they should be encouraged to take small sections of a passage (for example measures thirty-five and thirty-six) and repeat them while varying the volume and experimenting with touch to gain a comfortable knowledge of the "action" of each note. Again start at a slower tempo (enough to think and react to each note) and gradually increase the tempo while focusing on consistency until the desired tempo is reached.

Finally, it is worth noting that any interpretation of these etudes (including edits or omissions) provided by the teacher are entirely valid so long as they serve the student. The sign of a successful educator is one who knows their student: their strengths and weaknesses, their tendencies, and their habits, both proper and poor. If the whole student is kept in mind with each given instruction, the etudes are left to the discretion of the teacher entirely.

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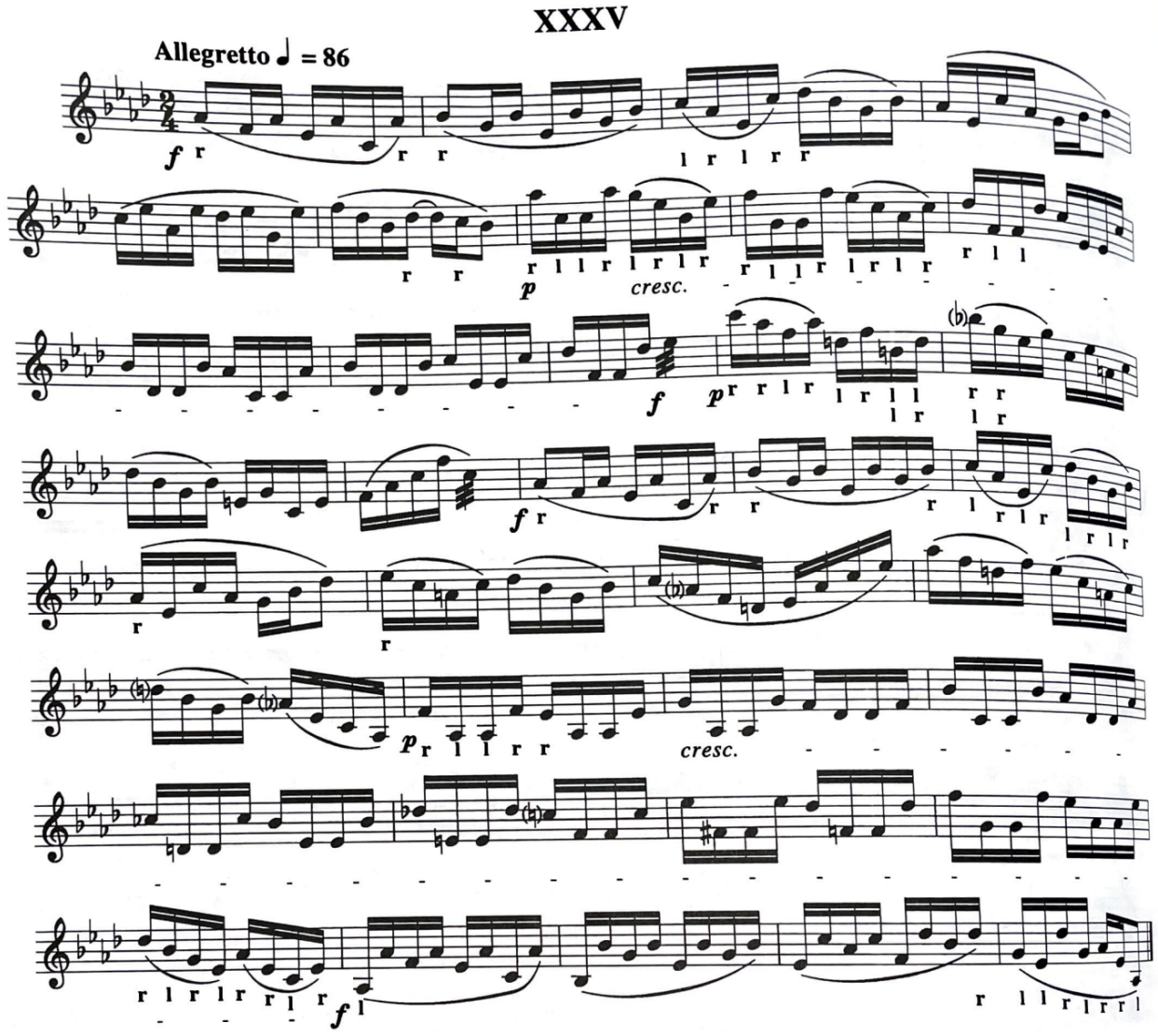
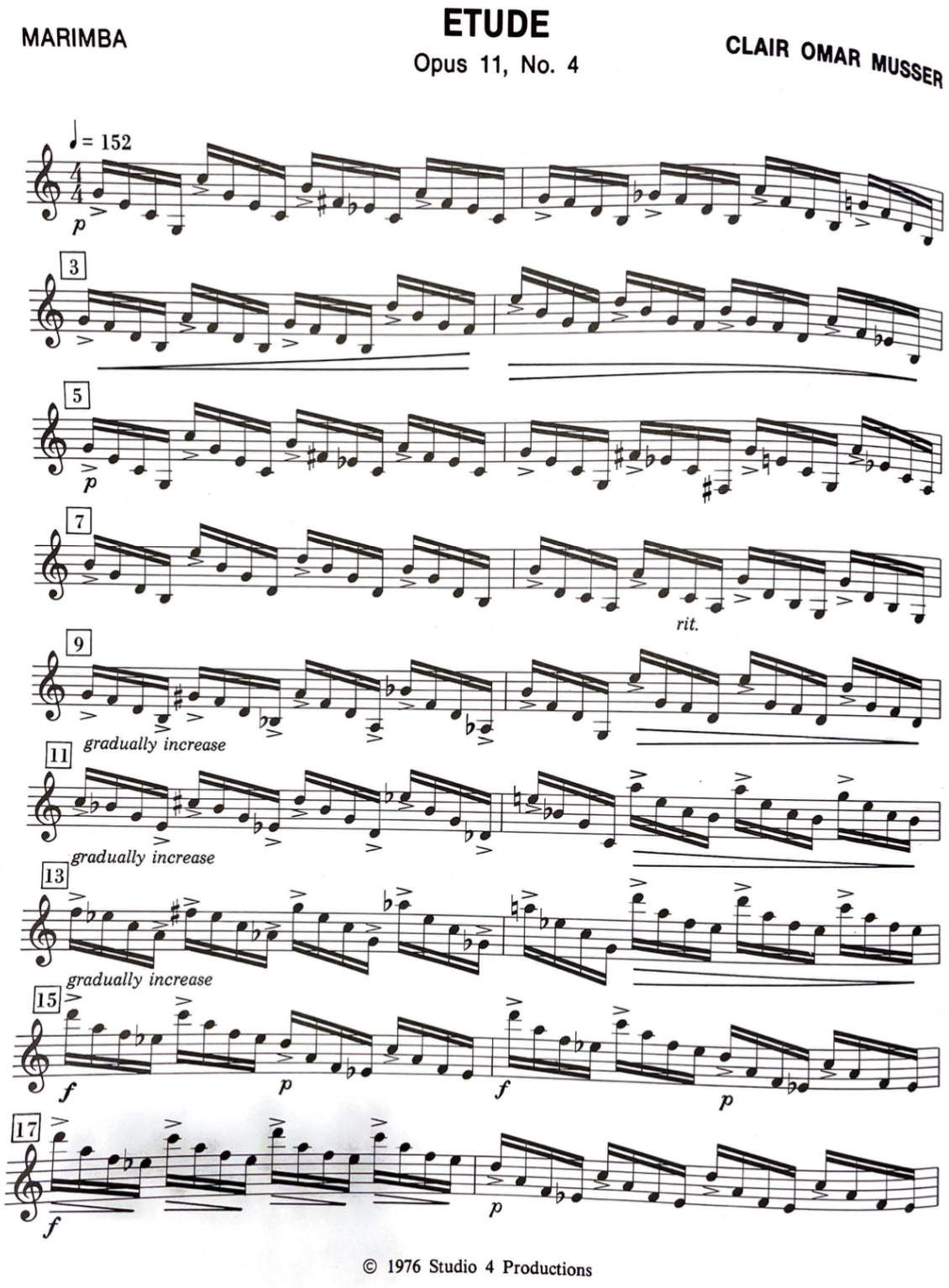
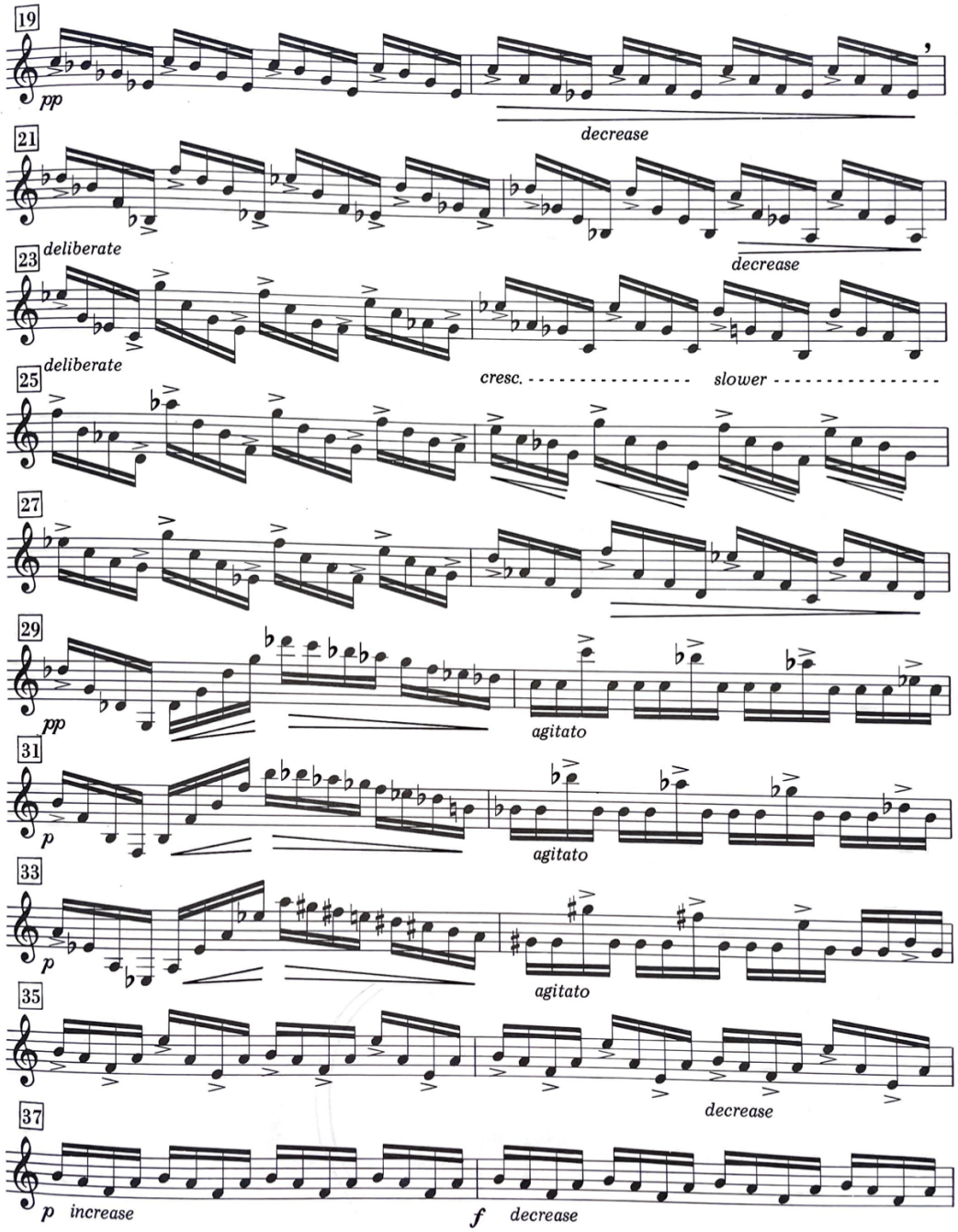
Appendix A



