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The Evolution of Flute Articulation from the Baroque to the Present: Changes in Flute Construction and Design and Design and Articulation Techniques for the Playing of the Instrument

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The Evolution of Flute Articulation from the Baroque to the Present: Changes in Flute Construction and Design and Design and Articulation Techniques for the Playing of the Instrument

By
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We certify that we have read this document
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Syrina Elace Robinson

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The Purpose of the Research

Articulation is the essence of flute playing, commonly known as tonguing. Articulation consists of the syllables flute players use to tongue on the instrument. It is the technique that wind players use to initiate a sound and separate any given sound from the sound that succeeds it. Articulation also includes singing while playing, double and triple tonguing, slurring, non legato playing, *tenuto* playing, and flutter-tonguing. The tongue is not used during slurred legato passages. The placement of the tongue is essential to the articulation of non legato flute playing. This thesis will explore the evolution of flute articulation from the time of Johann Joachim Quantz (1697-1773) in the Baroque to the 21st century and demonstrate how extended techniques of the flute continue to evolve. Flute players today are expected to have expertise in these extended techniques. The differences in flute articulation and the evolution of extended techniques through successive musical eras are easily demonstrated by an examination of representative musical excerpts by select composers from each of these periods. References will be made to facsimiles of original manuscripts, writings, scores and treatises.

Articulation provides variety and enlivens the listener's interest in the music. When a musical phrase is repeated with a change in the articulation, a new sound idea and character is given to the music. It was a common performance practice in the Baroque period for a player to repeat entire movements or specific phrases while incorporating changes in the music. The player might change the dynamics, the tempo, or the articulation. Any variety in the execution of flute music, especially articulation, creates a different mood in the music. The historical

performance practice of flute articulation has survived to the modern metal flute and still remains one of the most important aspects of performance practice that continues to be applied by flutists today.

The purpose of this thesis is to provide a comprehensive analysis of the changes in flute articulation from the time of Quantz during the Baroque to the 21st century. Performance practice concerning flute articulation will be explored as it has evolved through time and is currently still evolving. An analysis of Baroque flute articulation will be presented, with similarities and changes in flute technique traced through succeeding eras. This paper will follow the evolution of flute articulation over time, drawing upon representative works by specific composers to illustrate this evolution in flute playing techniques that resulted from the response to the ongoing development in musical compositional thought. The changes in flute playing to meet the technical demands of the music itself were accompanied by changes in the design and manufacture of the instrument from that of the wooden Baroque flute to the modern silver or gold flute introduced by German inventor and musician Theobald Boehm (1794-1881) in the mid-19th century. The radical advances in the design and construction of Boehm's instrument stimulated similarly significant changes in playing technique.

The four representative musical examples used in this thesis are the first movement of Johann Sebastian Bach's *Partita in A Minor for Solo Flute* for unaccompanied solo flute (composed 1723–1724), the fourth movement of Ludwig van Beethoven's Symphony No. 3 in E-Flat, "Eroica," (composed 1803), Paul Taffanel's *Andante pastoral et scherzettino pour flûte et piano* (composed 1907), and Ian Clarke's *The Great Train Race* for solo flute (composed 1993).

These pieces collectively demonstrate the increasing demands upon the player that resulted in advancement in flute articulation.

The techniques encompassed by articulation are essential to the art of flute playing and do not remain static. Flute technique continues to evolve to this day. Every aspect of performance practice has widened and become more sophisticated. The ambiguity of articulation evident in Baroque music had been replaced by a highly mannered approach to the negotiation of musical effects by composers in the Classical era. At the time of Quantz, the choice of how to articulate a certain passage in flute music was left up to the performer's discretion. There was no instruction in Baroque flute repertoire informing the flutist on what kind of articulation to use. In modern flute repertoire articulation is clearly notated in the music. It would be inappropriate for a flute player of today to ignore the articulation notated in the music and opt for some other articulation.

Modern professional flute players are expected by flute teachers and called upon by major orchestras and music conservatories around the world to be able to play all extended articulation techniques. It is necessary for modern flute players to have a diverse range of extended techniques because many modern pieces call for them. These extended techniques in articulation include singing while playing, speaking while playing, harmonics, and whistle tones. Each one of these extended techniques requires a lot of training and is considered an important element of the high standards in flute playing for professional flute players. Ian Clarke's solo flute piece, *The Great Train Race,* has extended techniques throughout the music that will be explored in this thesis.

The embouchure hole on the baroque flute is a lot smaller than the embouchure hole on the modern flute and has a completely different effect upon the way notes are articulated. In the Baroque period, Quantz gave flute players specific syllables to use when articulating, clearly demonstrating pedagogical intent regarding performance practice. The flute articulation in Beethoven's *Eroica Symphony* is extremely fast and excerpts from this piece are on many flute audition lists making it one of the most important sources for flute orchestral excerpts. Theobald Boehm revolutionized the construction of the transverse flute with his invention of metal flutes made out of silver and gold. This changed the physical aspects of flute articulation because the entire placement of the tongue changes when articulating a note on a metal flute as opposed to a wooden flute. In the second half of the 19th century, Paul Taffanel in his compositions and writings capitalized on the advancement in flute construction to introduce advances in playing techniques, thus stimulating the evolution of what modern scholars refer to as "The French Flute School."

It is difficult to see visually how the tongue is used while playing the flute and this makes it hard to understand at times the importance of the tongue and articulation in flute playing. Air does not always move freely through the body of the flute. It is manipulated and dealt with through articulation. The evolution of flute articulation is indispensable to the modern flutist because the tongue is the essence of flute playing. By exploring the evolution of flute articulation from the Baroque to the 21st century, the reader will be able to see how articulation was revolutionized and used by composers throughout the time periods that will be explored in this thesis.

Every instrument is making use of air. This is common for every instrument but it happens differently for every instrument. There is a cubic area for air that is made to vibrate and when a vibration occurs waveforms are sent through the air until they reach receptors, human ears. On some woodwind instruments there is a mouthpiece that has a reed which creates the vibrations. On a flute, the player creates vibrations by blowing across an open hole using a controlled and focused push of air. The flute is different from other woodwind instruments because it does not make use of a reed. Flute articulation consists of many different subcategories. These different subcategories of articulations impart different qualities to the sound. Articulation for the flute involves all the different physical techniques that are used to control the air which produces different musical effects in the sound of the flute.

The modern metal flute that is available and played today is not the same instrument that was available to Johann Sebastian Bach and for which he wrote his unaccompanied partita for flute. Composers wrote music that necessitated changes in the instrument. Composers were writing notes from a musical standpoint of what the musical effect would be and wanted this effect to come out in the sounds and the articulations that the instruments provided. The changes in the flute and therefore the techniques of playing the instrument were the result of composers wanting more in the music. The composers wrote for something that was not ordinarily done and that prompted the development of the instruments. The music that was written forced the evolution of the flute. The evolution in flute articulation and the instrument itself was a result of the development in musical compositional thought and what composers wanted out of the instrument for the expression of their musical ideas.

Content

The analysis of the evolution of flute articulation will be organized into four sections in this thesis. The Introduction will specify the purpose of this research, the content of the thesis, the methodology, and the bibliographies that are interconnected to the topic. This section will supply the overview of this thesis for the reader so that they will be able to recognize and understand the music, composers, and content for each chapter.

The first chapter will serve as an introduction to flute articulation in the Baroque period. This section will present the first detailed instructions specifically for flute articulation given in the Baroque period by German composer and flutist Johann Joachim Quantz in his treatise *On Playing the Flute,* first published in 1752. It is important for the reader to understand the pedagogical intent of this treatise. The section of Quantz's treatise that will be referenced in this thesis specifically relates to flute articulation and it is in this treatise that flutists during this time are provided with the first instructions ever on articulating on the flute. There will be an overview on the syllables that Quantz instructs the flutist to use for articulation as well as an overview on articulation in one of the most important Baroque solo flute works, *Partita in A Minor for Solo Flute* written by Johann Sebastian Bach.

The second chapter will engage in a discussion on the Classical and Romantic periods. It was during this time when Theobald Boehm introduced gold and silver metal flutes which revolutionized the world of flute playing and flute articulation. There will also be an examination of how flutists articulated notes on the Baroque flute compared to articulating on a metal flute. The reader will be able to trace the continuities and recognize the discrepancies in flute articulation as the instrument evolves.

This section will also analyze the double tonging articulation in the fourth movement of Ludwig van Beethoven's third symphony. In this piece the reader will be able to recognize the evolution of flute technique and literature that resulted from the mechanical development of the instrument. The flute part in the fourth movement of Beethoven's third symphony is played very fast and the speed of fingering is something that flute players had not seen before. There would have been Baroque flutes in Beethoven's orchestras during this time period but there was a slight evolution in the Baroque flute that occurred in the early 1800s with the edition of more holes and keys that allowed flutists of the time to play a little faster than they could on the Baroque flute. The classical flutes were slightly more advanced than Baroque flutes but the entire mechanism of both flutes was very similar. The nature of the instrument does not remain static and the nature of the literature does not remain static. Composers make use of what the instrument offers.

The third chapter will delve into the development of the "French Flute School" and the French style of flute articulation taught by the flute professors at the Conservatoire de Paris. This chapter will include a study on articulation in the Morceaux du Concours piece *Andante pastoral et scherzettino pour flûte et piano* composed by Paul Taffanel, professor of flute at the Conservatoire de Paris and founder of the "French Flute School." This piece was written by Taffanel as an examination piece for the Conservatoire de Paris end of semester competition titled *Concours des Prix*. Students in the conservatory played in public examinations called concours. These examinations were performed in front of a jury of professors who would determine whether or not a student graduated from the Paris Conservatoire based on performance. In these examination pieces, specifically for flute, one can trace the evolution and continuities of flute repertoire from the 19th century and beyond. *Andante pastoral et*

scherzettino pour flûte et piano was Paul Taffanel's last work and written to be a competitor piece in the *Concours*. Within this work is an increase in expectations for flutists and the level of mastery of their instruments. The French Flute School was responsible for new standards for the flute as a sound ideal and new instruction on the execution of flute articulation. The French Flute School was the name given to new standards of flute playing with a specific approach to technique, articulation, tone, vibrato, and the emotional expression of music.

