

THE MISSING SAXOPHONE:

Why the Saxophone Is Not a Permanent Member of the Orchestra

by

Mathew C. Ferraro

Submitted to

The Dana School of Music

in Partial Fulfillment of the Requirements

for the Degree of

Master of Music

in

History and Literature

YOUNGSTOWN STATE UNIVERSITY

May 2012

The Missing Saxophone

Mathew C. Ferraro

I hereby release this thesis to the public. I understand that this thesis will be made available from the OhioLINK ETD Center and the Maag Library Circulation Desk for public access. I also authorize the University or other individuals to make copies of this thesis as needed for scholarly research.

Signature:

Mathew C. Ferraro, Student Date

Approvals:

Ewelina Boczkowska, Thesis Advisor Date

Kent Engelhardt, Committee Member Date

Stephen L. Gage, Committee Member Date

Randall Goldberg, Committee Member Date

James C. Umble, Committee Member Date

Peter J. Kasvinsky, Dean of School of Graduate Studies Date

Abstract

From the time Adolphe Sax took out his first patent in 1846, the saxophone has found its way into nearly every style of music with one notable exception: the orchestra. Composers of serious orchestral music have not only disregarded the saxophone but have actually developed an aversion to the instrument, despite the fact that it was created at a time when the orchestra was expanding at its most rapid pace. This thesis is intended to identify historical reasons why the saxophone never became a permanent member of the orchestra or acquired a reputation as a serious classical instrument in the twentieth century.

Dedicated to
Isabella, Olivia & Sophia

And to my father
Michael C. Ferraro

CONTENTS

Abstract.....	iii
Dedication.....	iv
Figures.....	vi
Preface.....	vii
INTRODUCTION	1
CHAPTER I.	
CONSPIRACY, SABOTAGE, AND THE EARLY HISTORY OF THE SAXOPHONE	2
Adolphe Sax.....	2
The Early Saxophone.....	4
The Early Success of the Saxophone.....	8
Creating Enemies	18
Opposition Begins.....	21
Early Repertoire	27
Early Saxophone Instruction.....	30
CHAPTER II.	
THE SAXOPHONE’S PATH INTO THE TWENTIETH CENTURY	40
Military Bands and Wind Bands.....	41
Vaudeville and Its Negative Connotations	45
Conclusion	54
Epilogue	56
Bibliography	58

FIGURES

1.1	Sketch's from Sax's Original Patent.....	7
1.2	Early bass saxophones	7
1.3	Ophicleide player	10
1.4	Sax's Factory at no. 10 rue neuve Saint-Georges in Paris, 1848.....	13
1.5	Concert held at Sax's factory in Paris.....	13
1.6	Adolphe Sax (ca. 1844).....	18
1.7	Score of Georges Bizet's <i>L'Arlésienne</i>	37
1.8	Alto saxophone solo in the score of <i>L'Arlésienne</i>	38
1.9	Score of Richard Strauss's <i>Symphonia Domestica</i>	39
2.1	Saxophone section of Patrick Gilmore's band (1889).....	44
2.2	The Six Brown Brothers (ca. 1916).....	48

PREFACE

Although my career as a saxophone player has been extensive, I can honestly say that until I began studying the history of orchestral saxophone (an oxymoron if there ever was one), I had never played the alto solo from Bizet's *L'Arlésienne*, suite no.1, nor the alto solo from Ravel's arrangement of Mussorgsky's *Pictures at an Exhibition*. In fact, I have never had the opportunity to perform with an orchestra at all. My only performance of the famous solo in Ravel's *Bolero* came when I played in the pit orchestra for the "Radio City Rockettes," the high-kicking female dance troupe from New York.

The limited saxophone repertoire precluded me from performing symphonic literature of the nineteenth century, one of the most prolific periods in the history of orchestral composition. The standard saxophone repertoire consists mainly of twentieth-century compositions, and transcriptions of earlier bowed string works. Also, the saxophone is the only applied wind instrument that is not a permanent member of the orchestra. This relegates the saxophone to an unusual class of instrument, both worthy of being studied at the highest levels but lacking particular qualities that render it unfit for the orchestra.

In the 1990s, I began playing for a variety of touring Broadway shows at Cleveland's Playhouse Square. During the run of these shows, I often stayed with my good friend and fellow saxophonist, Keith Turner. Keith has an extensive collection of recordings and we have always enjoyed listening to and analyzing music together. We always listened to a wide variety of styles, but favored music that included the saxophone. One evening after I had performed a show, we sat down at his apartment for one of our infamous listening sessions. Keith put on an orchestral piece, something he

didn't often do (probably because they rarely contain the saxophone). I will never forget that moment. The music began with strings in a kind of rocking, wheezing ostinato. Then came the cello, playing a beautiful, haunting melody. I liked it immediately. The opening section included the violin, celeste, horn, and bassoon joining the cello on this beautiful melody. Then, out of nowhere, appeared the sound of what seemed to be the tenor saxophone. My eyebrows rose instantly and I flashed a look at Keith, who was smiling and apparently enjoying the fact that I recognized our beloved saxophone. If not listening carefully, it is not obvious that the instrument is a saxophone. I have since played this excerpt for many musicians, including saxophonists, who have failed to correctly identify the instrument. In this instance it was being played with no vibrato by a clarinetist, which is common as you shall see, and was blended, alternately and in combination with the bassoon and cello so well that it was not obvious that it was a saxophone. The piece turned out to be the Romance movement of Prokofiev's *Lieutenant Kijé* (1934), recorded by the Cleveland Orchestra under the direction of George Szell.

The story of how Keith became aware of this work is remarkable in itself. One of our favorite albums of the 1980s was Sting's *The Dream of the Blue Turtles* that contained the song "Russians," an anti-nuclear, Cold War protest song. In the liner notes, which Keith was notorious for reading in their entirety, Sting acknowledged that he had borrowed the melody from Prokofiev. This, of course, led to a thorough listening of the piece and the identification of the tenor saxophone.

Fast-forward to April of 2006, on my birthday. A package arrived at my door that contained a book by Michael Segell entitled *The Devils Horn: the Story of the Saxophone from Noisy Novelty to King of Cool*. Inside the cover read the inscription, "I hope you

enjoy this as much as I did-Keith.” I found the book fascinating. It included various sections about Adolphe Sax, the history of the saxophone, and its use, or lack thereof, in orchestral music. The book gave *some* insight into why the saxophone was not included in orchestral music of the nineteenth century and why the standard saxophone repertoire begins around 1930, approximately ninety years after the instrument was invented. It inspired the question of this thesis. Why was the saxophone not a permanent member of the modern orchestra?

INTRODUCTION

Since Adolphe Sax first took out a patent for his saxophone in 1846, the saxophone has found its way into nearly every genre of music with one glaring exception: orchestral music. This omission seems curious in that the saxophone has proven itself to be an extremely versatile instrument and has maintained a standard position in a variety of ensembles including concert bands and wind ensembles. Why, then, has this instrument struggled, and ultimately failed, to enter the orchestral community?

Chapter 1 will address the success of Adolphe Sax's competitors to undermine the saxophone and influence both musicians and composers to reject it.

Chapter 2 will discuss how the saxophone's use in popular music genres influenced the perception of the instrument by orchestral composers and musicians.

These factors helped to shape the belief that the saxophone is not an appropriate instrument for orchestral playing. Whether intentional, as was the case during the instrument's introduction, or consequential due to its popularity in mainstream music, the issues discussed in this thesis have left the saxophone with a limited repertoire that begins nearly ninety years after its invention.

CHAPTER I

CONSPIRACY, SABOTAGE, AND THE EARLY HISTORY OF THE SAXOPHONE

Adolphe Sax

The history of the early rise and fall of the saxophone is intertwined with the personality of its inventor, Adolphe Sax (1814-1894). Adolphe Sax was born in Dinant, Belgium, into a family of instrument makers and began his instruction under the guidance of his father Charles, *Facteur du Roi à Brussels* (Musical Instrument Maker of the King at Brussels).¹ The young Sax quickly learned the shape and structure of all brass and woodwind instruments and by the age of six was able to drill the body of a clarinet and twirl the cup of a horn.² His father made instruments for the purpose of retail sales, entrusting the experimental aspects of the family business to Adolphe.³ This arrangement allowed for the freedom to develop the future inventor's creative talents.

In addition to the instruction he received from his father, young Adolphe received formal music instruction from professors at the Brussels Conservatory where he studied voice, flute, and clarinet. Sax could have pursued a career as a clarinetist but seemed to be preoccupied with overcoming the acoustical shortcomings of the instrument.⁴ Still, he would later take advantage of his musical skills to challenge rival musicians and instrument makers to musical duels to prove the superiority of his own designs.

¹ Robert Howe, "The Invention and Early Development of the Saxophone," *Journal of the American Musical Instrument Society* 29 (2003): 98.

² Léon Kochnitzky, *Adolphe Sax and his Saxophone* (Chicago: North American Saxophone Alliance, 1985), 6.

³ Wally Horwood, *Adolphe Sax, 1814-1894: His Life and Legacy* (England: Egon Publishers Ltd., 1983), 20.

⁴ Thomas Liley, "Invention and Development," in *The Cambridge Companion to the Saxophone*, ed. Richard Ingham (Cambridge: Cambridge University Press, 1998), 2.

Though a skilled musician, Sax made a name for himself as an instrument maker. In 1830, at the age of sixteen, he presented a clarinet and two flutes made of ivory at the Brussels Industrial Exposition, where the judges considered them to be exquisite specimens.⁵ Sax also began to work extensively on the bass clarinet, reworking it completely and patenting his improvements in 1838 and it is his version of the bass clarinet, with minor alterations, that is still played today.⁶

A year later in 1839, Sax attended the Paris Exposition where he presented his new bass clarinet to Mr. Decosta, the solo clarinetist of the *Academie royale de musique*.⁷ Sax performed the bass clarinet solo from Giacomo Meyerbeer's *Le Huguenots* and persuaded Decosta that his instrument was superior to the one Decosta was playing.⁸ This was the first example of Sax proving the supremacy of his own design by comparing it to another instrument. During his stay in Paris, Sax was able to meet many well-known composers including Hector Berlioz, Fromental Halévy, Jean-George Kastner and Meyerbeer.⁹ These contacts would be important in shaping Sax's career when he later established his shop in Paris in 1842.¹⁰

The outcome at the Brussels Exposition of 1841 influenced Sax's decision to permanently relocate to Paris. After the examining committee recommended Sax for the

⁵ Michael Segell, *The Devil's Horn: The Story of the Saxophone, From Noisy Novelty to King of Cool* (New York: Farrar, Straus and Giroux, 2005), 12.