Appendix B


MARIMBA
ETUDE
Opus 11, No. 4
CLAIR OMAR MUSSER
♩ = 152
p
3
5
p
7
rit.
9
gradually increase
11
gradually increase
13
gradually increase
15
f
p
f
p
17
f
p
© 1976 Studio 4 Productions
S4P-1003

Appendix B (cont.)



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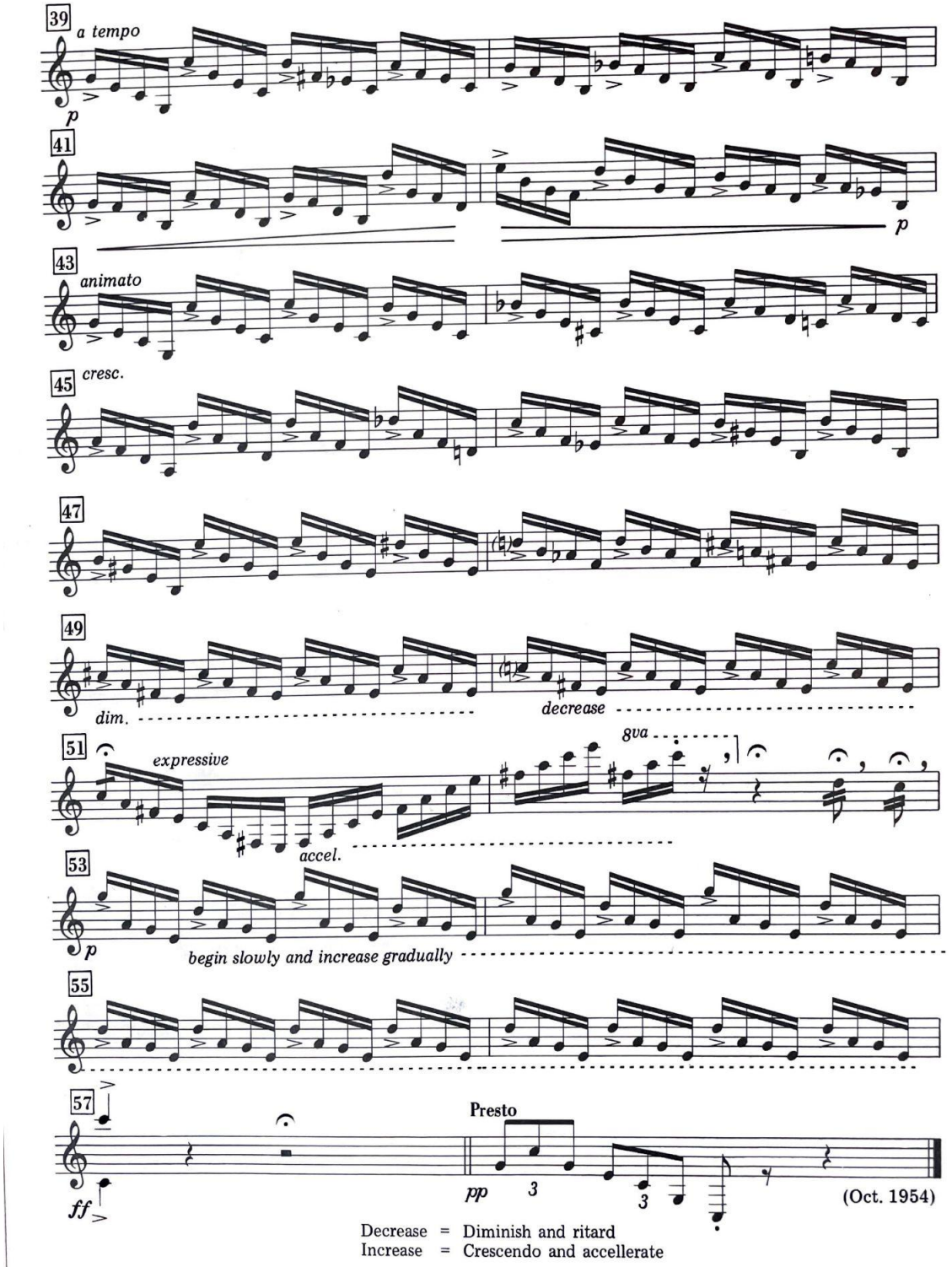
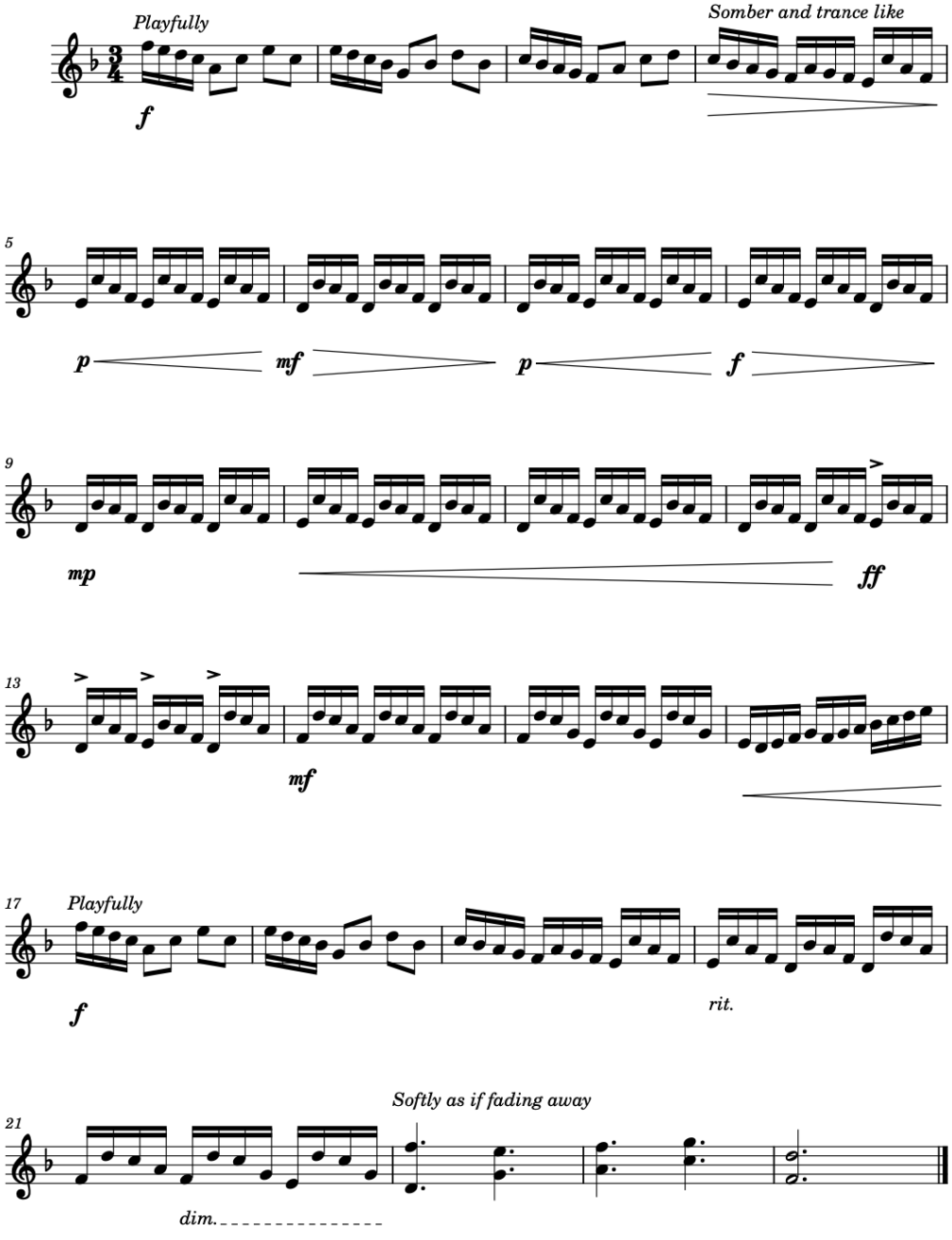