The final chapter will conclude the thesis with an analysis of flute articulation in the 21st century and a summarization of the research outcomes of each of the previous chapters. The reader will gain awareness of the evolution of flute articulation from the Baroque period of Quantz to the 21st century. Readers will understand the nature of the flute and how it is played and how articulations are used. They will also recognize that composers were not limited to exploiting only what the instrument could do. Flute articulation and extended techniques were discovered by flutists in order to provide the effects that these composers wanted in their musical compositions. The music was written before the instrument and the technique were modified.

Methodology

The analysis for this research will be expanded by means of a thorough understanding of flute articulation, the historical background of flute articulation through each musical period, and musical examples that demonstrate this evolution of articulation throughout each period. The primary sources themselves, Quantz's treatise *On Playing the Flute* and the urtext editions of musical scores allow for the understanding and organization of the evolution of flute articulation from the Baroque period of Quantz to the 21st century. Understanding these sources and tracing

the continuities in this aspect of flute performance will help the reader to organize this content and realize that flute articulation is not static and that it evolves as the instrument evolves and that composers recognize these evolutions in the instrument and notate this in their scores.

The musical scores from Bach's *Partita in A Minor for Solo Flute*, Beethoven's *Eroica Symphony*, Taffanel's *Andante pastoral et scherzettino pour flûte et piano*, and Clarke's *The Great Train Race* will help the reader to contextualize these concepts and understand the process. Excerpts from these four musical scores will be referenced and copied onto the pages of this thesis. The reader will be able to discern the differences between composers and their compositions as these differences are reflected in flute articulation. Each composer mentioned in this thesis has his own unique way of writing for the flute, and from the examples included herein the reader will be able to differentiate between time periods and stylistic ways of writing articulations for the flute. In addition, a close investigation into Quantz's treatise *On Playing the Flute* will help to inform the reader of instructions that are given by Quantz for playing articulations.

Articles and books from composers, teachers, and flutists provide assistance in evaluating, comparing, and analyzing methods of flute performance. Every generation from the Baroque period to the present had different opinions of flute articulation and what is and is not acceptable in performance. Reading these articles and tracing the continuities between the time periods and composers therein will aid the reader in recognizing what was accepted in terms of flute articulation and which composers were masters of this aspect of flute performance practice within their respective eras. Every generation has composers and compositions that have more prominence and recognition than others. In this thesis, those composers and their compositions

will be used as examples of what is considered to be the pillars of excellence in flute articulation and performance.

Resources

On Playing the Flute by Johann Joachim Quantz is an indispensable book for flutists. Published in 1752, this book is substantial and more than 300 pages long. Quantz is the expert on Baroque flute playing and this book gives flutists instruction in all aspects of flute performance. This book is made up of three interconnected essays that discuss the important practices of a solo musician. The range of subjects in this treatise is large and Quantz analyzes the use of phrasing, ornamentation, accent, intensity, tuning, cadenzas, and articulation as they all relate to performance practice.

Quantz gives flutists the first syllables for articulation in his treatise. There is a pedagogical intent in this book and the formal instruction given by Quantz not only serves as a reference for flutists, but for composers and how they write for the flute. This book has been acknowledged as one of the most consequential and extensive treatises on eighteenth-century performance practice. Although written for flute, this book has lessons and instruction that can be applicable to all musical instruments as well as singers. This treatise is a comprehensive organization of material in baroque studies and historical performance practices that all instrumentalists and singers can take into account and apply to their own training.

The urtext editions of *Partita in A Minor for Solo Flute, Eroica Symphony, Andante pastoral et scherzettino pour flûte et piano,* and *The Great Train Race,* all contain the original notes and instructions given by the composers of the pieces. In these scores, the reader will be

able to understand and follow the exact instructions from the composers and see how each piece was meant to be played and articulated. Each of these pieces has a specific intention and all of these pieces show the process and continuity of flute articulation throughout the centuries. Bach, Beethoven, Taffanel, and Clarke represent four different centuries of evolution and thought in flute articulation and performance. This discussion of four completely different composers and one of their representative pieces is absolutely integral to this thesis. Each of these pieces has a substantial place in the flute repertoire of today because in all of them the evolution of articulation and flute performance practice can be observed. The incorporation of the urtext edition of each score into this thesis provides further direction for research scholars.

Chapter One. Flute Articulation in the Baroque Period

Johann Joachim Quantz's 1752 treatise *On Playing the Flute* laid the foundation in the late Baroque upon which were based the first instructions for flute articulation and the first collection of syllables used for articulation in this period. Quantz lived from 1697 to 1773 and he was a German flutist, flute maker, and composer who served as a Royal Prussian Chamber Musician to Frederick the Great.[1] This treatise is one of the most reliable sources of Baroque performance practice mostly due to how in depth and practical it is for readers. Quantz writes his entire sixth chapter on the use of the tongue in flute articulation. There is a clear pedagogical intent in this chapter as Quantz gives instructions, specific syllables, and correct and incorrect ways to articulate on the flute. Quantz sets a standard for flute articulation in the Baroque period that remains virtually the same to the present day. Minor changes and priorities arise in the coming centuries but this formal instruction from Quantz gives musicians a standard to practice for flute articulation.

Quantz begins this chapter by writing, " The tongue is the means by which we give animation to the execution of the notes upon the flute. It is indispensable for musical articulation, and serves the same purpose as the bow-stroke upon the violin. Its use so distinguishes one flute player from another that if a single piece is played in turn by several persons, the differences in their execution frequently make the work almost unrecognizable. The majority of these differences rest upon the correct or incorrect use of the tongue…The liveliness of the execution,

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[1] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 5.

however, depends less upon the fingers than upon the tongue."[2] In this quote, Quantz states that the tongue is indispensable to flute articulation. He tells the reader that there are distinctions made between flute players based on their articulations, and he makes it known that there is a correct and incorrect way to use the tongue when articulating. In this brief quote, Quantz is informing the reader on why the tongue is important in flute articulation, how flute players distinguish themselves based on how they articulate, and that there is a right way and a wrong way to use the tongue in flute articulation.

It is in Quantz's treatise that the first syllables are given to flute players to use when articulating. Quantz writes, "To make the tone of the flute speak properly with the aid of the tongue and the wind that it allows to escape, you must, as you blow, pronounce certain syllables, in accordance with the nature of the notes to be played. These syllables are of three kinds. The first is *ti* or *di,* the second *tiri,* and the third *did'll.* The last is usually called the *double tongue*, while the first is called the *single tongue.*"[3] These syllables given by Quantz require flutists to place emphasis on the strong beats. This historically informed performance practice of flute articulation in the Baroque period of Quantz is different from the way modern flutists are taught today. Modern flutists use syllables that are similar to the syllables *tu ku.* The syllables *tu* and *ku* are the syllables that modern flutists use to double tongue certain passages of music.

This system of articulation that Quantz describes is complex and appropriate to the kind of music that was played in the Baroque period on the Baroque flute. When comparing the

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[2] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 71.

[3] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 71.

Baroque flute to the modern flute, one cannot ignore the practical limitations of the Baroque flute. The Baroque flute is a wooden instrument with six holes and one key. The embouchure hole on the Baroque flute was a lot smaller than the embouchure hole on the metal flute of today. The system of the Baroque flute was far less complicated than the system of the metal flute. An evenness of tone and a steadiness of sound was much more difficult to accomplish on the Baroque flute and the instrument was not as loud as the modern metal flute. Articulating and tongue placement on the wooden Baroque flute is different, as are the syllables used compared to what modern flutists encounter in everyday practice and repertoire. The image in Figure 1 below is taken from Quantz's treatise *On Playing the Flute.* This is an image of the wooden Baroque flute that was in use during Quantz's time.

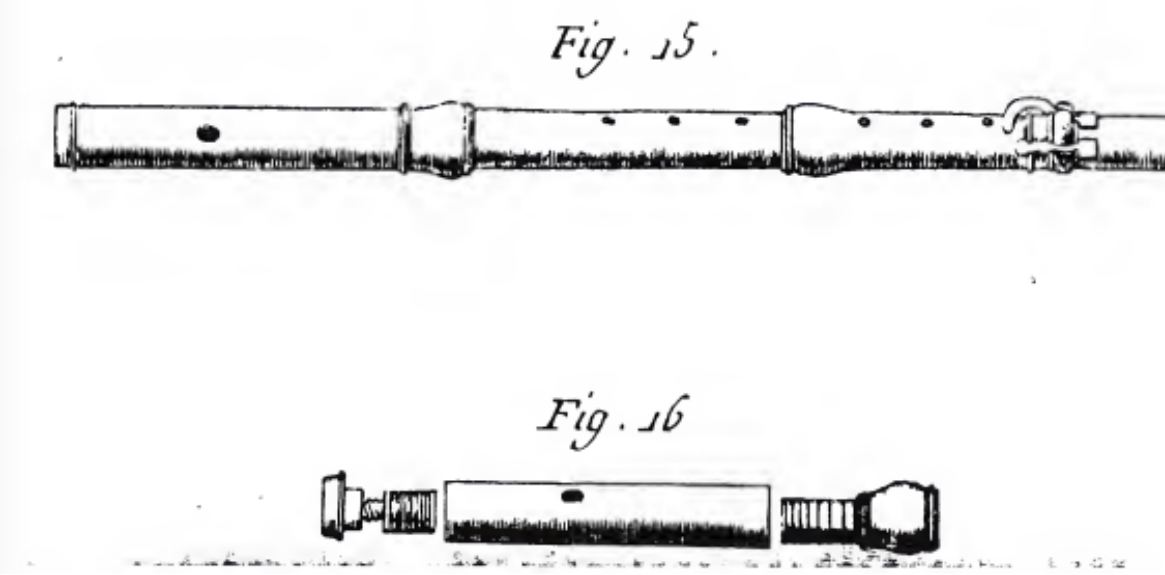

Figure 1. Image given by Quantz, p. 28

Modern flutists try to achieve an evennesss between the notes when articulating. Notes are articulated with the same strength so that one does not overpower another unless specific

notes are notated with accent markings which would instruct the performer to play those notes stronger. The modern day performance practice of even articulation when tonguing is a standard that was set when Theobald Boehm invented metal flutes in the middle of the 19th century. Between the *tu* and *ku* syllables that modern flutists use today in articulation, the *ku* syllable is the weaker syllable that requires significant training in order to get that syllable to sound with the same strength as the *tu* syllable. Professional flutists of today are expected in auditions, music conservatories, and professional ensembles to be able to articulate so evenly that one cannot distinguish which syllable is being used to achieve the smooth, even tone. This is one of the ultimate tests of the musical maturity and skill of the flutist.