⁶ William McBride, "The Early Saxophone in Patents 1838-1850 Compared," *The Galpin Society Journal* 35 (March 1982): 113. The early success with the bass clarinet was important to Sax's career, earning him international attention. The celebrated conductor François Antoine Habeneck, for instance, heard Sax perform on his improved bass clarinet in 1838 and insisted that a Sax bass clarinet replace the existing one in his Opera orchestra in Paris. Horwood, *Adolphe Sax*, 23.

⁷ Frederick Hemke, "The Early History of the Saxophone" (DMA diss., University of Wisconsin, 1975), 14.

⁸ Liley, 2-3.

⁹ There seemed to be an immediate affinity between Berlioz and Sax and Berlioz quickly became an outspoken advocate of Sax and his work. Several sources comment on the personality traits the two shared. "Both were enthusiastic, romantic, combatively protective of their own work, conceited, and suspicious of their rivals' intentions." Howe, "Invention and Early Development," 107.

¹⁰ Liley, 3.

Premier Gold Medal, the exhibitions highest award, the Central Jury rejected his submission stating that if he was awarded the first prize that year there would be nothing better to offer him the following year. Sax, in a defiant manner that would become typical to him stated, “If I am too young for the gold, then I am too old for the silver.”¹¹

The Early Saxophone

By 1840 Sax had completely reworked the bass clarinet, created a new fingering system on the soprano clarinet, and invented the contrabass clarinet.¹² Sax had also begun to work on an entirely new instrument: the saxophone. It is unclear precisely when Sax devised the saxophone, but it is possible that he manufactured a prototype bass saxophone after finishing his bass clarinet in 1838. The Belgian journalist Jean Baptiste Jobard, who praised the instrument, first documented the saxophone at the 1839 Brussels Exhibition.

“Mr. Sax junior has just invented a contrabass clarinet in brass. After thunder, it is by far the strongest bass that exists. Its round, full, and vibrant sounds entirely fill the ear and will satisfy the musical appetite of the greatest glutton; it is no longer a brook, but a river of harmony ready to overflow. The saxophone is the Niagara of sound.”¹³

¹¹ Disappointed by the jury’s decision, Sax began preparations for a permanent move to Paris. Sax later stated, in a publication of 1858, that the French Ambassador to Belgium, who was the brother of Lieutenant General de Rumigny, approached him with an offer in Paris. Sax had already considered offers from St. Petersburg and London, but following a trip to Berlin to study German instrument manufacturing, decided to pursue his career in Paris. Hemke, “Early History,” 15.

¹² Ibid.

¹³ Jean Baptiste Ambroise Marcellin Jobard, *Industrie française: Rapports sur l’exposition de 1839* (Brussels: Chez l’auteur, 1841-42), 2:154, translated in Albert Rice, “Making and Improving the Nineteenth-Century Saxophone,” *Journal of the American Musical Instrument Society* 35 (2009): 83.

Although Jobard's initial reference is to a "contrabass clarinet in brass," it was probably a bass saxophone. His later designation is perhaps the first use of the name "saxophone," or at least a very early one.¹⁴

Sax's initial goal was to improve the sound and blend of the low woodwinds. He believed that the lower voices of the orchestra in use at the time left something to be desired, which must have inspired his reworking of the bass clarinet. Sax felt the bassoon in particular lacked the qualities necessary to bridge the timbres of the brass and the woodwinds and could only be used to fill in the accompaniment or to produce special effects.¹⁵ The ophicleide, a brass instrument with the key work of a woodwind, was also being used in the orchestra, mostly to reinforce the trombones.¹⁶ Sax asserted that it made a sound of a most disagreeable nature to the extent that it was banned from being played indoors and was unsatisfactory because its sound was not dynamically flexible.¹⁷

There are many theories about the specific origins of the saxophone, all of which can be traced to one of three other instruments: the clarinet, the bass clarinet, and the ophicleide. One theory stipulates that Sax was searching for a clarinet that could play octaves. Another is that he simply substituted a single reed mouthpiece for the cup mouthpiece of the ophicleide.¹⁸ Sax's first versions of the saxophone support the latter. His early drawings clearly represent his application of a bass clarinet mouthpiece to the body of an ophicleide (Fig. 1.1). This produced a bass instrument capable of a wide range

¹⁴ Rice, "Making and Improving," 83. Rice also notes that Maurice Hamel, the son of Sax's friend Henry Hamel, gave the date of 1838 for the invention of the saxophone in *Notes complémentaires sur Adolphe Sax* (Paris: Archives de H. & A. Selmer, 1925), 38, cited in Hemke, "Early History," 10, and Howe, "Invention and Early Development," 99.

¹⁵ McBride, "Early Saxophone in Patents," 113.

¹⁶ The ophicleide was the most-used wind bass instrument of the mid-nineteenth century; however, it did not work well in its lowest range, blended poorly, and had questionable intonation. Howe, "Invention and Early Development," 98.

¹⁷ McBride, "Early Saxophone in Patents," 113.

¹⁸ Hemke, "Early History," 11.

of dynamic contrast, which could create a timbral bridge between the brass and woodwinds and in doing so, improve the overall blend of the orchestra. An article by Hector Berlioz that appeared in the *Revue et gazette musicale de Paris* on March 13, 1842 gives further evidence of the saxophone's early ophicleide form:

Due to the beauty of sound it gives to the ophicleides, M. Sax of Brussels has just created a valuable invention. It consists of replacing the ophicleide mouthpiece with a clarinet mouthpiece. The ophicleides thus become brass instruments with reed. The difference in sonority and timbre that results in those of this system is so much to their advantage, according to those that were able to judge it, that very probably the ophicleide-à-bec will come into general use in a few years.¹⁹

Sax's friend and composer, Georges Kastner, wrote in his saxophone method book between 1844 and 1845:

It was through studying the make-up of the orchestras and comparing among them the diverse natures of timbre that Monsieur Adolphe Sax conceived the first idea for the saxophone. Indeed, in our military bands, the woodwind instruments do not have the power to compete against the brass choir; in our symphony orchestras, the string instruments are powerless to make themselves heard when playing with the wind instruments. It was necessary, then, to imagine a type of bridge, an intermediary member, which did not overwhelm the weaker instruments or allow itself to be overwhelmed by the most powerful instruments. The Saxophone, it must be agreed, has come to provide the solution to this difficult problem, and is called to render inestimable service to our military bands and symphony orchestras.²⁰

¹⁹ Hector Berlioz, "De l'instrumentation," *Revue et gazette musicale de Paris*, (March 13, 1842): 99-100, translated in Kenneth Deans, "A Comprehensive Performance Project in Saxophone Literature with an Essay Consisting of Translated Source Readings in the Life of Adolphe Sax" (DMA diss., University of Iowa, 1980), 86. From 1834-63, Berlioz was employed as a music critic and wrote weekly essays for the semi-official *Journal des débats politiques et littéraires*, and less often for the *Revue et gazette musicale de Paris*. He penned many articles concerning Adolphe Sax, his instruments, and the climate in which they were developed. The genesis of his *Grand Traité d'Instrumentation et d'Orchestration Moderne* is found in a series of articles published in the *Revue et gazette musicale*, from November, 1841 to July, 1842. See Howe, "Invention and Early Development," 107-8, and Deans, "Translated Source Readings," 96.

²⁰ Georges Kastner, *Méthode complète et raisonnée de Saxophone* (Paris: Brandus et Cie, 1844), 22, translated in Deans, "Translated Source Readings," 122.

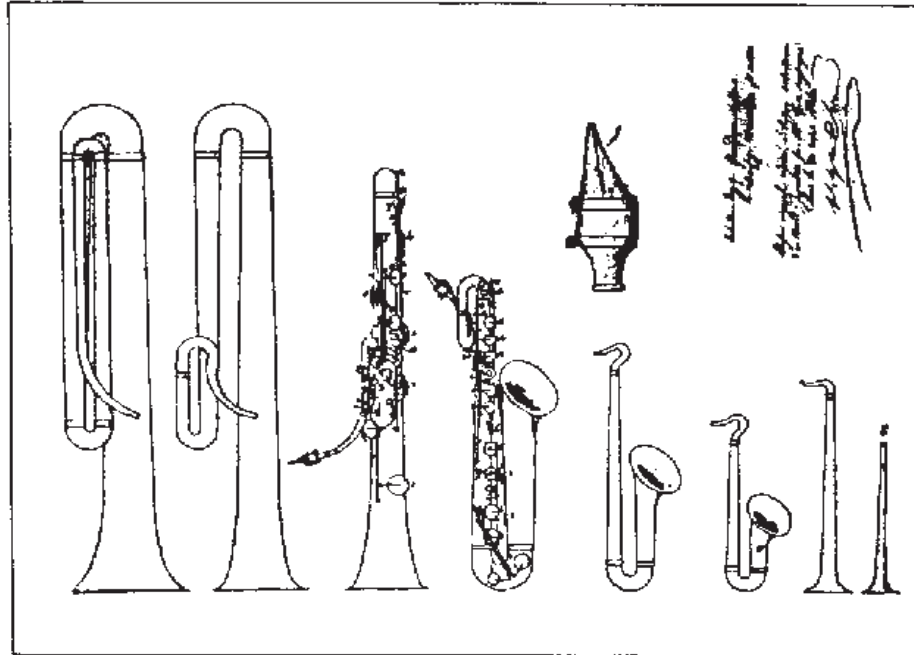


Figure 1.1. The sketch from Sax's original French patent (1846) showing his vision of a family of eight saxophones. Only two were drawn in detail: the bass and baritone. Photo printed in William McBride, "The Early Saxophone in Patents 1838-1850 Compared," *The Galpin Society Journal* 35 (March 1982): 122.