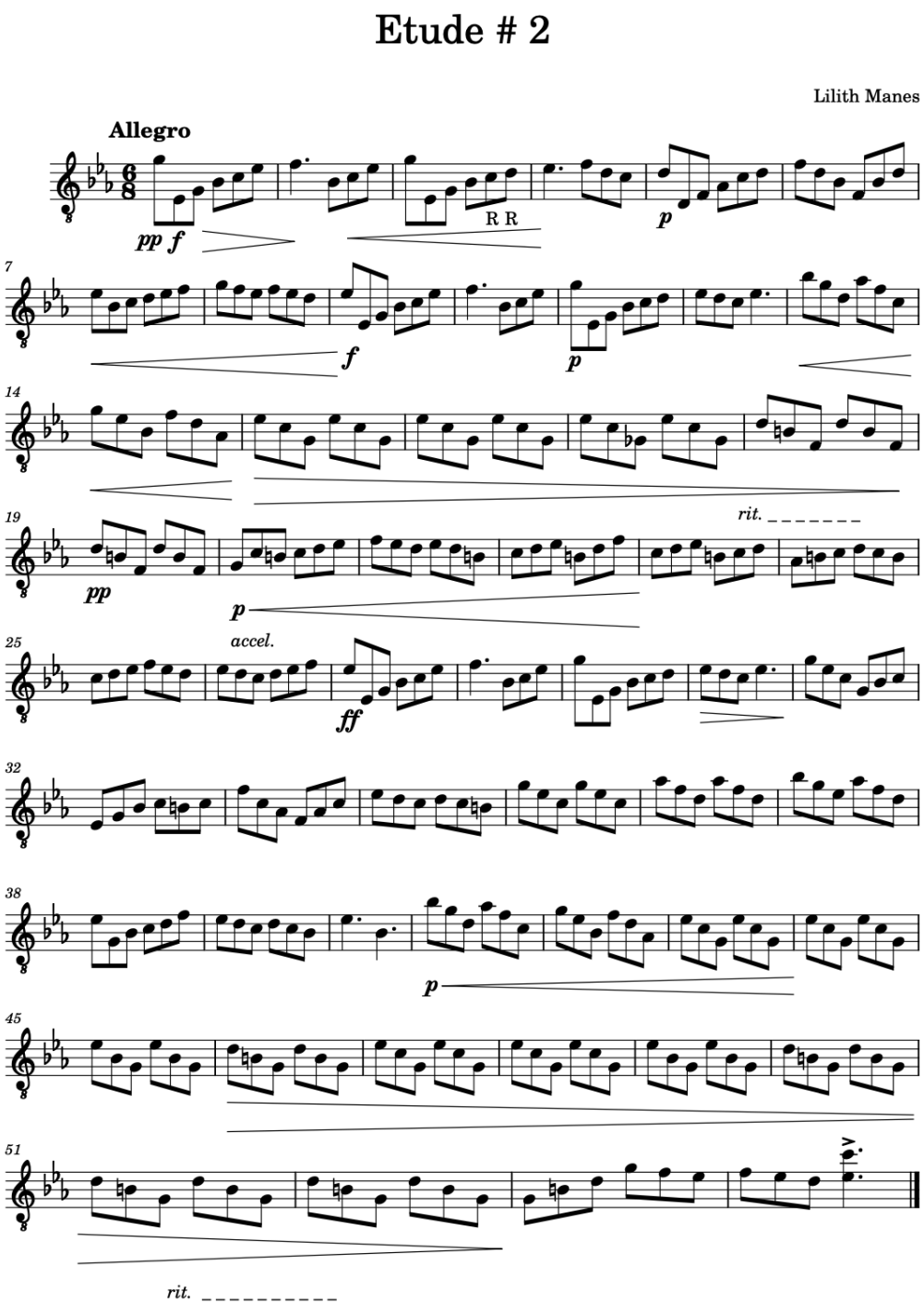
Appendix C

Etude #1

Lilith Manes



Appendix D


Etude # 2
Lilith Manes
Allegro
pp f
R R
p
7
f
p
14
19
pp
rit.
p
25
accel.
ff
32
38
p
45
51
rit.