Quantz speaks about the use of the tongue with the syllables *ti* and *di.* He writes, "Since some notes must be tipped firmly and others gently, it is important to remember that *ti* is used for short, equal, lively, and quick notes. *Di,* on the contrary, must be used when the melody is slow, and even when it is gay, provided that it is still pleasing and sustained…*Ti* is called a tongue-stroke. To make it, both sides of the tongue must be pressed firmly against the palate, the tip curved up and placed in front near the teeth, so that the wind is stopped or held in check. When the note is to be produced, you draw only the tip of the tongue away from the palate, the rear part of the tongue remaining on the palate; the impact of the stopped wind is the result of this withdrawal, rather than that of the stroke of the tongue itself, as many mistakenly believe."[4] In this instruction, Quantz is explicitly directing the flutists on where to place their tongues in their mouth. It is hard to visualize the tongue in flute playing since one cannot see the tongue of

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[4] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 71-72.

someone who is actively playing the flute. This is a common performance practice issue that flutists have. When instructing a beginning flute player on placement of the tongue for articulation, it is difficult to make this concept clear because of the difficulty of explaining articulation visually.

Flutists often practice and play their flutes for a long time using the wrong tongue placements, and this action can result in habits that are detrimental to flute performance practice. In his treatise, Quantz informs the reader of what he considers to be a wrong practice in tongue placement. He writes, "Some have a way of placing the tongue between the lips and making the stroke by withdrawing it. This I consider wrong. It prevents a full, round, and masculine tone, particularly in the low register, and the tongue also must make an excessive forward or backward movement, which impedes quickness."[5] In this statement, Quantz is informing the reader of a preference towards a full, round tone. This preference becomes the standard in flute performance. Quantz is setting these standards in the Baroque period and stating that these important standards can be accomplished by articulating correctly. The flutists during Quantz's period are receiving a foundation for articulation and are learning the proper and improper ways of executing this indispensable technique in flute performance practice. This pedagogical intent for teaching flute articulation has its origin with Quantz and his treatise.

Double tonguing is the opposite of single tonguing in articulation. In double tonguing, the player alternates between two consonants. The first consonant is on the strong beat and the other on the weak beat. Single tonguing is the use of a single syllable in articulation. A flutist

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[5] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 72.

would choose to single tongue notes in a passage of music over double tonguing when the music is played at a slower tempo. Although it is not impossible to single tongue passages that are quick, it is tiresome and the tongue might slow down and cause a less defined quality and a sloppy articulation. Contrastingly, double tonguing a passage that is at a slower tempo might cause the music to sound choppy or rushed, thus affecting the over all mood of the piece.

Two of the most common forms of flute articulation include double tonguing and slurring. According to Quantz, "The double tongue is used only for the very quickest passage-work. Although easy to explain orally, and simple for the ear to grasp, it is difficult to teach in writing. The word *did'll* which is articulated in it should consist of two syllables. In the second, however, no vowel is present; hence it must be pronounced *did'll* rather than *didel* or *dili,* suppressing the vowel which should appear in the second syllable. But the *d'll* must not be articulated with the tip of the tongue like the *di."*[6] The double tongue articulation is still used to articulate quick musical passages today, but it is not exclusively used to double tongue fast passages. Double tonguing is a way of articulating notes quickly and evenly, but it is also used to articulate slower passages of music evenly. The syllables given by Quantz allow for a quick and steady tongue whether or not the musical passage is quick or slow.

In the Baroque period, music was not written out with instructions from composers on whether or not to double tongue or single tongue specific passages, and this quite naturally was the case with flute music. Flutists were left with the authority to make decisions on the type of articulation that would be most appropriate in a specific piece. This was a historical performance

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[6] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 79.

practice of flute articulation where the flutist chose how to articulate in the Baroque period with the understanding that articulation can change the mood of a piece and the affect on the listener.

Quantz gives further instruction on how to articulate the syllables necessary for double tonguing. He writes, "To articulate *did'll,* first say *di,* and while the tip of the tongue springs forward to the palate, quickly draw the middle portion of the tongue downward a little on both sides, away from the palate, so that the wind is expelled on both sides obliquely between the teeth. This withdrawal of the tongue will then produce the stroke of the second syllable *d'll;* but it can never be articulated without the preceding *di.* If you pronounce *did'll* quickly several times in a row, you will hear how it should sound better than I can express in writing."[7] It is important to note Quantz's instruction to pronounce the syllable *did'll* several times. Articulation is something that can be practiced without the use of an instrument. The goal of Quantz in his instructions on double tonguing is to have air expel from the sides of the tongue. This creates a lighter articulation that is fast.

Flute articulation and as it relates to double tonguing is accomplished with proper execution of the tongue. The placement of the tongue in one's mouth and the subtle movement of the tongue to expel air is what accomplishes this goal of playing fast passages evenly by double tonguing the notes in articulation.

At the pinnacle of his instrumental chamber music writing Johann Sebastian Bach wrote *Partita in A Minor for Solo Flute* while he was nearing the end of his stay in Kothen. This piece highlights the important aspects of Baroque flute articulation. The original date of composition is

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[7] Johann Quantz, *On Playing the Flute*, trans. Edward R. Reilly (Boston: Northeastern University Press, 2001), 79.

unknown, but because of the technical advancements implied by the nature of the flute part writing it is believed to have been between 1717 and 1724. This Partita is Bach's only known musical work for solo flute.

The four movements of the Partita are labeled with French names and marked "Allemande," "Corrente," "Sarabande," and "Bourrée angloise." These are all dance movements. This work is essentially a collection of musical pieces. The "Allemande" sounds like a prelude to the "Corrente," a running dance. The slow and expressive "Sarabande" marks the third movement of this piece and the fourth and final movement is lively and energetic. This Partita shows off the talent and musical maturity of its players because a flutist needs quick and steady fingers, a great deal of breath control, and a mastery of flute articulation on the Baroque flute.

In order to understand the complexity of the unidiomatic writing for the flute, one must understand the history of this work. There is no autograph score for Bach's *Partita in A Minor for Solo Flute.* There is only a single manuscript that was written out by two copyists, one identified as Anonymous 5. The second copyist has not been identified. Anonymous 5 is believed to be Bernhard Christian Kayser who was associated with Johann Sebastian Bach in Kothen and Leipzig and the probable date range for this manuscript is 1722-23.[8] The only surviving manuscript was discovered in 1917 by Karl Straube.[9] Some musicologists suggest that this work may have been composed initially for the harpsichord because the solo line is continuous and there is little room for breaths in the flute part. Since there are no rests in this movement, flutists are presented with the challenge of finding places to take a breath without disrupting the flow of

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[8] Johann Sebastian Bach, ed. Christoph Wolff, *Neue Ausgabe sämtlicher Werke* (Kassel: Bärenreiter-Verlag, 1955), pp. 7-8.

[9] Ardal Powell, *The Flute* (New Haven: Yale University Press, 2003), 249.

the music. There is debate among scholars and musicologists as to whether or not Bach fully understood the system of the Baroque flute and all that the instrument could deliver.

Bach leaves little to no room for breaths in the first movement and this whole work is written in a low register for the flute. This could suggest that Bach did not have a great understanding of the limitations or demands of the flutes during his time or that he intentionally left interpretations up to the performer. An allemande is a walking dance in four and in the first movement of this partita, the "Allemande" is distinctively suggested by the opening declamatory statement of seven notes which begin on the dominant and arrive on the tonic. The first eight sixteenth notes of this piece establish the tonality of A minor. This movement is made up of all sixteenth notes and there are no specific articulations notated in this movement.

Pictured below are the first ten measures of the "Allemande" in *Partita in A Minor for Solo Flute.* Leaving out the repeats, this movement is comprised of 46 measures of all sixteenth notes. This is one of the most technically demanding pieces of all eighteenth-century flute repertoire. There is a specific type of articulation that one needs in order to present the melody, specifically the melody in the "Allemande." The only slurs in the original Partita are found in the "Corrente." Bach gave no instruction on what articulation to use for this work. There are no slurs, accents, breath marks, or dynamics written anywhere in this movement. Every note appears to be written to be articulated individually, however; the lack of any dynamic contrast, accents, or ornamentation call for the performer to incorporate articulation that is even and steady. This movement also happens to be in a low register for flute. The use of the tongue in flute articulation in a lower register can be complicated. Each note in the "Allemande" was written to sound individually and not as though all surrounding notes are being meshed together.

All of these elements add to this piece's complexity. The “Allemande” serves as a demonstrative example of the double tonguing and articulation that was used during the Baroque.