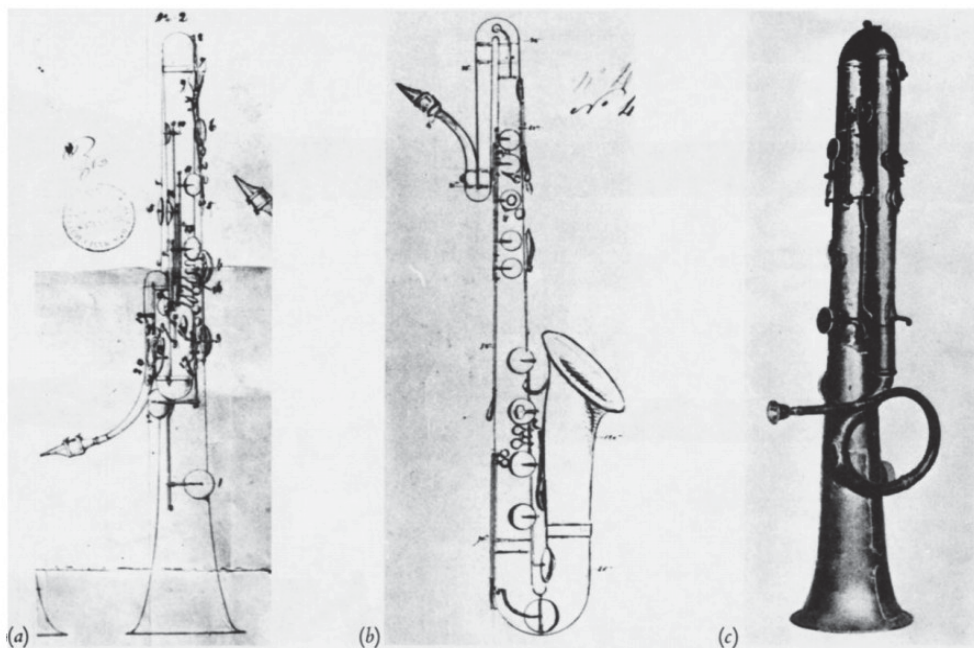


Figure 1.2. (left) Bass saxophone (ophicleide form) from original French patent of 1846. (center) Bass saxophone (saxophone form) from the Belgian patent of 1850. (right) ophicleide. Photo printed in William McBride, "The Early Saxophone in Patents 1838-1850 Compared," *The Galpin Society Journal* 35 (March 1982): 113.

Kastner's comments confirm that Sax's original intention in creating the saxophone was to design a new bass voice for the orchestra, and one that could also serve as an intermediary between the strings and brass. It was Sax's dissatisfaction with the bass instruments of the time that led to his reworking of the bass clarinet and the invention of the saxophone.

The Early Success of the Saxophone

Sax traveled to Paris in the first part of June, 1842. He gave his first successful concert (held at the Paris Conservatory) where he played and spoke eloquently about his instruments. There, he also met with many of the most distinguished musicians in Paris, including again, Berlioz and Habeneck, as well as Daniel-François Auber, Gaspare Spontini, and Gaetano Donizetti.²¹ Berlioz described the concert in the June 12, 1842 issue of the *Journal des débats*:

ADOLPHE SAX'S MUSICAL INSTRUMENTS

A revolution is in the making and Monsieur Adolphe Sax from Brussels . . . strongly contributes to it . . . The Saxophone (*Le Saxophon*), named after its inventor, is a brass instrument with nineteen keys, whose shape is rather similar to that of the ophicleide. Its mouthpiece, unlike those of most brass instruments is similar to the mouthpiece of the bass clarinet. Thus, the Saxophone becomes the head of a new group, that of the brass instruments with reed. It has the compass of three octaves beginning from the lower B-flat beneath the staff (bass clef); its fingering is akin to that of the flute or the second part of the clarinet. Its sound is of such rare quality that, to my knowledge, there is not a bass instrument in use nowadays that could be compared to the Saxophone. It is full, soft, vibrating, extremely powerful, and easy to lower in intensity. As far as I am concerned, I find it very superior to the lower tones of the ophicleide, in accuracy as well as in the solidity of the sound. But the character of such sound is absolutely new, and does not resemble any of the timbres heard up till now in our orchestras with the sole exception of the bass

²¹ Liley, 4.

clarinet's lower E and F. Owing to its reed, it can increase or diminish the intensity of its sounds. The notes of the higher compass vibrate so intensively that they may be applied with success to melodic expression. Naturally, the instrument will never be suitable for rapid passages, for complicated arpeggios; but the bass instruments are not destined to execute light passages. Instead of complaining, we must rejoice that it is impossible to misuse the saxophone and thus to destroy its majestic nature by forcing it to render mere musical fripperies.

Composers will be very indebted to Mr. Sax when his new instruments are generally employed. If he perseveres, he will meet with the support of all friends of music.²²

Berlioz's advice to avoid rapid passages and his description of the saxophone as a "new ophicleide," are likely referring to the saxophone's early shape. As shown in the original patent sketches, the prototypes were not shaped like modern saxophones but instead like ophicleides. This requires the player to support the full weight of the instrument in his arms, held above the waist, thus making the instrument clumsy (Fig. 1.3).²³

²² Hector Berlioz, "Nouvelles: Instruments de Adolphe Sax," *Journal des débats* (June 12, 1842): 3, translated in Hemke, "Early History," 22-3. Although this review was encouraging, Berlioz's reference to "complaining" reveals that upon his arrival in 1842, Sax immediately encountered resistance to his new instruments. Sections from the above article in the *Journal des débats* appear nearly word-for-word in the 1st edition of Berlioz's *Grand Traité*. Berlioz's praise of Sax and his instruments has often been questioned and many believe their friendship influenced Berlioz's objectivity. However, Kenneth Deans states that their friendship was secondary to Berlioz's objective evaluation of Sax's talents. "Berlioz was too much the professional critic to endorse a colleague blindly. Friendship aside, Hector Berlioz was profoundly impressed with Adolphe Sax as an artist-inventor." See Deans, "Translated Source Readings," 87.

²³ Howe, "Invention and Early Development," 113.



Figure 1.3. Ophicleide player French military band (ca. 1840). This illustrates the awkward playing position of the ophicleide, requiring the full weight of the instrument to be supported in the arms, held above the waist. This explains Berlioz's suggestion to avoid rapid passages. Image from <http://kimballtrombone.com/>

The concert drew other positive comments as well. The *Revue et gazette musicale de Paris* wrote:

Mister Sax, talented instrument manufacturer from Brussels, has been in Paris for several days. He has played his bass clarinet and a new ophicleide which he has created, at the Conservatory before the director Mister Auber and several professors. Full justice has been rendered to the beauty of these instruments. They cannot be compared to any others by virtue of their range, quality and the infinite variety of nuances they are capable of providing.²⁴

²⁴ Anon., "Nouvelles (Conservatoire: Essai de la clarinette-basse et de l'ophicléide de Sax)," *Revue et gazette musicale de Paris* 9/24 (June 12, 1842): 245, translated in Hemke, "Early History," 19.

The editors of *La France musicale* gave a more detailed account of Sax's performance that same day (again the saxophone is misnamed, called merely a "brass instrument played with a clarinet mouthpiece"):

A distinguished artist from Brussels, Mister Sax, performed several instruments which he has invented. The first is a clarinet which allows the performer to play in every key. Mister Sax, who is an excellent clarinetist, brought out the best from his instrument. The second is a bass clarinet in B-flat, which descends to D of the fourth string of the cello and is very remarkable for its intensity and quality of sound. His third invention is destined to replace the ophicleide. This brass instrument is played with a clarinet mouthpiece and has a range close to two and a half octaves beginning from the B-flat of the bassoon. You cannot imagine the beauty of sound and the quality of the notes in its lower octaves. These different instruments have been heard by a committee at the Conservatory and by the best composers, who highly approved of the improvements, which Mister Sax demonstrated in this performance. They have encouraged him to give the finishing touches to his inventions which they feel will be a great help to the orchestra.²⁵

In October of 1842, at the age of 28, Sax moved from Brussels to Paris permanently, arriving in the French capital nearly penniless.²⁶ By 1843, as a result of the funds gathered at his performance in June of the previous year, Sax established the Adolphe Sax Musical Instrument Factory at No. 10 rue neuve Saint-Georges (Fig. 1.4).²⁷ With the launch of his new factory Sax began to manufacture his instruments, including the saxophone, which he continued to rework and perfect. Sax regularly performed on his instruments to display and promote their superiority. In 1847 Sax opened a 400-seat

²⁵ [Léon or Marie-Pierre-Yves] Escudier, *La France musicale* (June 12, 1842): 218, translated in Hemke, "Early History," 19-20. "The brothers Escudier, publishers of *La France musicale*, did not generally sign first names to articles in their journal." Howe, "Invention and Early Development," 111.

²⁶ Jaap Kool, *The Saxophone* trans. Lawrence Gwozdz (Baldock, Hertfordshire, England: Egon Publishers, 1987), 198.

²⁷ Liley, 4. Although Liley estimates the amount to be 3,000 francs, other sources claim as much as 12,000 francs was raised through donations following his 1842 performance.

concert hall adjacent to his workshop, which according to Berlioz, met a long-existing need in Paris for a medium-size hall suitable for chamber concerts (Fig. 1.5).²⁸

²⁸ Hector Berlioz, "Nouvelle salle des concerts d'Adolphe Sax," *Journal des débats* (February, 14 1847): 2. The lack of a multi-purpose theatre in Paris inspired Sax to design a large, parabolic auditorium, the plans for which he patented in 1866. A lack of finances prevented its construction. For more information, including a translation of an article by Sax that sketched the project, see Deans, "Translated Source Readings," 140-2, 158-71.



Figure 1.4 .Sax's Factory at No. 10 rue neuve Saint-Georges in Paris. Engraving from 'L'illustration' (Feb. 5, 1848). Note the baritone saxophone hanging on the right. Mary Evans Picture Library, Grove Music Online.