Appendix E

When the British government first banned the use of traditional drumming in 1883 to discourage the lower class's Canboulay traditions during the Carnival season, new forms of percussion began to take place. (Brereton, 1981) One of these forms was tamboo bamboo (from the French *tambour)*, whose bands were comprised of predominantly young men of African descent who sought to recreate the rhythms originally played on traditional Afro-Trinidadian drums. Due to their social status and the violence associated with Canboulay, these groups were often looked down upon by the upper and middle classes. The instrumentation for tamboo bamboo music was primarily stalks of bamboo, hence the name, as well as other found objects such as bottles, paint cans, and biscuit tins. (Hill, 1993) By the early 1940s, however, most bands had replaced their bamboo with metal entirely, thanks to its durability and volume, thus creating the earliest forms of the steel band. (Hill, 1993; Stuempfle, 1995)

While the origin story of the earliest steelpan remains ambiguous, one generally accepted pioneer was Winston "Spree" Simon, a member of the John John tamboo bamboo band, who found that a paint can could produce specific pitches when dented in various ways. (Stuempfle, 1995, p. 38) Around this time other groups such as the Hell Yard band and the Gonzales band were experimenting with different early forms of the steelpan and by 1945 pan builders (or *"*tuners") were making use of the ample supply of oil barrels coming from Trinidad's industrial involvement in World War II. (Stuempfle, 1995, p. 37) Within a year the first "ping pong" pan was created, a triumph often credited to Ellie Mannette who also claimed to have created the earliest version of the "pan around the neck," and was "among the first steel band players to tune the oil drums." (Hill, 1993; Stuempfle, 1995, p. 41)

Around the late 1940s and 1950s, steel bands playing increasingly intricate melodic lines became more popular and started to gain public appeal thanks to the admiring middle class, with some pannists receiving musical scholarships as well as other sponsorships. (Stuempfle, 1995, p. 87) The pan's international appeal also began to grow in 1951 when the Trinidad All Stars Percussion Orchestra (TASPO) became the first steel band to perform at the Festival of Britain. (Brereton, 1981) By this time, Trinidadian nationalism had led to the acceptance of the steel band as a significant cultural icon. (Stuempfle, 1995, p. 79)

Thanks to the considerable growth in popularity and the newfound monetary support coming from the middle and upper classes, steel bands began to form in more socially respectable settings and young middle-class men began to join college bands (Stuempfle, 1995, p. 101). With newly-established collegiate bands sweeping the country, the unofficial exclusion of female pannists was challenged by groups such as Birdsong, an all-female steel band and black power organization at the University of the West Indies. As most women during this period studied in a collegiate setting due to the dangers of the panyard setting, the prominent teachers of the time were primarily traditionally taught women. Throughout the 1970s, these women helped to shape the future of the steelpan within the educational systems in Trinidad. (Stuempfle, 1995, p. 179). That same decade, the first college steel band in the United States was founded by Al O'Connor: the NIU steel band.

NIU became responsible for the spread of the university steel band movement across the United States, having influenced around fifty other collegiate groups. (Tiffe, 2006) A few years prior in New York, Murray Narell, a social worker and the creator of several youth steel bands, brought Ellie Mannette to the United States, thus furthering the teaching and building of the steelpans. (Tiffe, 2007) Mannette introduced and integrated the steelpan into schools beginning

in New York and later in Washington D.C. by working with various Trinidadian pannists in the U.S. to create and teach steel bands. He often expressed the opinion that college steel bands were not only used “as a tool for promotion and revenue, but as an effective teaching tool for ear training, understanding orchestration, and the like.” (Dudley, 2007) According to a directory provided by Brandon Haskett and the NSSBE, there are currently 819 collegiate and K-12 level steel bands in the United States. (Lienert, 2020) This growing trend is brought about by pan educators who continue to spread their knowledge of the history and playing of the steelpan from one generation to the next.