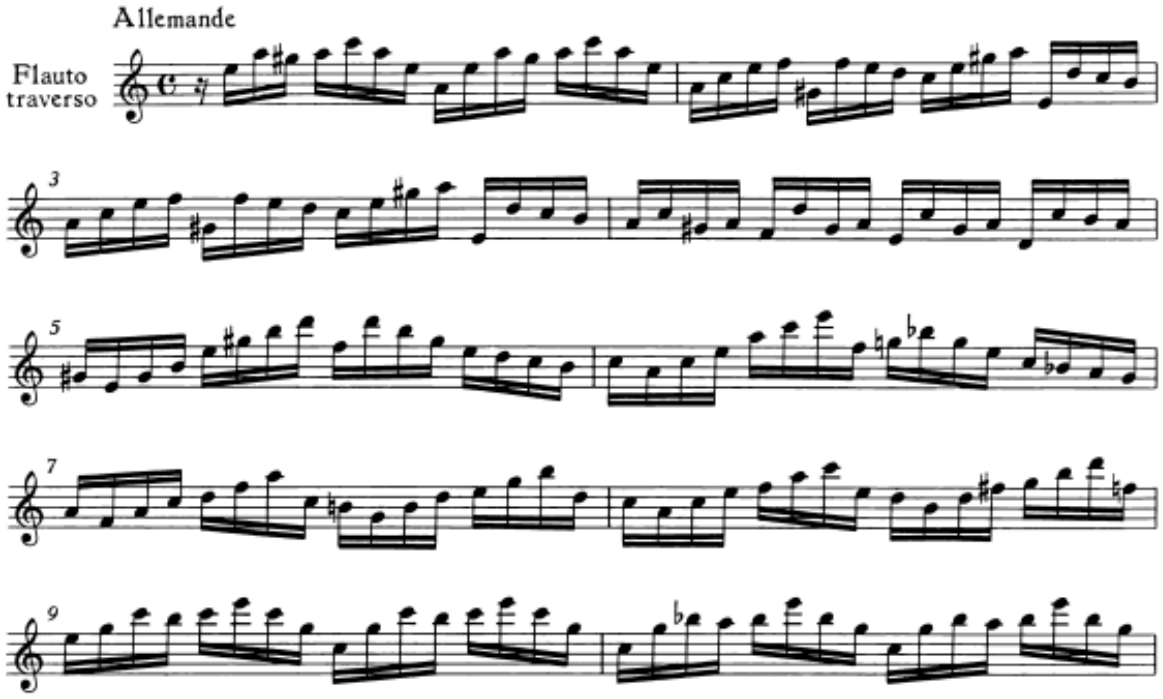

Figure 2. 1st Movement, “Allemande,” of Bach’s *Partita in A Minor for Solo Flute*

This piece was written for the flute available during Bach’s time, the Baroque flute. This movement is one that is featured on many orchestral audition lists and it highlights the flute player’s ability to articulate evenly and steadily. There are no metronome markings on this piece but most flutists of today take a moderate tempo when playing with the quarter note being equal to around 75 beats per minute. The Baroque flute did not have as many holes or keys as the metal flute of today so a flutist of that period would have had to use a lot of cross fingerings in order to play all of the notes written. This would have limited the player’s ability to play this movement

very fast. Flutists of today choose either to double tongue or single tongue this movement depending upon the tempo they decide to take.

The first syllables for flute articulation given by Quantz were *ti, tiri,* and *did'll.* These syllables are not valid in present time among modern day flute players who play on metal instruments. The Baroque syllables have since been replaced with the syllables *tu* and *ku.* The *tu* syllable is used separate from the *ku* syllable to single tongue passages, and both syllables are combined as *tu-ku* when double tonguing. This evolution of syllables shows that there was an evolution in flute articulation. The Baroque wooden flute eventually evolved into the more complex metal flute and this created a demand for new syllables. The timbre of a wooden flute is different from the timbre of a metal flute. Both instruments produce different vibrations of sound and different syllables are needed in order to tongue on each instrument.

Chapter Two. Flute Articulation in the 19th Century

Beethoven composed his Symphony No. 3 in E-Flat, "Eroica," in 1803. This work was composed about eighty years after Bach's *Partita in A Minor for Solo Flute*. The next musical excerpt, Figure 4, clearly illustrates the extreme contrast in the way music was written for the flute by Beethoven as opposed to that of Bach. In the Beethoven example, the articulations are different and the register in which the flute is being played is considerably higher. Baroque flutes were still being played during Beethoven's time, but another flute with slight variations in the design was invented. These variations in the instrument were necessary because the Baroque flute only had one key and required cross fingerings in order to play chromatically. Beethoven's grand symphonic orchestrations were mirrored by ongoing developments in wind instruments which included the flute.

Figure 3. Images of a Baroque flute (bottom) and Classical flutes

An evolution occurred in the development of the system of the flute during this time. The Classical flute had emerged in the mid-eighteenth century after the Baroque flute but it was a small scale evolution. The system of the Classical flute was very similar to the system of the

Baroque flute with the addition of a few more holes and a total of four keys. The addition of more holes and keys extended the range of the instrument and the loudness and tone of the sound. These small developments allowed players to play a little louder, faster, and without as many cross fingerings. In Beethoven's third symphony, the Classical flute would have been necessary for a flutist because of the speed at which the flute part was expected to be played, the more advanced flute articulations that were notated in the score, and the large size of the orchestra for which the symphony was written. The flute needed to sound louder in order to be heard against the other instruments in the orchestra. In this piece there are soloist qualities coming out of the flute, and the articulations that Beethoven wrote for the flute part would be best performed on a Classical flute because the instrument would have produced more sound.

Figure 4 is an excerpt of the first flute part taken from the fourth movement of this symphony. This flute passage features prominently on flute orchestral audition lists and it is one of the most important flute orchestral solos. This flute solo is also featured in Jeanne Baxtresser's album and flute book titled *Orchestral Excerpts for Flute.* Jeanne Baxtresser is an American flutist, teacher, and former principal flutist of the New York Philharmonic. She is responsible for a compilation of the most important orchestral flute excerpts that flutists encounter in auditions. Having performed all of them, she includes notes and instructions for each excerpt. In her annotations about the flute part in Beethoven's third symphony Baxtresser writes, "This is a solo of great contrasts. Emphasize the stylistic contrasts by playing the beginning of the solo with a lyrical, singing quality and the end of the solo with rhythmic clarity and technical brilliance. Beethoven's utilization of the full dynamic range and tessitura of the flute requires complete tonal control at every dynamic level and in every register. As was typical in 19th-century

orchestral parts, the continuation of staccato dots after bar 186 is implicit. As with all technical excerpts, be prepared to play at a tempo different from what is marked. Always prepare a range of tempi for auditions or orchestral performances. The marked tempo here is at the high end of those I have encountered in performance."[10] This book is considered a staple of flute pedagogy. Baxtresser gives the flutist instructions on how to perform this excerpt and she writes on the performance practice issues that arise when playing it.

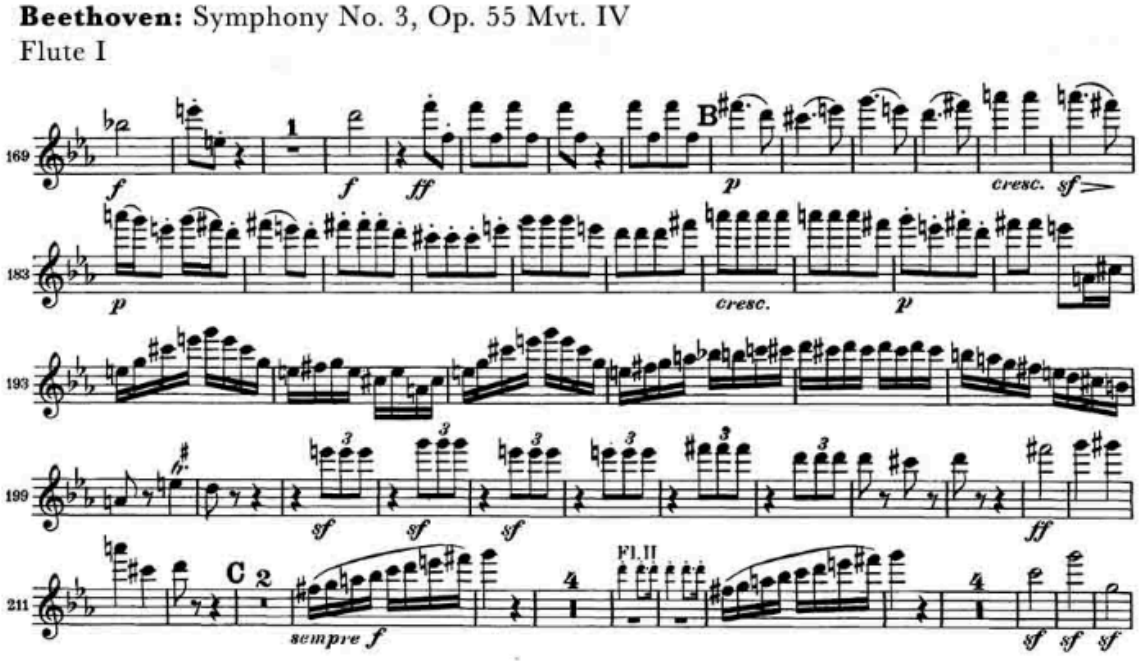

Figure 4. 1st Flute Part, 4th Movement of Beethoven's Symphony No. 3 in E-Flat

Baxtresser makes an important comment on Beethoven's use of a full dynamic range for the flute and she also makes a suggestion about the tempo in her notes. She also states that one needs tonal control when performing this excerpt. These comments provide an explanation of

[10] Jeanne Baxtresser and Martha Rearick, *Orchestral Excerpts for Flute with Piano Accompaniment* (Malvern: Theodore Presser Company, 1995), 16.

how Beethoven's writing for flute and the articulations he chooses are different from other composers. The flute articulation in this excerpt is extremely different from the flute articulation that was seen in the first musical example, *Partita in A Minor for Solo Flute.* In the Beethoven excerpt there are extreme dynamic contrasts, slurred articulations, staccato markings, sforzando accents, crescendos, and diminuendos. This symphony provides a major evolution in composing for the flute because in this work one would have needed a more advanced instrument to meet the demands of the music. In this evolution of composition for the flute there is an evolution in articulation for the flute. The flute was now being used as a sound idea in the orchestra. Beethoven was revolutionary in his compositions, especially for the flute because the types of articulation that are present in this piece are not what musicians had encountered in the Baroque. There are speeds in his third symphony that had never been done before and flute articulations at this speed are complex and demonstrate the technical mastery of the musician. Beethoven was the composer who first introduced metronome markings in his compositions and this provides a flutist with instructions on how fast or slow to play the articulations in this excerpt.