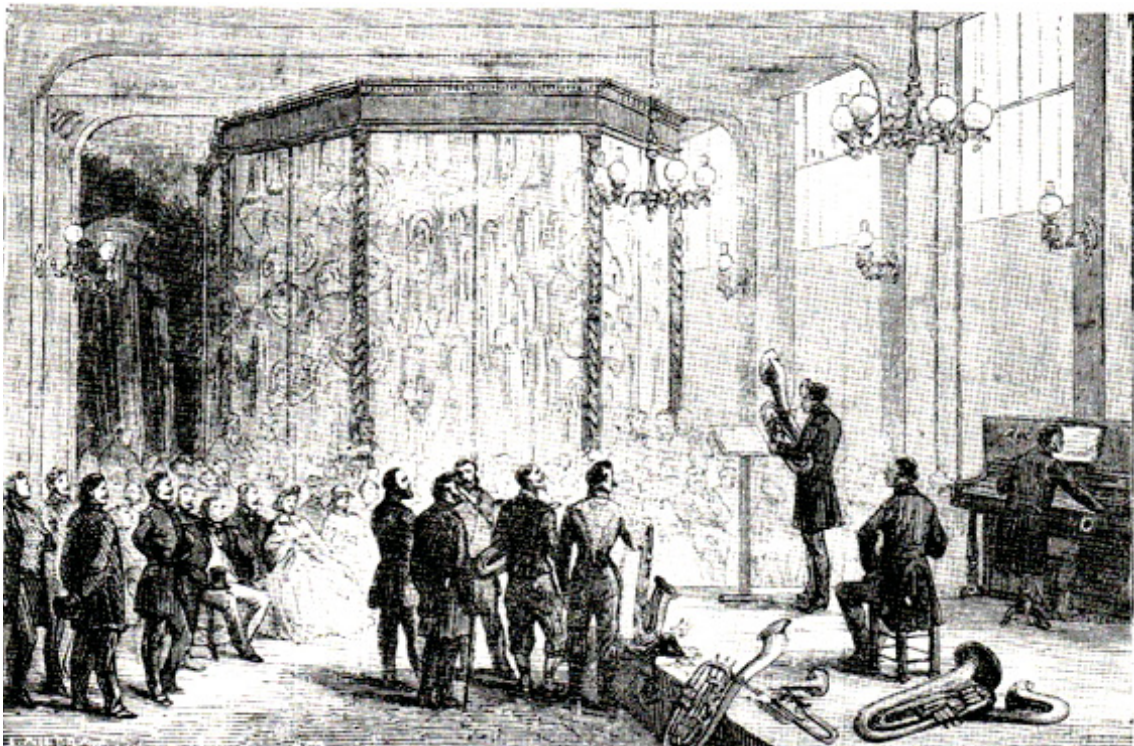


Figure 1.5. "Nouvelle salle des concerts d'Adolphe Sax," Printed in the *Journal des débats* (February 14, 1847): 2. Image from <http://www.kimballtrombone.com/>

The early versions of the saxophone were well received. Critics applauded its timbre, tone, and dynamic capabilities. On August 27, 1843 Castil-Blaze wrote a long article on Sax, praising the virtues of the saxophone in particular:²⁹

The sonority and the timbre are admirable, it will be the “bull” of the orchestra and yet the huge vibrant full rich gratifying sounds of the saxophone can be softened almost to the final degree of pianissimo without effort, without constraint. The saxophone can sing and play a melody with the charm and polish that can be obtained on the English horn. The sound, the timbre of this instrument are completely unheard of until now, and I cannot give you anything to compare it with. It is a beautiful acquisition for the orchestra. The saxophone is made in a complete family, with an alto and two sopranos. The effect of three or four saxophones introduced into a symphonic orchestra would be charming. Their clinging and connected sounds and those sounds struck with vigor will be doubly valuable in supporting the mass of harmony.³⁰

Berlioz, already a proven friend and supporter, wrote elsewhere of the saxophone: “It cries, sighs and dreams. It possesses a crescendo and can gradually diminish its sound until it is only an echo of an echo of an echo . . . until its sound becomes crepuscular.”³¹ This statement supports Sax’s belief that the saxophone’s greatest quality was the possibility of its becoming louder or softer at will while staying in tune throughout its range.³² Berlioz wrote again about the saxophone in the August 21, 1849 issue of *Le Journal des débats*:

The tone of the saxophone bridges the gap between the brass and the woodwind but it also suggests, more remotely, the tone of the strings. In my view its principal advantage is the great variety and beauty of its different expressive capabilities . . . I know of no other instrument that possesses this particular capacity to reach the outer limits of audible sound. . .³³

²⁹ François-Henri-Joseph Blaze, using this pen name, was Berlioz’s predecessor at the *Journal des débats*. Peter Bloom, *The Life of Berlioz* (Cambridge: Cambridge University Press, 1998), 75, quoted in Howe, “Invention and Early Development,” 117.

³⁰ *La France musicale* (August 27, 1843): 278, translated in Hemke, “Early History,” 26-7.

³¹ McBride, “Early Saxophone in Patents,” 113.

³² Ibid.

³³ Hugh MacDonald, ed. *Berlioz’s Orchestration Treatise, A Translation and Commentary*, (Cambridge: Cambridge University Press, 2002), 299.

Other composers also recognized the unique qualities of the saxophone. Earlier, in 1844, Rossini visited Sax's shop and later had Sax's instruments adopted by the Conservatory of Bologna. He declared, "The saxophone produced the finest blending of sound that I have met with."³⁴ On August 11, 1842 Fromental Halévy wrote, "Hasten, therefore, Monsieur to complete your new family of instruments and come to the aid of the poor composers who seek for new innovations and to the public which demands them, if not the world itself."³⁵ When Auber heard the saxophone at the Paris Exhibition of 1844, he could not hide his enthusiasm: "What a lovely tone," he said, "and what advantage could be derived from this instrument combined with the human voice."³⁶

In an article that appeared on September 10, 1843 in the *Revue et gazette musicale*, Henri Blanchard had encouraging words for Sax and the saxophone:

Adolphe Sax isn't, however, altogether discouraged and in order to console himself to the obstacles he meets at every step, he has brought about the manufacture of an entirely new instrument which he, like a proud father, has already named, the SAXOPHONE. This instrument, which has been played for us, has a low, noble, and mellow voice; it is made of brass and is close to eight feet in length. By the proportions of its tube it forms a parabolic cone along its length and is equipped with nineteen keys, which close the holes, some of which are almost two inches in diameter. Its fingering is like that of the second register of the clarinet and it uses a mouthpiece similar to that of a clarinet, something close to that of the new bass clarinet. Its range is three octaves, the lowest note being A. Mr. Sax has told us correctly enough what we know, that the sound of the bass wind instruments is either too loud or too soft. The ophicleide, which plays forte with the trombones, often has raucous, uneven, and, above all, disagreeable sound in the concert hall as well as the open air; it is very difficult to modify these sounds. The bassoon in contrast is only good for accompaniments and certain effects which are

³⁴ Kochnitzky, *Sax and His Saxophone*, 16.

³⁵ *Faits et documents relatifs au procès entre M. Sax et M. Gautrot* (Paris: Imprimerie Centrale de Napoléon Chaix et Cie., 1858), 98, translated in Hemke, "Early History," 24.

³⁶ Kochnitzky, *Sax and His Saxophone*, 18.

peculiar to it; it is almost useless for fortes. With the exception of the bassoon, there are no instruments which work agreeably well with the stringed instruments and the bassoon is worthless for outside performances where an instrument must overcome the strident voice of the brass instruments. The saxophone remedies these inconveniences: because of its more intense sonority, it can be modified better than any other instrument. From its low sound, which resounds with the solemn thundering quality of an organ, to the intoning of the human voice, spinning out its sound to its softest level, the saxophone unites with all types of sonority. This beautiful and curious instrument is, so to speak, an eclectic composite of the most pure and most suave effects of a sonorous body.³⁷

Despite positive reviews, only a handful of composers began to use the saxophone in their compositions. Berlioz scored his *Chant Sacré* for an ensemble of six Sax instruments and on February 3, 1844, had it performed as *Hymn pour les instruments de Sax* at Salle Herz in Paris. The six “new instruments” were B-flat piccolo trumpet, E-flat bugle, B-flat bass bugle, soprano clarinet, bass clarinet, and saxophone.³⁸ Kastner was the first to use the saxophone, a bass in C, in the orchestra of his grand opera, *The Last King of Juda*, which premiered on December 1, 1844; its only public performance. In April 1849 Meyerbeer’s *Le Prophète* opened in Paris after which he wrote a long letter to Sax explaining that he had included the saxophone in two scenes of the opera but do to unreasonable staging issues at the theatre, the scenes were taken out.³⁹ It appeared as if nothing could prevent the incorporation of the saxophone into the increasing assortment of instruments available to composers of the nineteenth century.

There is little doubt that many of Sax’s esteemed contemporaries were impressed with the new instrument. Most shared the belief that the saxophone would make an

³⁷ Henri Blanchard, “Adolphe Sax,” *Revue et gazette musicale de Paris* 10/37 (September 10, 1843): 315, translated in Hemke, “Early History,” 29.

³⁸ Kochnitzky, *Sax and His Saxophone*, 17-18.

³⁹ Adolphe de Pontecoulant, *Organographie: Essai sur la facture instrumentale-art, industrie et commerce* (Paris: Castel, 1861), 288, translated in Hemke, “Early History,” 294.

excellent addition to the orchestra. Nearly every description from the time of its introduction emphasized how the saxophone could be applied in an orchestral setting and applauded its tone quality and ability to blend with other instruments. Many composers predicted its swift incorporation into the orchestra, and the saxophone appeared to be destined to find its place among the other orchestral instruments of the time.

But curiously, even the proponents of the saxophone hesitated to include it in their symphonic works. On his handwritten score, Berlioz contemplated using saxophones in the “Epilogue” (*Dans le ciel*), the last scenes of *La Damnation de Faust* (1845-46). In the autograph, two saxophone staves appear below the flutes, the English horn, and the clarinets, but are not contained in the final score.⁴⁰ This curious omission raises the question as to why Berlioz never including the saxophone in one of his compositions.

There are specific causes that must be studied in order to understand the inexplicable exclusion of the saxophone by orchestral composers. The remainder of this chapter is devoted to the resistance that Adolphe Sax encountered while introducing the saxophone. Political issues within the musical community, collusion between the instrument makers and musicians of Paris, and Sax’s own dynamic personality will all combine to prevent the successful introduction of the saxophone.

⁴⁰ Howe, “Invention and Early Development,” 120.



Figure 1.6. Adolphe Sax (ca. 1844). Image from Wikimedia Commons.

Creating Enemies

“Brash, arrogant, and supremely self-confident, Sax was the embodiment of the fiery nineteenth-century Romantic” (Fig. 1.6).⁴¹ Evidence of his considerable ego can be found in his proclivity to attach his name to everything that he invented including the saxhorn, the saxotromba, the saxtuba, and the Goudronnier Sax (a fumigation box that infused the air of a room with tar or antiseptics).⁴² An incident that was indicative of the young inventor’s competitive personality took place at the *Grande Harmonie* concert hall in Brussels soon after he had completed his overhaul of the bass clarinet. A jealous artist,

⁴¹ Segell, *The Devil’s Horn*, 13.