In Figure 4 the flute part is written in a higher register in Beethoven's third symphony than the flute part from Bach's Partita. The pairing of fortissimo dynamics with staccato accents enables the sound of the flute to stand out from the orchestra. Flute articulation in a higher register is accomplished with strong breath support, a refined embouchure, and a pointed, clear sound. The staccato markings instruct the player to play with space between the notes. This symphony is written for a more heavily scored and larger orchestra than was common in its time, thus the flute needed to be able to stand out. At rehearsal letter B there are slurred notes at a piano dynamic in the upper register. This is executed with strong breath support and a lightness

in the tongue. It is important for flute players always to have strong breath support when articulating whether or not they are playing with a soft or loud dynamic. Breathing is indispensable in flute articulation because it is the strength of the breath that creates clarity in the articulation. In the upper register it is important always to articulate with clarity of sound. In all flute articulation, but especially in a higher register, the sound ideal most sought after for flute players is a clarity in pitch.

In Figure 4, there are rests scattered throughout the flute solo. A rest in music is simply a musical pause meaning that the rests are specifically placed in this excerpt to provide emphasis on the articulations. The rests in the fourth movement of this flute solo are placed with intention and aid in the performance of each articulation. Each rest adds to the momentum of the articulation and helps this solo sound push forward. In measures 201 to 206 specifically, the quarter note rests are placed on the first beat of each measure followed by triplet eighth notes. The triplet eighth notes could be articulated with a triple tongue or a single tongue articulation using the three syllables *tu-ku-tu,* or three consecutive *tu* syllables. The rests in this phrase serve as pauses between the articulations to emphasize further the triplet eighth notes. There were no rests notated in *Partita in A Minor for Solo Flute,* only ongoing sixteenth notes. This provides an entirely different affect of the articulation compared to the affect of the articulation in Beethoven's third symphony.

An evolution in flute articulation took place during the middle of the 19th century when Theobald Boehm revolutionized the world of transverse flutes. He created metal flutes made out of silver and gold. The simple system of the Baroque and Classical flutes had evolved into a much more complex system of holes, keys, and an enlarged embouchure hole. These substantial

changes to the mechanism of the flute allowed for a clearer tone quality, a louder sound, and crisper articulation. Theobald Böehm completely redesigned the flute. The Boehm flute had a cylindrical bore with large tone holes in acoustically correct positions, open standing keys, and a sophisticated mechanism that functioned as an extension of the fingers. Figure 5 comes from page three of Theobald Boehm's book *The Flute and Flute-Playing.* This is an illustration of Boehm's old system of flutes compared to his new system.

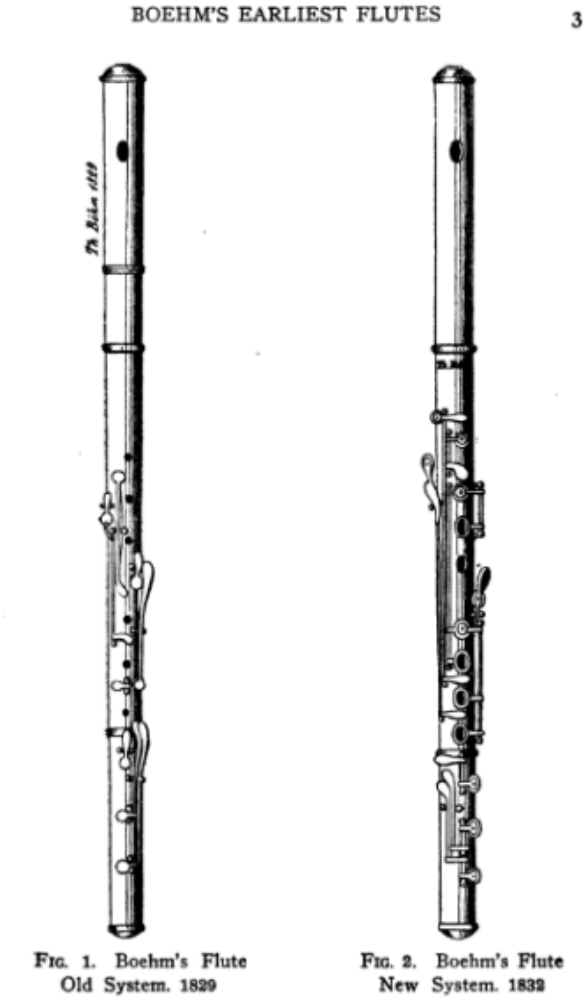

Figure 5. A picture of Boehm's old and new systems of flutes

The Baroque and Classical flutes were commonly made of wood, having only one key and six to eight tone holes that were small and easily covered by the fingertips. The Boehm flute was characterized by a system of sixteen or more keys and six rings for controlling the opening and closing of the tone holes. The tone holes of wooden flutes were carved into the body of the instrument and did not use keys to open and close the holes. Holes in the wooden flutes could only be covered by the player's fingers. Boehm designed the modern flute as a very accurate chromatic instrument favoring a pitch stability that could match equal temperament instruments. He did this by eliminating the possibility for large pitch variation as much as possible.

The embouchure is the way in which a musician that plays a wind instrument places the mouth to the mouthpiece of the instrument. Flutists use the embouchure in a completely different way from other wind players since air is blown across the mouthpiece rather than into it. Boehm created a major development in the embouchure hole in his new metal flutes. When air is blown across the flute, it is angled somewhat downward in order to vibrate against the inside of the embouchure hole which is located in the head joint of the flute. The size of the embouchure hole determines the timbre of sound, overall volume of the instrument, and clarity of the articulation.

Theobald Boehm understood the importance of creating the perfect embouchure. In chapter 2 of his book, *The Flute and Flute-Playing,* Boehm discusses his process of creating the embouchure. He writes, " Next, the size and form of the mouth-hole (embouchure) must be determined. The tone producing current of air must be blown against the sharp edge of the mouth-hole, at an angle which varies with the pitch of the tone. When the air stream strikes the edge of the hole it is broken, or rather divided, so that one part of it goes over or beyond the hole, while the greater part, especially with a good embouchure, produces tone and acts upon the

column of air enclosed by the tube, setting it into vibration."[11] Boehm makes the important point that it is the angle at which flute players blow air into the instrument that varies the pitch of the tone. The direction of the stream of air into the embouchure hole determines the timbre of sound of the note. Unlike other wind players who blow into their mouth piece to make a sound, flutists have to blow air and angle it in a specific direction. Boehm writes, "By a greater depression of the air stream towards the middle of the hole, the tone becomes deeper and more pungent, while a greater elevation makes the tone higher and more hollow."[12] When articulating notes in a higher register like Symphony No. 3 in E-Flat, a flutist is going to angle the air at a greater elevation for a higher and more hollow tone. On the contrary, articulating notes in a lower register in a piece such as *Partita in A Minor for Solo Flute,* the flutist is going to angle the air stream towards the middle of the embouchure hole for a deeper sound.

The use of the embouchure varies depending on the length of a note, pitch, volume, and type of articulation being executed. The embouchure is one of the most important considerations for flutists in articulation and tonguing. A flutist does not use the embouchure in the same way in all musical repertoire. Different types of flute articulation are executed with different uses of the embouchure. For example, a musical passage that is slurred is going to have more of a relaxed embouchure while a musical passage that consists of double-tongued sixteenth notes in the upper register is going to need an embouchure that is more focused and sharp.

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[11] Theobald Boehm, trans. Dayton Miller, *The Flute and Flute-Playing* (Mineola: Dover Publications, 2011), 9.

[12] Theobald Boehm, trans. Dayton Miller, *The Flute and Flute-Playing* (Mineola: Dover Publications, 2011), 10.

The most significant development to the embouchure hole of the modern metal flute compared to the wooden Baroque flute is the increase in size. The muscles in the mouth and tongue are used by flute players at all times when playing the instrument and using articulations. An increase in the size of the embouchure hole is going to cause the muscles in and around the mouth to work harder and the mouth is going to form a different kind of shape along the larger embouchure hole. A larger embouchure hole allowed the flute to produce a larger sound. Boehm explains this in his book and writes, "The opening between the lips through which the air stream passes is in the form of a slit, and a mouth-hole in shape like an elongated rectangle with rounded corners, presenting a long edge to the wide air stream, will allow more air to be effective than would a round or oval hole of equal size. For the same reason a larger mouth-hole will produce a louder tone than a smaller one, but this requires a greater strength in the muscles of the lip, because there is formed a hollow space under the lip which is unsupported. More than this it is difficult to keep the air current directed at the proper angle, upon which the intonation and the tone quality for the most part depend."[13] The rounded corners in the embouchure create a sound and articulation that does not sound forced and that does not put immense amount of strain on the muscles around the mouth. If the muscles in or around the mouth are strained, it will cause the articulations to sound weak and sporadic instead of strong and steady. One of the goals of articulation is not to sound out irregularly from the texture of the music.

An evolution in the development of the flute became necessary because of the major development of the 19th century symphony orchestra. Nineteenth-century composers were

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[13] Theobald Boehm, trans. Dayton Miller, *The Flute and Flute-Playing* (Mineola: Dover Publications, 2011), 9.

looking for a richer coloration, a more massive tutti of solid sound, and a greater variety of textures in melodic, harmonic, and rhythmic ideas. Varieties in melodic and rhythmic ideas were brought fourth by this developing technique in articulation. In order to accomplish this variety, composers brought more instruments into the orchestra. As the wind instruments became more evolved and had better quality, composers used them and required increasingly larger numbers of them. If there is not enough of an instrument, it will not be heard in the orchestra. The flute was expanded in the 19th century in terms of technique and this included an enlarged repertory of "tools of the trade" for the flute.

Chapter Three. The French Flute School and late-19th Century Articulation

The term "French Flute School" came about as a designation to encompass the way French flutists used vibrato, technique, tone, and articulation to reflect their emotional approach to music. Paul Taffanel (1844-1908) was a French flutist and professor at the Paris Conservatoire in the 19th century. He was credited with the foundation of the French Flute School. This term was also used to acknowledge the flute students of Taffanel at the Paris Conservatoire. These flute students included Philippe Gaubert (1879-1941) and Marcel Moyse (1889-1984). Moyse was a legendary French flutist and teacher. He compiled and edited one of the most important collections of flute music, *Flute Music by French Composers,* which includes Taffanel's piece *Andante pastoral et scherzettino pour flûte et piano.* Moyse had an important influence on flute and woodwind playing in the 20th century and he held positions at the Paris and Geneva Conservatories as a Professor of Flute from 1930 until World War II. He was one of the founders of the Marlboro Music Festival. Moyse also wrote several books of exercises and studies but his main focus was on tone and romantic musical expression. Taffanel and Gaubert collaborated together and wrote *17 grands exercises journaliers de mécanisme pour flûte* and *Méthode complète de flûte.* These are two of the most revered books of flute exercises and progressive studies and they came directly from the French Flute School.

Taffanel and Gaubert's *Méthode complète de flûte* was published in 1923. In this book, Taffanel and Gaubert provide instruction and notes on different aspects of flute performance. Regarding flute articulation they write, "As soon as the student starts to become familiar with the process of producing a sound, it is necessary to study 'tonguing,' or the manner of beginning a

note…When attacking a note the tongue should be used in the following way: To obtain a good, loud beginning the breath must be directed clearly and boldly towards the outer edge of the embouchure: firstly the breath is prevented from coming out by the end of the tongue, which is placed like a stop against the back of the top teeth. Secondly, the quantity of air thus compressed is freed by taking the tongue back quickly to its normal position."[14] Taffanel and Gaubert discuss the importance of first making a sound on the instrument before articulating. It is important for the flutist to be able to produce a sound on the instrument before the act of tonguing is accomplished successfully. The Boehm metal flutes provided a fuller and steadier sound than the Baroque wooden flute and this changed the way French flutists articulated in the 19th century. Flute articulations on the metal flute were louder and had a more round and full sound. The French Flute School placed an emphasis on tone quality because it adds to the overall emotional affect of the music. In *17 grands exercises journaliers de mécanisme pour flûte,* Taffanel and Gaubert also comment on the importance of tone quality. They write, "Purity of tone and intonation must be carefully noticed. As stated at the beginning of the Method these qualities are of the utmost importance."[15] The tone produced on the flute sets up the foundation for flute articulation and is a major consideration when tonguing on the instrument. The purpose of the *Méthode complète de flûte* is to provide a comprehensive analysis of the French considerations for successful flute practice in the 19th century.

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[14] Paul Taffanel and Philippe Gaubert, *Méthode complète de flûte* (Paris: Éditions Musicales Alphonse Leduc, 1923), 14.

[15]Paul Taffanel and Philippe Gaubert, *17 grands exercises journaliers de mécanisme pour flûte* (Paris: Éditions Musicales Alphonse Leduc, 1958).

In *Méthode complète de flûte,* Taffanel and Gaubert demonstrate the French Flute School's method of performance and authority on teaching this new wave of flute players. There was a concern for a new way of flute technique and flute performance and this was coming directly from the Paris Conservatoire. These new priorities were mirrored with changes in the instrument and therefore the techniques of playing the instrument was the result of the composers, especially the French flute composers of the 19th century, wanting more in the music. In M*éthode complète de flûte,* Taffanel and Gaubert's concluding remarks on articulation are, " At the beginning of this study the student will find great difficulty in co-ordinating a clear movement of the tongue with the bringing together of the lips leaving thus a free passage for the breath. It will therefore be necessary at first to place the lips in the required position to produce a note, and then to tongue making sure the lips do not move."[16] Taffanel and Gaubert's concluding comments on articulation provide further evidence of the pedagogical intention for flutists in the French way of articulation.

These lessons were given to flutists by professors of the Paris Conservatoire and this was the new standard in French flute articulation. It is important to make sure that the lips are set in the correct position in order to produce sound. If the embouchure is not set correctly the flutist will not be able to create that desired full sound which would ultimately affect a player's ability to articulate properly. When the embouchure is unsteady, the tone is unsteady and therefore provides an unbalanced foundation for the tongue. This section in the book provides the essential

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[16] Paul Taffanel and Philippe Gaubert, *Méthode complète de flûte* (Paris: Éditions Musicales Alphonse Leduc, 1923), 14.

steps for a flutist to take when articulating and this demonstrates a process and continuity as flute articulation becomes more evolved.

17 grands exercises journaliers de mécanisme pour flûte is indispensable to flute players and the development of the skill of flute articulation and tonguing. The title of this book translates to *17 Large Daily Finger Exercises for the Flute*. As mentioned in the title, this book is also used as an aid in fingering technique. These exercises are fast and meant to be played at increasingly faster tempos as a player's technique strengthens. These exercises help flutists practice fingering at rapid speeds and articulating simultaneously, which is a skill that was absolutely necessary in the flute literature of the 19th century. These exercises were designed for flutists to practice daily but not in their entirety since there are ten different articulations to incorporate and some of the exercises in this book expand across several pages. In the description at the beginning of the book the authors write, "Regular and thoughtful study of these exercises is necessary for all flutists. They contain all the difficulties of the instrument…Each exercise is headed with a list of different articulations. It would be impossible to practise all these exercises in all the articulations every day. The student will vary the articulations according to the amount of time at his disposal and according to the number of difficulties which have to be overcome in the use of each."[17] This book is a standard in today's flute repertoire for practicing articulation. Modern flutists typically choose one exercise from this book per day and incorporate it into daily practice in order to advance skills in finger speed and tonguing.

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[17] Paul Taffanel and Philippe Gaubert, *17 grands exercises journaliers de mécanisme pour flûte* (Paris: Éditions Musicales Alphonse Leduc, 1958).

The exercises in this book are notated without any specific articulation. At the top of each page, the authors include ten different ways of articulation with which to play each exercise. The ideal way for a flutist to play the exercises in this book is for the player to play each exercise and alternate between each of the ten articulations. The instructions written at the beginning of each new exercise read, "To be practised with each of the following ten articulations."[18] Figure 6 shows an example of one exercise and the ten different types of articulation to use when practicing the single exercise.

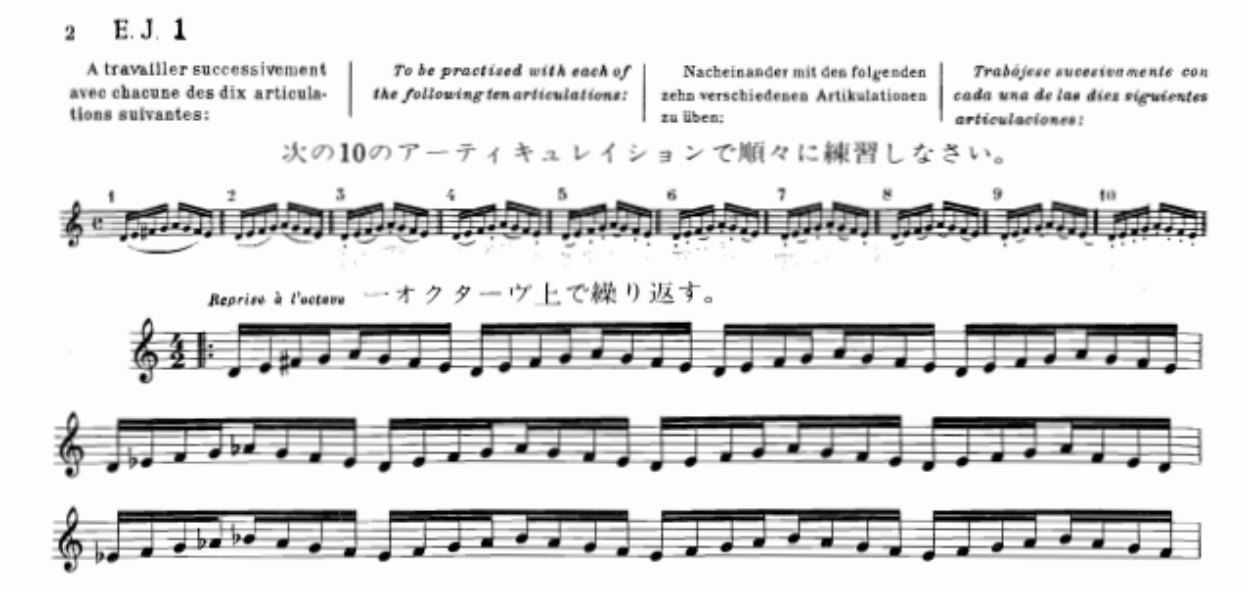

Figure 6. Page 2 of *17 grands exercises journaliers de mécanisme pour flûte*

There are no dynamics notated in any of the exercises throughout this book, but the authors' comments at the beginning of this book state how these exercises are intended to be practiced with different levels of dynamics: "These exercises will be practised alternately in

[18] Paul Taffanel and Philippe Gaubert, *17 grands exercises journaliers de mécanisme pour flûte* (Paris: Éditions Musicales Alphonse Leduc, 1958).

different degrees of intensity *mf* (natural tone) at first, then: *f*; *p*; *ff*; *pp*; etc."[19] This brings into conversation the importance of practicing flute articulation at different dynamic levels. There are different approaches to flute articulations depending on the intensity of dynamics. With Boehm flutes becoming the new standard in flute repertoire, there were different considerations in flute articulations. The metal flutes produced a much louder sound and the addition of keys and tone holes provided a much larger range for the instrument. This acknowledgement of how critical it is to practice articulations with different dynamic ranges was necessary.