⁴² In one of the first displays of his ability to create enemies, Sax named his new brass instruments “saxhorns”, which were essentially valved bugles, although it was well known that they were not his invention. He had simply made improvements (incorporating rotary valves) to an earlier version, similar to his reworking of the bass clarinet. This infuriated his growing list of adversaries who felt he was attaching his own name to an already existing instrument. After competitors mocked the size of some of his larger instruments he threatened to make an instrument “with the diameter of the Colonne de Juillet (the bronze column on the place de la Bastille), which he planned to call the Saxontonnerre (Sax-thunder). He said “In life there are conquerors and the conquered; I most prefer to be among the first.” Ibid., 13-14.

who played the older version of the bass clarinet, threatened to quit the orchestra if it adopted an instrument built by Sax. The young inventor, employing one of his favorite techniques, challenged the antagonist to a musical duel, which resulted in a victory for Sax and his bass clarinet.⁴³

In 1844, Lieutenant General Rumigny asked Sax to propose a letter to the French War Minister requesting that Sax's instruments be implemented into the military bands. Realizing the French military bands lagged behind the instrumental achievements of the Prussian and Austrian military bands, Rumigny was planning to revamp the French bands. According to an article in *L'Illustration*, "Whoever heard an Austrian or Prussian band surely broke into laughter upon hearing a French regimental band."⁴⁴ Sax agreed to submit the proposal and explained in the letter that the high-pitched piccolos, clarinets, and oboes, and the instruments used to carry the bass line, bassoons and ophicleides, were not suited for open-air performances. He intended to remedy this situation by introducing his saxhorns, his improved valve bugles, and of course his bass saxophones.⁴⁵ While the Paris instrument makers were quick to protest the incorporation of Sax's instruments into the French bands, Sax's influential friends lobbied for a commission that was to decide the matter. The members of the commission, who held their first meeting in February 1845, had been chosen from France's foremost composers: Spontini, Auber, Halévy, Adolphe Charles Adam, George Onslow, Kastner (most of whom supported Sax) and Michele Carafa, director of the *Gymnase de Musique Militaire*.⁴⁶

⁴³ Kochnitzky, *Sax and His Saxophone*, 7-8.

⁴⁴ *L'Illustration*, (June 17, 1845): 227, translated in Hemke, "Early History," 193.

⁴⁵ Sax was an anomaly among instrument manufacturers in that he constructed both brass and woodwind instruments. This was unusual given that the tooling and process of manufacture is completely different in each case. Horwood, *Adolphe Sax*, 29.

⁴⁶ Kochnitzky, *Sax and His Saxophone*, 26.

Invitations were sent to all principal instrument manufacturers to submit specimen instruments for the commission's consideration.⁴⁷ The committee rejected most submissions on the basis of fragility and other defects in the instruments, causing many manufacturers to decline the request of the commission. Sax was the only one to accept the invitation. Before giving its opinion, the commission called for a contest between the old system of instrumentation, and the one proposed by Sax. The public "battle of the bands" took place on April 22, 1845 at the Champ-de-Mars, which is now the site of the Eiffel Tower.

The contest was staged before an estimated 20,000 people. As the bands were set to begin there appeared to be a problem within Sax's group. Several of his players had failed to arrive, the opposition having used what were to become their familiar weapons of bribery and coercion to prevent the musicians from showing up.⁴⁸ But Sax, who loved a pitched battle and was never so dangerous as when infuriated, strapped two instruments to his side, including, some historians believe, his B-flat bass saxophone.⁴⁹ With his band seven players short, he still achieved a stunning victory. The large crowd overwhelmingly favored Sax's smaller but more powerful band. With the audience having declared Sax the clear winner, the commission's final report to the Minister of War on August 9, 1845, gave Sax a distinct victory. The government declared a near monopoly mandating the use of his instruments.⁵⁰

The victory at the Champ-de-Mars marks both a great triumph for Sax and the beginning of years of conflict with his competitors. Although Sax had already

⁴⁷ Horwood, *Adolphe Sax*, 71.

⁴⁸ *Ibid.*, 73.

⁴⁹ Segell, *The Devil's Horn*, 18.

⁵⁰ Liley, 5.

encountered resistance to his instruments, this singular decision by the French government served to unite Sax's rivals in an effort to protect their interests. This marked an onslaught of attacks that included litigation, sabotage, and possibly even assassination attempts against Sax. Sax had now begun a bitter enmity with the established instrument makers of Paris who would begin to obstruct the introduction of his instruments, most notably the saxophone.

Opposition Begins

From his first days in Paris, many leading composers recognized Sax as a gifted inventor, and critics in the music journals of Paris praised his work. This drew immediate disdain from the established instrument makers in Paris. Many businesses had been handed down from father to son and were steeped in time-honored procedures. Up to the 1840s, it was customary for manufacturers to have smaller firms make the individual parts for their instruments separately (body, keys, valves, finish), which they would then assemble and stamp with their trademark.⁵¹ “The typical instrument manufacturer was technically unable and philosophically opposed to the possibility of creating anything new and substantive.”⁵² Into this environment arrived Adolphe Sax, whose inventive nature prohibited him from following the established rules of manufacturing. Since Sax's instruments were of his own design and required specific parts, he oversaw the entire process of production himself, cutting out many of the smaller more specialized shops in Paris. Sax's disregard for traditional manufacturing practices coupled with the governmental contract of 1845 motivated his rivals to hamper the inventor's career.

⁵¹ Kool, *The Saxophone*, 201.

⁵² Hemke, “Early History,” 126.

The first effort by Sax's competitors to hinder his progress with the saxophone was to instigate a long series of legal battles questioning the validity of his patents. In August of 1843, Sax was issued a French patent for his improved valve bugle that he subsequently named the saxhorn (see footnote 42). In November of 1845 he took out another patent for a new family of brass instruments that he named saxotrombas.⁵³ The 1845 patent came just three months after the French decree to incorporate his instruments into the military bands, and posed the biggest threat to the manufacturers of Paris. The adoption of Sax's system and his exclusive patent for these instruments meant a loss of considerable revenue for Sax's rivals.⁵⁴ On March 3, 1846 the first subpoena was issued on behalf of Parisian manufacturers including Raoux, Halary, Buffet, Gambaro, and Besson, who had organized to question the validity of Sax's patents and protest the French government's decision to use Sax's instruments.⁵⁵ When Sax applied for his first saxophone patent later in 1846, the instrument was quickly added to the original lawsuit allowing for all of Sax's instruments to be challenged at once.

Various contradictory lines of attack were made against the saxophone, including the assertion that the instrument did not exist at all, and if it did, it was a completely unmusical invention that already existed in other forms including the English tenoroon, a

⁵³ Hemke, "Early History," 127, 137.

⁵⁴ Ibid., 137.

⁵⁵ The United Association of Instrument Manufacturers is often erroneously named as the group that was created in opposition to Sax. However, this misidentified group was actually called the *Association fraternelle d'ouvriers facteurs d'instrument de vent* (Benevolent Association of makers and constructors of wind instruments) and was established in 1848 as a worker's co-operative of eleven artisans and three associates and was never involved in the battle with Sax. In fact, there were thirty-four Parisian wind-instrument manufacturers who organized a committee in opposition to the French War Ministry's adoption of Sax's instruments. After initiating his own lawsuits for patent infringement, Sax eventually granted licenses to some of his rivals to build his models. William Waterhouse, Lyndesay G. Langwill, *The New Langwill Index: Dictionary of Musical Wind-instrument Makers and Inventors* (London: Bingham, 1993), 11, 348.

bass clarinet by Desfontenelles, and the German bathyphone by Wieprecht.⁵⁶ The opposition also alleged that since Sax had already performed on the instrument at the contest at Champ-de-Mars, he had made the instrument aware to the public, thus making the saxophone a matter of public property and thus not capable of being patented.⁵⁷

The case was dismissed but an appeal was immediately filed. With the amount of technical evidence that was submitted, arbitrators resolved many questions. The arbitrator's report submitted on November 2, 1847 went on for sixty-six pages and concluded that the instrument described had been, or was able to be, made and was perfectly patentable. Finally, the report concluded, the instrument was not public property.⁵⁸

Another tactic used by Sax's opponents to challenge the originality of the saxophone was to purchase several of Sax's early instruments and have them secretly shipped to neighboring countries where the serial numbers were removed and re-engraved. They were then openly returned to Paris as instruments of foreign manufacture. This tactic failed only because the re-engraving was of such poor quality that it was quickly revealed in court. Regardless of the outcome of these suits, the majority of which were won by Sax, his adversaries quickly followed with another, often preparing the next suit while still involved with the existing one. Many times, a single case would exhaust every possible appeal process until it would finally reach the Supreme Court after costing both parties substantial resources.

⁵⁶ Liley, 6.

⁵⁷ Horwood, *Adolphe Sax*, 104.

⁵⁸ *Ibid.*

The litigation served Sax's competitors well. The constant stream of lawsuits succeeded in delaying the patent process and drained Sax of financial resources.⁵⁹ He was driven to bankruptcy twice. The original lawsuit in opposition to his patent application was not resolved until 1854, eight years after it was filed. Although Sax's patents were declared valid and the opposition was ordered to pay damages, the time and money that could have been spent creatively had been expended on endless legal battles.⁶⁰

These legal battles were also matters of public attention that served to tarnish, or at the very least bring into question, Sax's character. The issue of the originality of the saxophone was irrelevant inasmuch that the damage being committed was to the reputation of Sax as an inventor. Sax's rivals constantly questioned the validity of his patents and the moral fiber of the man himself. This caused composers and musicians apprehension toward Sax's instruments, particularly the newly invented and often-disputed saxophone.⁶¹

The strategies used by Sax's adversaries were not limited to litigation. His opposition proved to be clever, tenacious, and relentless in their attacks.⁶² They schemed to undermine him financially: after Sax sold stock in his company, they bought much of it

⁵⁹ Liley, 7.

⁶⁰ Ibid.

⁶¹ The most compelling evidence of the effect of these court cases was a patent extension that was granted in 1860. Sax originally applied for a fifteen-year French patent on March 21, 1846 that was granted on June 22 of the same year. On June 26, 1860, an extraordinary appeal was made to the French government by Frederic LePlay on Sax's behalf to extend (for five years) protection of Sax's saxotromba patent of 1845 and saxophone patent of 1846. Only one other applicant had ever successfully appealed for a patent extension. LePlay emphasized Sax's unique contributions, and the inability of Sax to benefit from his patents because of tremendous legal costs and later bankruptcy associated with other makers seeking to make saxophones in violation of the patent. The *Conseil* (advisory council) agreed with LePlay and drafted a bill for the extension of Sax's patents. Thus, Napoleon III's decree of July 20, 1860, states that both of Sax's patents are to be extended by five years. This is clear acknowledgment by the French government that Sax had been adversely affected by the court cases that were brought against him. He was denied profits and drained of finances during a time that he stood to increase his earnings substantially. See Rice, "Making and Improving," 90-1.