Throughout this book there are different time signatures and note lengths in each exercise, but there are no metronome markings present in this book. At the beginning of the book the authors comment on the way the different tempos are to be executed. They write, "Practise slowly at first with a metronome, not only to indicate the tempo, but to keep a steady beat throughout the exercise. Do not pass to a quicker tempo until the exercise has been played faultlessly."[20] The practice of playing at a slower tempo and only progressing to a quicker tempo when there are no flaws in the practicing is common for musicians. This is because for a musician it is detrimental to the final performance to practice with bad habits. In order to improve on a skill such as articulation, the practice has to be nearly perfect in order to increase tempo.

Taffanel would have practiced on the Boehm flute during his studies at the Paris Conservatoire in the mid-19th century. The Boehm flute had become the standard at the Paris

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[19] Paul Taffanel and Philippe Gaubert, *17 grands exercises journaliers de mécanisme pour flûte* (Paris: Éditions Musicales Alphonse Leduc, 1958).

[20] Paul Taffanel and Philippe Gaubert, *17 grands exercises journaliers de mécanisme pour flûte* (Paris: Éditions Musicales Alphonse Leduc, 1958).

Conservatoire during this time period and by then French flutists were playing on the Boehm metal flutes. Paul Taffanel set a standard for flute playing in the mid-19th century that flutists aimed to emulate in regard to tone, a fullness of sound, and a lightness of sound. In French flute music, the sound ideal is light, fast, and full. These qualities are also what French flutists strived for in their articulations.

Playing musical passages with a lightness and full and steady tone could be accomplished on the metal flute. The Boehm flute was indispensable to flutists in the 19th century because an advanced flute system was needed in order to play the flute repertoire of this time. There was an emphasis placed on tone in the French flute school that was a direct result of an emotional expression that the flutists of that time were trying to embody in the music. This emphasis on tone translated into an emphasis of tone quality when articulating on the flute. These priorities coming out of the French Flute School and French flute repertoire were completely different from the priorities of previous musical eras.

In the Paris Conservatoire, musicians participated in annual end of the year public examinations called "concours." In these competitions, students would perform pieces for a jury of their professors and the jury would determine which students would graduate from the Paris Conservatoire. *Andante pastoral et scherzettino pour flûte et piano* was composed by Taffanel in 1907 as a contest piece for an end of the year flute concours at the Paris Conservatoire. The flute concours served as an opportunity for composers to present new music. This piece was dedicated to Philippe Gaubert. This work is divided into two movements. The first is slow and the second is fast. The lyricism and musical expression in this piece are accomplished with successful tonguing and flute articulation as well as proper breath support.

In this first movement, Taffanel incorporates dotted slur articulations. This is significant because the way this articulation is executed by flutists is completely different from the way other instrumentalists interpret it. This articulation requires the lightest touch of the tongue. The player creates a smooth pulse and subtle breaks between notes. This is significant because it requires the player to play both connected and detached at the same time. This is legato tonguing. The practice of legato tonguing by flute players comes from the French Flute School. This type of articulation was not common in flute repertoire prior to the 19th century. In string instruments, this bowing technique is called portato. An articulated legato is another name for portato. Figure 7 shows the dotted slur articulation in measure six of the first movement of *Andante pastoral et scherzettino pour flûte et piano.* The image shows an evolution in flute articulation of the late 19th and early 20th centuries.

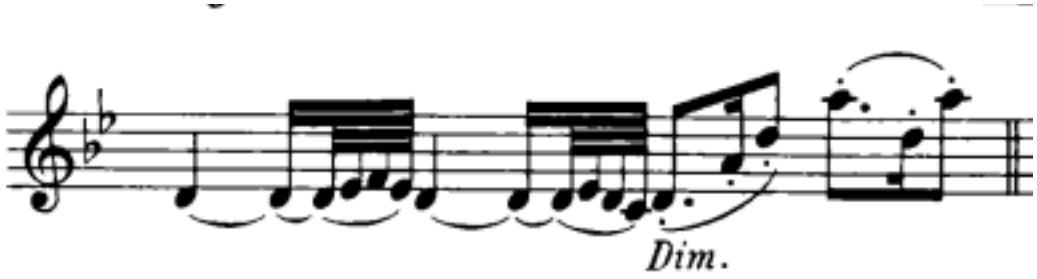

Figure 7. Measure 6 of *Andante pastoral et scherzettino pour flûte et piano*

Scattered throughout both movements of *Andante pastoral et scherzettino pour flûte et piano* are at least one example of each of the ten articulations from Taffanel and Gaubert's *17 grands exercises journaliers de mécanisme pour flûte.* For this piece to have been on the exit exam for the flute concours shows how indispensable the teachings of Taffanel and Gaubert were to the French Flute School. This piece is essentially a complete study of Taffanel and Gaubert's

17 grands exercises journaliers de mécanisme pour flûte as it relates to French flute music. This piece shows evidence of what the flute students of the French Flute School studied during their time at the Paris Conservatoire. For Paul Taffanel to compose this piece for the end of the year examinations shows that he expected the flutists at the Paris Conservatoire to be able to play all of these articulations. The articulations in this piece are complex, and the technical difficulties therein force a clear distinction between flutists who are more accomplished in articulation and those that are not.

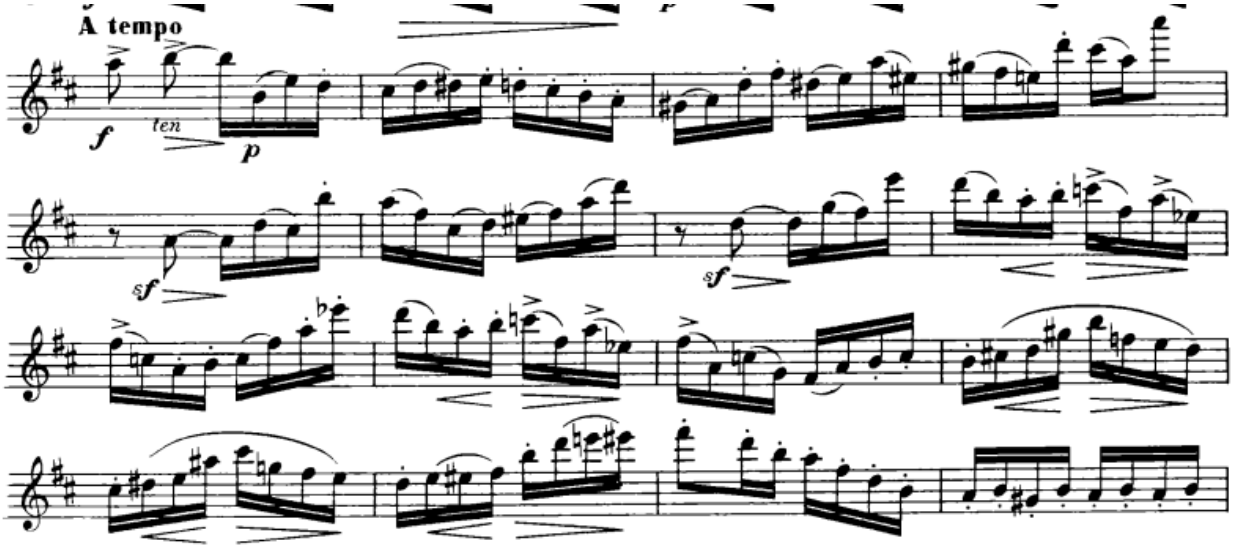

Figure 8. Movement 2 of *Andante pastoral et scherzettino pour flûte et piano*

From the French flute school modern day flutists retain the important emotional aspects of French flute performance. The desired tone quality and style of articulation are similar to that of the French Flute School. Flutists today practice with the same books as did the flutists of the Paris Conservatoire. Taffanel and Gaubert have a major influence on flute players in the modern day just as they did at the Paris Conservatoire. Full, rich, and emotionally expressive playing that was taught at the Paris Conservatoire is what is taught to flutists in the professional world.

Taffanel and Gaubert in their flute practice books emphasized the importance of articulation and expressive playing and these are the same books and lessons that flutists study today.

Chapter Four. Ian Clarke and Articulation: Moving Forward into the 21st Century

Ian Clarke is a modern day British flutist and composer. His solo flute piece *The Great Train Race* (1993) pushes the boundaries of flute articulation and the qualities of sound that one can produce on the instrument. The subtitle of this piece is *The Flute As You Don't Usually Hear It!* This imaginative work traces within it the complete evolution of flute articulation and the sound ideal that composers were exploring on the flute as music moved forward into the 21st century. This piece shows off the extended techniques capable on the flute and provides the listener with sounds that are not heard in flute repertoire of the past. As the title of this work suggests, this showpiece is about a train and the flute is used to depict the sounds of a train as it is moving. The extended techniques within this piece include the use of a residual and breathy tone, explosive harmonics, flutter-tonguing, singing and playing, and lip bending.

Ian Clarke writes music for the flute with articulations not heard in flute literature of the past. He is ushering in a new perspective on flute sound capability and creating new ways for flute articulations to be perceived by audiences. His music is experimental and pushes the boundaries of flute articulation. His incorporation of extended techniques in his music was not seen in flute repertoire a century earlier. Clarke helped initiate a new era of flute literature and ushered it into the 21st century. This new style of experimentalism in flute playing has come to be accepted by flutists of today. The extended techniques present in *The Great Train Race* are now a standard for modern flutists in the professional world. In decades prior to the late 20th century, extended techniques were outside standard of flute technique.

Many modern day flute players incorporate extended techniques into daily practice routines and a great deal of 20th and 21st century flute music is written with extended techniques in articulation. The extended techniques used in *The Great Train Race* are complex and intended for an advanced performer. These articulations require a development of strength in the muscles in the embouchure. A beginning flutist is not going to have the developed muscle strength in and around the mouth to perform this piece as intended by the composer. Extended techniques in articulation can be exhausting and the embouchure muscles need to be developed over time and stretched in order to perform a piece of this caliber.

Extended techniques in flute articulation help to develop a flutist's overall technique. A flexible embouchure is necessary in flute playing and these extended techniques help to increase muscle flexibility in the embouchure. For example, there are directions to flutter-tongue in *The Great Train Race.* This extended technique is accomplished by fluttering the tongue while simultaneously playing a note. The flutist should feel a subtle vibration in the back of the throat. Flutter-tonguing has benefits in technique that go beyond the unique effect in the music. The practice of flutter-tonguing opens up the throat and relaxes the tongue. Flute players are constantly trying to open up the throat while playing the instrument and make sure the throat stays open so the sound is not closed off. An open throat sets the foundation for a warm, full, and rich tone quality. Notes will sound louder and project further depending on how open a flutist's throat is while playing. Flutter-tonguing also relaxes the tongue and the muscles in and around the embouchure. A relaxed tongue is essential for flute articulation because if the tongue is too stiff the articulation might drag and sound heavy. Flutter-tonguing is a technique that many modern day flutists practice daily and use as an aid in warming up the embouchure. Flutists will

often flutter-tongue a phrase of music as a practice technique in order to open up the throat to play the phrase louder and stronger. The end result of this practice technique is that when the flutist plays the same passage again without flutter-tonguing it, the music will sound more open and project out more. This skill of flutter-tonguing is more than a showy sound effect. Figure 9 provides an example of flutter-tonguing found in Ian Clarke's *The Great Train Race.*

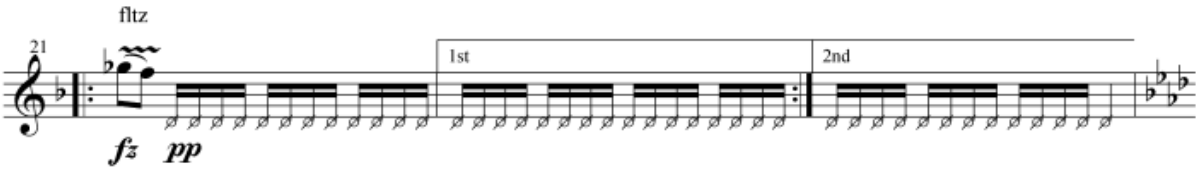

Figure 9. Measures 21-23 in *The Great Train Race*

At the beginning of *The Great Train Race* there are sixteenth notes written at a pianissimo dynamic. The player is instructed to play these notes with a residual and breathy tone. The flutist is also instructed to make an "R R R R" to give the affect of a forward moving momentum as if a train were starting up. There are accent markings, including szforzando accents in this section as well. The tempo is marked *Presto* and a quarter note equals 184 beats per minute. These notes would naturally be articulated by double tonguing. In the note to the performer right below the title of the piece Clarke writes, "Imagine this first page is a graphic score - think 'Steam Train!' The shape, rhythm, accents & tonal centre are important whereas the precise graduation of harmonics and number of bars are guides. Refer to performance notes throughout."[21] These compositional instructions are not something flutists encountered in the

[21] Ian Clarke, *The Great Train Race* (London: Just Flutes Edition, 1993).

past. Music with this many instructions with the exception of stage directions in a play or opera was not common prior to the 20th century. There is a specific mood that Clarke is trying to set for the performance. There are a lot of instructions in the first few bars of this piece for how the flutist is supposed to engage with the articulations as written. There is no room for misinterpretation as to how the flute articulation is supposed to sound. Flutists are no longer left to decide on their own how to play flute articulations in music of the 20th and 21st centuries. These instructions are very specific with much for the player to comprehend. It is the responsibility of the performer to understand how the instrument works and know thoroughly all of the various ways to produce certain musical affects with the instrument. Regular practice of extended techniques increases a flutist's knowledge of how the instrument works and all of the nuances that are present in the system of the flute. 20th and 21st century flute articulation set new standards for flute articulation that professional flutists are now expected to be able to accomplish.

Figure 10 shows the first measure of Clarke's piece with all the instructions given by the composer to the flutist. Double tonguing at a pianissimo dynamic is not new for flutists moving forward into the 21st century. However, this articulation with directions to make a sound that mimics a machine is. This first measure alone shows a complete evolution of flute articulation from the Baroque to the present. Flutists are given an enormous amount of direction and guidance in this music. There is a clear and obvious sound and effect that this composer is looking for and although these flute articulations are more complex than those of the past, the instructions for articulation are clearly written out for the performer without a need for

interpretation. This demonstrates the intention of the composer and desire for a specific sound quality from the flute.

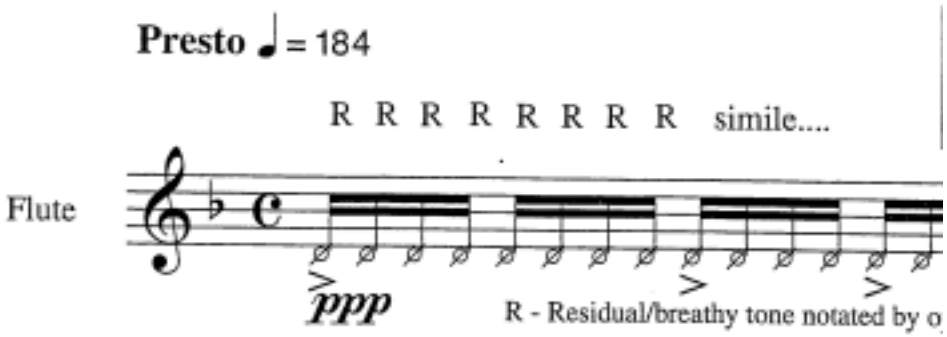

Figure 10. Measure 1 of *The Great Train Race*

Music moves forward through time and music is always modern. Every period of music is a modern time for that period. Modernisms in flute articulation of the late 20th century were already present in compositions throughout the 19th century and were expanded upon and used differently. All of the techniques in 20th century articulation had antecedents in the 19th century. The first quarter of the 20th century is the culmination of thought of the previous one hundred years. There are so many different ways of expressing the composer's thoughts and ideas in the 20th century and composers were developing their own ways of expression through flute articulation. Flute articulation was in transition at the turn of the century and in the works of composers of that time can be seen clearly the steady changes in the role of the flute as a sought after sound ideal during the second half of the 20th century.

The evolution of flute articulation and compositional thought in *The Great Train Race* is at the cusp of what is familiar and what is new. The articulations in Clarke's piece might be seen as experimental, but Clarke is not experimenting in this piece. He was intentional with every flute articulation he wrote because the flute can handle all of these compositional demands and articulations. This style of articulation is not what flutists normally encounter in everyday repertoire, but it has become a standard for modern flutists in the professional world. There is an authority that a flutist must have on the instrument and a professional flutist is expected to have a full understanding of the system of the flute. As music moves forward through time, so does the way composers approach writing for the flute. Composers wanted more out of the instruments and this is reflected in composition. The flute was being used as a sound ideal in the orchestra as well as in solo repertoire because as the instrument evolved so did the way in which music could be written for it. This modern style of flute articulation is present in *The Great Train Race* because as the instrument developed so did the music.

Conclusion

Commonly known as tonguing, articulation is the essence of flute playing. The syllables that flute players use to tongue on the instrument are different from any other wind instrument. Articulation has come to include all extended techniques in flute articulation. The placement of the tongue is the most important part of flute playing because if it is not used, air is just moving through the body of the instrument. It is the manipulation of air with the flute that distinguishes it from all other wind instruments. It is hard to visualize how the tongue is used while playing the flute and this aspect of flute performance can make it difficult to understand fully how important the tongue is in flute playing and flute articulation.

The evolution of flute articulation from the Baroque to the 21st century can be traced through the indispensable flute repertoire and its composers from each era. The technique of flute articulation is not static in time. It is constantly evolving and being expanded. As the flute evolved so did the practice of flute articulation. Composers used the flute as a specific sound ideal, and as the instrument became more sophisticated, the ambiguity of flute articulation was replaced by a highly managed approach by composers. The entire nature of flute performance became more evolved and sophisticated. In the Baroque period, the performer had the authority to choose how to articulate phrases in music. Through succeeding musical periods, composers provided the instrumentalists with more direction for flute articulation and did not leave a choice of how to articulate. Articulation was revolutionized and used by composers throughout history from the Baroque to the present because it is the indispensable quality of flute playing.

Flute articulation affects variety in musical works. The addition of articulations such as slurs, trills, double tonguing, and legato tonguing change the effect of the music. The listener's interest is enlivened by articulation and the resultant changes to the music. Flute articulation gives a new sound idea and character to the music. In the Baroque, it was common practice for flutists to repeat a movement of a musical work with changes in dynamics, tempo, or articulation. This is not a common practice of today. There is still importance on creating a mood in music and invoking feelings in the listeners with articulation.

Flute articulation is how the flutists make use of air on the instrument. All instruments make use of air in different ways. The flute is different than all other woodwind instruments because it does not use a reed. On the flute, the musician blows across an open hole to cause the column of air within the instrument to vibrate. The player has to use a controlled force of air in order to create these vibrations throughout the instrument. The vibrations start in the head joint of the flute and continue throughout the body of the instrument. There are different physical techniques needed by a player to control the air. These physical techniques produce a variety of musical effects in the sound of the flute and this involves articulation. As the instrument evolves so do the different types of articulation because the vibrations made by a player differ depending on what kind of flute the musician is using. The Theobald Boehm silver and gold metal flutes are not the type of flute Johann Sebastian Bach had and for which he wrote during his time. The music that composers were writing created a demand for a more sophisticated instrument. The music demanded these changes to the flute.

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