⁶² Horwood, *Adolphe Sax*, 89.

and resold it at half the price, hoping to scare away potential investors.⁶³ Because of a loss in public confidence, the sale of Sax and Company stock failed and the overextended Sax found himself 20,000 francs in debt.⁶⁴

In addition, Sax's workers stole plans as well as special tools and were bribed to abandon his service during crucial points of production. They were constantly being lured away with higher wages, which made it difficult to maintain a consistent workforce. At one time the situation got so bad that Sax was forced to search for desperate remedies. Working with authorities at the Melun Central Prison, Sax began training inmates to manufacture his instruments. Because of the constant supervision of the prisoners, his fears of sabotage and theft were avoided and Sax was able to negotiate favorable rates for labor.⁶⁵ The arrangement worked well until the prisoners were released and arrived at Sax's factory demanding money that they felt was owed to them.

Once again this threatened the established manufacturers and served to unite their efforts against Sax.

The most disturbing actions against Sax involved two possible assassination attempts. At the height of his battles with rival instrument makers, a bomb was allegedly placed under Sax's bed. His life was spared only through a faulty fuse that prematurely exploded the device. He escaped assassination again when a trusted and loyal employee of similar height and build arrived at Sax's house and, mistaken for his boss who was not home, was fatally stabbed through the heart.⁶⁶ In a letter to M.M. Louise Bertin, dated October 8, 1843, Berlioz observed the following about Sax's attackers:

⁶³ Segell, *The Devil's Horn*, 21.

⁶⁴ Hemke, "Early History," 130.

⁶⁵ Horwood, *Adolphe Sax*, 89.

⁶⁶ Segell, *The Devil's Horn*, 22.

“Will you believe it that this young and ingenious artist has a thousand troubles in getting an opening in Paris? Persecutions worthy of the Middle Ages are renewed against him, exactly resembling the machinations of the enemies of Benvenuto, the Florentine carver. His workmen are enticed away, his plans stolen, he is accused of insanity, beset with lawsuits; only a little more daring is wanting to have him assassinated. Such is the hatred inventors always excite among those of their rivals who invent nothing.”⁶⁷

Sax’s competitors also applied their influence on musicians. As is the practice today, it was not uncommon for the best instrumentalists to be employed by leading instrument manufacturers. In an unprecedented move, the musicians got together, at the secret urging of the manufacturers and decided to collectively reject Sax’s instruments and refuse to play them under any circumstance.⁶⁸ In November 1843, Donizetti, in the score of his opera *Dom Sébastien*, included a part for the bass clarinet. Rehearsals began for the production. For the second time in its brief existence, however, no one would play Sax’s bass clarinet. When Sax suggested playing the instrument himself the other musicians protested. “If Mr. Sax sets foot in the orchestra,” they said, “we shall all walk out.” Donizetti had no choice and dropped the instrument from the score.⁶⁹ The politics of the Paris Opera and the fact that many of its players were spokesmen for other makers also played a role in keeping Berlioz and other composers from embracing the saxophone.⁷⁰

This boycott of Sax’s instruments by Parisian musicians is the most convincing evidence that Sax’s rivals had a direct influence on the use of his instruments. Although the first instance involved the bass clarinet, there is no question that the saxophone was

⁶⁷ William Foster Anthrop, *Hector Berlioz; Selections from his Letters, and Aesthetic, Humorous, and Satirical Writings* (New York: Henry Holt, 1879), 169.

⁶⁸ Kool, *The Saxophone*, 201.

⁶⁹ Kochnitzky, *Sax and His Saxophone*, 16.

⁷⁰ Howe, “Invention and Early Development,” 115.

suffering from the same reactions. Through their influence, the Parisian manufacturers were able to pressure musicians to reject Sax's instruments to the point of staging walkouts if they were used. This certainly would have influenced a composer's decision to include that instrument in future works. Why should they subject themselves to the problems associated with Sax's instruments if the simple answer was to not use them at all?

The efforts to undermine Sax undoubtedly affected the general perception of the saxophone. Amid the refusal by musicians to play the instrument, which in turn led to composers failing to incorporate it into their music, the saxophone was doomed for failure in the modern orchestra. Through their constant opposition to Sax and their strategies specifically designed to suppress the saxophone's introduction, Sax's competitors created what amounted to a very successful negative add campaign against the new instrument. One in which Sax was no match to defend.

Early Repertoire

Realizing that all instruments need a standard repertoire in order to survive in music, Adolphe Sax operated a publishing house in Paris from the 1850s to the 1870s. He published almost two hundred compositions including at least thirty-five for various saxophones and piano. Composers such as cornetist Joseph Arban, clarinet virtuoso Hyacinthe Klosé and most prolifically Jean-Baptiste Singelée, supplied music for the saxophone during its formative years. Many of these compositions were *solos de*

concours that were used at the Paris Conservatory for annual examinations. Very little of this music is known or performed today.⁷¹

The saxophone's occasional appearance in opera and dramatic works was the closest the instrument would come to orchestral music during the late nineteenth century. Two saxophones were listed on the general roster of the Paris Opera orchestra of 1877.⁷² This seems logical since up to the 1880s, the saxophone was played primarily in France and written for by French composers.⁷³ Also, operas were the traditional testing grounds for new instruments, dating back to Mozart's use of the trombone in his operas.⁷⁴ Effective and beautiful solos for the saxophone appear in Ambroise Thomas's *Hamlet* (1868) and *Françoise de Rimini* (1882), Massenet's *Hérodiade* (1877) and *Werther* (1892), Delibes's ballet *Sylvia* (1876), and most notably Bizet's *L'Arlésienne* (1872), which will be examined later in this chapter.⁷⁵

Vincent D'Indy was perhaps the most ardent supporter of the saxophone's use in opera music. One example is his opera *Fervaal* (1897) which includes soprano, alto, and tenor saxophones.⁷⁶ D'Indy compared the saxophone's timbre to the clarinet but believed it offered a softer and smoother quality and attested to the usefulness of saxophones to the symphonic orchestra and expressed admiration and loyalty to the saxophone throughout his career.⁷⁷

⁷¹ Thomas Liley, "The Repertoire Heritage," in Ingham, 51-2.

⁷² Hemke, "Early History," 301.

⁷³ Rice, "Making and Improving," 99.

⁷⁴ Abert Rice, e-mail message to author, January 5, 2012.

⁷⁵ Steven Trier, "The Professional Player," in Ingham, 101.

⁷⁶ Albert Rice, e-mail message to author, January 7, 2012.

⁷⁷ Hemke, "Early History," 303.

The fact that the saxophone was utilized primarily as a solo instrument and was often included only in select movements of a piece.⁷⁸ This virtually guaranteed that the saxophone was going to be ‘doubled’ by a clarinetist or other permanent member of the orchestra who did not have formal training on the instrument. Why would any orchestra employ a full-time saxophonist when the instrument was not used on a consistent basis? This also resulted in sub-standard performances that gave composers an inaccurate representation of the saxophone’s capabilities.

Also, there can be little doubt that Sax’s original intent was not to create a new solo voice in the orchestra, but a new bass voice. He had clearly expressed his frustrations with existing bass instruments and this was clearly his motivation to improve the bass clarinet and invent the saxophone. It was the bass saxophone played by Sax himself at Salle Herz on Berlioz’s arrangement of his *Chant Sacré* that was widely praised by composers. It was also the bass that appeared in Kastner’s *Last King of Juda*, the first known orchestral application of the saxophone. Many of the early articles written about the saxophone, including Berlioz’s from June 12, 1842 in the *Journal des débats*, universally praised its ability to blend with other instruments in an orchestral setting. Sax’s vision for the role of the saxophone undoubtedly changed as the saxophone family developed. However, it is clear that he intended for the instrument to be a consistent orchestral voice, serving both a harmonic and melodic function.

⁷⁸ Trier, 101.

Early Saxophone Instruction

Along with the battles that he was waging with his adversaries, Adolphe Sax was also struggling to provide quality instruction for the saxophone. Adequate instruction, or a lack thereof, may have contributed to the resistance the saxophone received from composers of orchestral music. Adolphe Sax played for many of the earliest performances of the saxophone, including the 1842 recital at the Paris Conservatory that introduced the instrument to composers, and the performance of Berlioz's *Chant Sacré* at Salle Herz in 1844. Many of the saxophone's positive reviews were of Sax's own performances at his shop and later at his concert hall, where he regularly gave recitals to show off his instruments. However, composers were finding out that adequate performers were not easy to find, which was a direct result of a deficiency in proper saxophone instruction.

Berlioz was the first to recognize the need for formal saxophone instruction, lobbying for it to be included in music schools throughout France. In a letter written to Humbert Ferrand during a visit to Prague in 1846, he suggested that the saxophone be taught at the Paris Conservatory:

The saxophone, the latest member of the clarinet family, an instrument which will prove extremely useful when players have learned to exploit its qualities, should be given its own separate position in the curriculum, for before long every composer will want to use it.⁷⁹

The above statement also suggests what Berlioz himself might have been experiencing: that although he was a fan of the saxophone and wanted to include it in his

⁷⁹ Hemke, "Early History," 245-50.

works, he was having trouble finding qualified players.⁸⁰ Unfortunately, despite Berlioz plea, it took another eleven years before the saxophone was taught at the Paris Conservatory.

The *Gymnase Musical Militaire*, established for the training of French military musicians, was the first school to offer instruction on the saxophone in 1846, hiring Jean-François Cokken, a former professor of bassoon, as the first instructor. By 1850, however, the classes were suspended and Cokken was listed once again as teaching bassoon.⁸¹ In 1857, special classes for military students were created at the Paris Conservatory in saxophone, saxhorn and valve trombone. Sax was enlisted as professor of saxophone for the next thirteen years.⁸² The applied lessons in saxophone offered at the *Gymnase Musical Militaire* and the Paris Conservatory led to a small body of performers, but the classes were offered only to military personnel who went on the perform in military bands.⁸³ Although saxophone instruction was being offered at various other conservatories scattered across Europe, the availability of quality players remained inconsistent.

The defeat of France by Germany in 1870 resulted in the abolishment of all military classes at the Paris Conservatory, including the saxophone. Even though Sax offered to continue teaching the classes without pay, the government deemed the military

⁸⁰ Robert Howe states, “the Parisian musical public being deaf to his works, Berlioz spent much time traveling; between December 1842 and May 1843 he conducted in thirteen German cities. As finding saxophones outside of Paris was unlikely (he even had difficulty finding players of ophicleide, harp, and English horn in Germany), it is understandable that he did not write for them.” Howe, “Invention and Early Development,” 115.

⁸¹ Hemke, “Early History,” 247-8.

⁸² *Ibid.*, 249-50.

⁸³ *Ibid.*, 257.

section of the conservatory unnecessary. The saxophone class at the conservatory was not reestablished until Marcel Mule was hired in 1942.⁸⁴

Being a new instrument, the first players and teachers, by necessity, took up the saxophone as a second instrument, as was the case with Cokken at the *Gymnase Militaire*. It was mostly clarinetists who took on the role of saxophone instructors and performers during the instrument's formative years, presumably due to the similarities in the single-reed mouthpieces. An article in the *Revue et gazette musicale* from 1852 suggests the ease with which a saxophone can be mastered by other woodwind players:

For those of our readers who have possibly not heard of the saxophone, it is a brass instrument equipped with keys, a mouthpiece about like a clarinet, and we add that its fingerings are quite similar to that of the flute, clarinet, oboe and bassoon. An artist playing one of these instruments has need of no more than eight days of study in order to familiarize himself with the saxophone.⁸⁵

In the final jury report of the Paris Industrial Exposition of 1855, the Belgian musicologist, composer, and theorist François-Joseph Fétis also states the misconception that the saxophone was a simple instrument for players of the flute, oboe, and particularly the clarinet. In the middle of a glowing statement about the saxophone, Fétis writes:

The instrument can be played with facility because its fingering system, like all instruments producing octaves, is little different from those of the flute or the oboe. Clarinetists learn to play it well in a short time because of the similarity of the mouthpiece to that of their regular instrument.⁸⁶

It may have been statements like Fétis' that led musicians and composers to assume that proper instruction and study of the saxophone was not necessary in order to play the

⁸⁴ Ibid.

⁸⁵ Hemke, "Early History," 257.

⁸⁶ Deans, "Translated Source Readings," 33-4.

instrument effectively. The report goes on to give a very complimentary review of the early saxophonist Henri Wuille and the possibilities of the saxophone:

...The remarkable virtuoso Wuille has played very difficult solos on this instrument with brilliant success. Capable of all dynamic nuances, the Saxophone can go from the softest piano to the strongest, most powerful sound.⁸⁷

The earliest saxophone soloists were converted clarinetists, including Charles-Valentin Soualle, Henri Wuille, and E. A. Lefebvre. These three were proponents of the saxophone and had dedicated themselves to playing the instrument.⁸⁸ It is safe to assume that many of the performances by clarinetists who were not as enthusiastic about the saxophone were lacking in some way. In turn, composers and musicians were not getting an accurate representation of the instrument's capabilities. The lack of talented players is confirmed in a report written by Berlioz who was a judge at the London Exposition of 1851. His remarks contradict Fétis assumption that the saxophone was an easy instrument to master:

Mr. Sax has created another instrument, the saxophone, a delightful brass instrument with a clarinet mouthpiece, which possesses a new timbre and lends itself to the most delicate and vaporous effects of shading as well as the majestic accents of religious style. Mr. Sax had made an entire family of saxophones and if composers do not as yet appreciate the value of this new organ, which they owe to the genius of the inventor, the inexperience of the performers can be the only reason. The saxophone is a difficult instrument; the player can learn its technique only after long and serious study, but it has, up to now, been only too imperfectly played and too little practiced.⁸⁹

Berlioz gives a clear indication that saxophone performances were often unsatisfactory and reasons that composers should hold the musicians responsible

⁸⁷ Ibid., 34.

⁸⁸ Thomas Dryer-Beers, "Influential Soloists," in Ingham, 37.

⁸⁹ Hemke, "Early History," 177.

for the inadequacy and not the instrument itself.⁹⁰ When Camille Saint-Saëns included a part for soprano saxophone in his symphonic poem *La jeunesse d'Hercule* (1877), Sax himself complained in a letter to Ambroise Thomas that it was not possible to find a player since his saxophone class had been discontinued at the Conservatory.⁹¹

Because the saxophone was a new invention, the nuances of teaching and learning the instrument were often misunderstood or overlooked. The best instruction was undoubtedly offered in Paris where pupils and teachers had access to Adolphe Sax. But most of these students were in the military and not available for public performances.

The problem of adequate performers persisted through the nineteenth century. Even when a composer sought to include the saxophone in a piece, they made sure there was an alternative to hiring a saxophonist. Many of the original orchestral parts for saxophone included optional instrumentation in the score, often writing the part for clarinet, oboe, or English horn if a saxophonist was unavailable or incompetent. One example is Bizet's *L'Arlésienne Suite* (1872), which contains an alto saxophone solo that is also cued in the first clarinet. Special instructions are included in the score concerning performance practice when the piece is played without a saxophone (Figs. 1.7 & 1.8).

⁹⁰ Tim McAllister, professor of saxophone at the Crane School of Music (one of the earliest American music schools to offer saxophone instruction) and former student of the legendary Donald Sinta, believes that a lack of talented players accounts for the lean repertoire of orchestral saxophone music. "Composers were reluctant to include saxophone parts because they couldn't be guaranteed that they would be played well. And when they did include a part, they had to make sure it could be played by another instrument in case they couldn't find a capable saxophonist." Segell, *The Devil's Horn*, 258.

⁹¹ Trier, 101.

Composer Gustav Bumcke, who claimed he introduced the saxophone in Germany in 1901, included the instrument in a symphony that premiered the same year. He complained of problems he had procuring performers to play the saxophone in Germany. Richard Strauss's *Symphonia Domestica*, composed in 1903, includes four saxophones, but the initial performances in Germany lacked the saxophone parts because adequate performers could not be found (Fig. 1.9).⁹² Strauss was then forced to write the saxophone parts *ad libitum*. This often results in the omission of the saxophones altogether.⁹³ Almost sixty years after the saxophone's invention, Strauss was still finding it difficult to locate competent players.⁹⁴ The problem of finding properly trained saxophonists had lingered and had still not improved by the turn of the century.⁹⁵

⁹² Strauss's score calls for saxophones pitched in C and F rather than the modern standard of Bb and Eb. This indicates what many feel was a series of "orchestral" saxophones. This belief has its roots in Strauss's work along with Maurice Ravel's *Bolero*, which calls for F sopranino. Although very few saxophones in F or C were ever produced, they are mentioned by Berlioz in his *Treatise* of 1855. Strauss edited a translation of this work (published in 1904) while working on *Symphonia Domestica*. Howe also states that Strauss's writing for these rare or nonexistent instruments was a contributing factor in his inability to recruit the necessary performers to debut his piece. Hemke, "Early History," 302 and Howe, "Invention and Early Development," 164.

⁹³ Gunther Schuller, who has conducted the piece both with and without the saxophones, says their inclusion richly adds to the piece: "They do nothing but double other instruments. There are a couple of fugues in the piece where the bass saxophone doubles the cellos [see Fig. 7]. But I love it because it adds an openness, even a roughness, and a kind of bucolic energy to the music that's lacking without them." Segell, *The Devil's Horn*, 257.

⁹⁴ Another possible reason that Strauss had problems finding players was that the saxophone was not being taught in Germany and was not a popular instrument there. The origins of Germany's disregard for the saxophone date back to one of Sax's confrontations with other inventors. Weiprecht, a German manufacturer, claimed he had invented a sax-like instrument prior to Adolphe Sax. At a gathering held by Franz Liszt, who had made sure both men were present, Sax challenged Weiprecht to play his saxophone. Sax was vindicated when Weiprecht was unable to play the instrument. Hemke, "Early History," 302.

⁹⁵ An interesting aside to saxophone instruction in the United States concerns the Dana School of Music, originally located in Warren, Ohio and now part of Youngstown State University. Joseph E. Murphy states, "though archives are incomplete for the early years, the earliest mention of saxophone instruction is by Aaron Traxler, who graduated in 1898 after three years of study, with the saxophone as his primary instrument." This makes the school one of the first in the country to offer saxophone instruction. Joseph E. Murphy, "Saxophone Instruction in American Music Schools before 1940," *The Bulletin of Historical Research in Music Education* 18 (Sept., 1996): 4.

Up to the time of Adolphe Sax's death in 1894, very little progress had been made regarding saxophone instruction and the corresponding availability of competent players. Only a limited number of schools in Europe offered regular classes for the saxophone in their curriculums. As a result, many saxophone players lacked a true understanding of the instrument and the proper techniques needed to play it successfully. The saxophone was being misrepresented as an orchestral instrument. Saxophone performances were inconsistent, leading most composers to include alternate parts in their scores. Could you imagine an alternate part for the oboe, clarinet, or flute? This was not necessary because these instruments were universally taught at music schools where players learned the proper playing techniques. In addition, flute, clarinet, and oboe players were never asked to play the others instrument. Only the saxophone suffered from these limitations. Music schools abandoned saxophone instruction at a crucial time in the instrument's development, which in turn had a damaging effect on the perception of the saxophone through the remainder of the nineteenth century.

Meanwhile, in the United States, despite continued resistance from the orchestra, the saxophone was beginning to find its place in other styles of music.

Figure 1.7. The first page of the score to Bizet's *L'Arlésienne* no. 1 (Paris: Choudens, 1873) with instructions at the bottom that read, *Nota On pourra supprimer le Saxophone en faisant exécuter par les Clarinettes, les Bassons et les Cors les parties supplémentaires gravées en petits caractères* (the saxophone can be eliminated by having the clarinets, bassoons and horns execute the supplementary parts in small print).

L'ARLÉSIENNE
GEORGES BIZET.
PRELUDE.
1^{re} SUITE D'ORCHESTRE.

Allegro deciso. (Tempo di marcia) *a*-104

N^o 1.

2 Flûtes.
1 Hautbois.
1 Cor anglais.
2 Clarinettes en si b.
2 Bassons.
1 Saxophone Alto en MI b.
2 Cors en MI b.
2 Cors en UT.
2 Trompettes en UT.
2 Pistons en SI b.
3 Trombones.
Timbales en SOL UT.
Tambour.
Harpe ou Piano.
Violons.
Altos.
Violoncelles.
Contre Basses.

Allegro deciso. (Tempo di marcia)

Paris, CHODENS, Éditeur, rue St Honoré, 265.

NOTE. On pourra supprimer le Saxophone en faisant exécuter par les Clarinettes, les Bassons et les Cors les parties supplémentaires gravées en petits caractères. Voyez les pages 15, 17, 27, 29, 34, 45, 50, 53. Quant aux Trompettes on peut les supprimer complètement dans les N^{os} 1 et 4; dans le Menuetto, on les remplacera par les Pistons. Les divisions des Violons, Altos et Violoncelles, basées sur le grand orchestre des Concerts populaires, devront être modifiées, selon le nombre d'instruments à employer dont on pourra disposer. Dans les petits orchestres le Piano devra être préféré à la Harpe.

Figure 1.8. The saxophone solo in the score of *L'Arlésienne* no. 1 (Paris: Choudens, 1873) with instructions at the top that read, *Nota* *Lorsqu'en exécutera ce morceau sans le Saxophone la 1^{re} Clarinette sera chargée de ce Solo et la 2^{ème} Clarinette jouera la partie de la 1^{re}* (when playing without the saxophone, clarinet I will play the solo and clarinet II will play the part of clarinet I).

Nota. Lorsqu'en exécutera ce morceau sans le Saxophone la 1^{re} Clarinette sera chargée de ce Solo et la 2^{ème} Clarinette jouera la partie de la 1^{re} 15

Andante molto (♩=63)

Clar. *p* *espress. viv.*

Saxop. *p* *espress. viv.*

non scordati.

Vcl. *ppp* *con sordini.*

ppp

(mettez les sordines)

ppp

(mettre les sordines)

Andante molto.

Fl.

Cor angl. *Fog* *cresc. molto*

cresc. molto

poco

poco

ppp

The image displays a page of a musical score for 'L'Arlésienne no. 1'. At the top, there is a handwritten instruction in French: 'Nota. Lorsqu'en exécutera ce morceau sans le Saxophone la 1^{re} Clarinette sera chargée de ce Solo et la 2^{ème} Clarinette jouera la partie de la 1^{re}'. Below this, the tempo is marked 'Andante molto (♩=63)'. The score consists of several staves. The first staff is for Clarinet (Clar.), with dynamics 'p' and 'espress. viv.'. The second staff is for Saxophone (Saxop.), also with 'p' and 'espress. viv.'. Below these are staves for Violins (Vcl.) marked 'ppp' and 'con sordini.', and a staff for Trombones (Tromb.) marked '(mettez les sordines)' and 'ppp'. A large handwritten signature 'L. Halévy' is written across the saxophone and violin staves. The bottom section of the score includes parts for Flute (Fl.), English Horn (Cor angl.), and other instruments, with dynamics like 'cresc. molto' and 'poco'.

Figure 1.9. A portion of the fugal section in the score of Richard Strauss's *Symphonia Domestica* (Berlin: Ed. Bote & G. Bock, 1904) with the bass saxophone doubling the cello.

The image displays a page of a musical score for Richard Strauss's *Symphonia Domestica*, specifically a portion of a fugal section. The score is arranged in a standard orchestral format with multiple staves for different instruments. The page is numbered 79 in the top right corner. The music is in 3/4 time and features a complex, rhythmic fugal texture. The instruments listed on the left include:

- 3 gr. Flöten (3 piccolo flutes)
- 2 Hoboen (2 oboes)
- Oboe d'amore
- engl. Horn. (English horn)
- D Clar. (D clarinet)
- A Clar. (A clarinet)
- 2 B Clar. (2 bass clarinets)
- Bass-Saxophon. (in C) (Bass saxophone in C)
- 4 Fag. (4 bassoons)
- 8 Hörner (8 horns):
 - (E) I. III. (E-flat horns I, III)
 - (F) II. IV. (F horns II, IV)
 - (F) V. VII. (F horns V, VII)
 - (F) VI. VIII. (F horns VI, VIII)
- 4 Tromp. (4 trumpets):
 - (E) I. II. (E-flat trumpets I, II)
 - (C) III. IV. (C trumpets III, IV)
- 3 Pos. u. Tuba. (3 trombones and tuba)
- Viol. (Violins):
 - I. (Violin I)
 - II. (Violin II)
- Bratschen. (Violas)
- Violonc. (Violoncello)
- Contrab. (Contrabass)

The score shows measures 102 and 103. The bass saxophone part is marked with a first ending bracket and a dynamic marking of *ff*. The string parts (Violins, Violas, Violoncello, and Contrabass) are also marked with *ff*. The woodwind parts show various rhythmic patterns and dynamics. The brass parts include some rests and specific markings like *(In F)* and *(In F)* for the horns and trumpets. The overall texture is dense and characteristic of Strauss's late Romantic style.

15613

CHAPTER 2

THE SAXOPHONE'S PATH INTO THE TWENTIETH CENTURY

When Adolphe Sax's intention for the saxophone to be a new voice in the orchestra was not realized, musicians and composers found new applications and a new identity for the instrument. While the saxophone struggled to acquire a permanent seat in the orchestra, it was being successfully implemented into military bands in France and elsewhere. The French military bands were directly responsible for bringing the saxophone to the United States where it was quickly accepted into popular music styles. The saxophone's association with American popular music led the instrument away from classical music, eventually destroying any hope of establishing a place in the orchestra. This chapter will trace the history of the saxophone through its involvement in the military band, its migration to the United States, and its eventual implementation into popular music styles of the twentieth century.

Military Bands and Wind Bands

While the saxophone fought for acceptance in orchestral music, it flourished in the military bands of France. Influenced by their French counterparts, military bands all over Europe began to include the saxophone as part of their standard instrumentation. The employment of the saxophone in these bands led to widespread distribution of the instrument and an increase in its production. By the turn of the century, saxophones were manufactured and played all over the world.⁹⁶

In France, the original decree of 1845 was supplemented by a second Imperial decision of March 5, 1855, which prescribed that all Garde bands and infantry bands of forty musicians include a double quartet of saxophones.⁹⁷ The saxophone became consistently more prominent in the French bands through the remainder of the nineteenth century. The rest of Europe began to regard the French military band as the model for their own bands. Dunkler, Holland director of the bands, came to Paris in 1855 to hear the newly organized Garde bands and study the compositions written for their instrumentation. These pieces typically included two each of soprano, alto, tenor, and baritone saxophones. European bands began to use instrumentation similar to the French model with minor variances in numbers.⁹⁸ English military bands had saxophonists as

⁹⁶ After 1866, when his French patent and extension ran out, anyone could copy Sax's instruments. By the 1870s, Parisian makers were manufacturing saxophones in earnest with Buffet-Crampon being the largest producer of saxophones worldwide. Manufacturers in Brussels also made and patented fine saxophones and in the United States, Gus Buescher made the first prototype for Conn industries in 1885. The first Italian saxophones can be traced to 1847. British companies included Boosey & Co. and Besson & Co. By 1885, Buffet-Crampon had produced about six thousand saxophones. Paul Lindermere, *Celebrating the Saxophone* (New York: William & Morris, 1995), 20; Emanuel Regato, "Saxophone production in Italy," in *The Galpin Society Journal*, 58 (May 2005): 58, Rice, "Making and Improving," 95.

⁹⁷ Hemke, "Early History," 227.

⁹⁸ *Ibid.*, 228.

early as 1848.⁹⁹ By 1867, the Imperial Russian band had eight saxophones, and the Dutch and Belgian bands each included four saxophones. Records for 1884 indicate that Spanish bands used eight saxophones and Japanese bands had as many as ten. In 1901, Italy introduced three saxophones into their military bands.¹⁰⁰ Civilian wind bands soon followed in instituting the saxophone into their ensembles. In fact, the modern wind ensemble, to which the saxophone remains an important member, can trace its origins to the French military bands of the nineteenth century.¹⁰¹ By 1850, conductor and impresario Louis Antoine Jullien featured Charles Soualle as saxophone soloist.¹⁰² Henri Wuille would become Jullien's soloist in 1852 and would debut the saxophone in the United States with Jullien's band on December 19, 1853 at New York City's Metropolitan Hall.¹⁰³

In May of 1872, the *Garde Republicaine* band, with its eight-piece saxophone section, left France to perform at bandleader Patrick Gilmore's Boston Jubilee and thirty-

⁹⁹ James Russell Noyes, "Edward A. Lefebre (1835-1911): Preeminent Saxophonist of the Nineteenth Century" (DMA diss., The Manhattan School of Music, 2000), 7.

¹⁰⁰ Claus Raumberger and Karl Ventzke. "Saxophone." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/24670> (accessed April 1, 2012).

¹⁰¹ Hemke, "Early History,"

¹⁰² Charles-Valentin Soualle was a clarinetist and winner of a first prize at the Paris Conservatory in 1844. He was subsequently made director of music of the French Marine Band in Senegal and later became the principal clarinetist at the Opéra Comique in Paris where he was encouraged by composer and conductor Louis Jullien to learn saxophone. In the 1850s he converted to Islam and changed his name to Ali-Ben-Sou-Alle and designed a straight alto saxophone with a slightly upturned bell that he called a "turcophone." He toured extensively, playing the instrument in many European capitols, Australia, New Zealand, the Philippines, Indonesia, and China, finally settling in India where he became Director of the Royal Music for the Maharajah. After returning to France around 1860, he took out a French patent for the turcophone. Following a performance for Emperor Napoleon III in 1865 he was not heard of again. Rice, "Making and Improving," 91-2.

¹⁰³ Henri Wuille was a clarinetist and early saxophone soloist with Jullien's band during the 1850s following Soualle. He was an ardent supporter of the saxophone and one of the first to devote himself to the instrument. His performances on both clarinet and saxophone were routinely praised. Michael Eric Hester, "A Study of the Saxophone Soloists Performing with the John Philip Sousa Band" (DMA diss., University of Arizona, 1995), 15.

two other concerts throughout the United States during its three-month stay.¹⁰⁴ The Garde's performance at the Boston Jubilee and its ensuing grand tour of the United States left a lasting impression on American wind bands. It was upon hearing the Garde band that Patrick Gilmore first included saxophones in his ensemble, at a time when the saxophone was not yet popular in the United States (Fig 2.1). It was Gilmore's use in the 1870's and 80's and John Philip Sousa's use in the 1890's that were instrumental in introducing the saxophone to American audiences.¹⁰⁵ By 1904 saxophones had reached unprecedented popularity in the United States, becoming part of countless band organizations.¹⁰⁶

¹⁰⁴ Patrick S. Gilmore (1829-1892) was an Irish-American bandmaster, impresario and composer. He was known for organizing concerts of mammoth proportions, including the 1872 Boston Jubilee that included 20,000 performers. In 1873 he began his association with New York's 22nd Regimental band for which he recruited the very finest musicians. It became the foremost professional band in the United States for the next nineteen years. Frank J. Cipolla. "Gilmore, Patrick S." in *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/11152> (accessed April 1, 2012). See also Noyes, "Edward A. Lefebre," 25.

¹⁰⁵ Rice, "Making and Improving," 96.

¹⁰⁶ Hemke, "Early History," 189.



Figure 2.1 The saxophone section of Patrick Gilmore's 22nd Regimental Band, which included (l-r) Bb soprano, Eb alto (played by Lefebvre), Bb tenor, Eb baritone, and Bb Bass saxophones. From *Harpers Weekly Supplement* (September 28, 1889), 785. Printed in Albert Rice, "Making and Improving the Nineteenth-Century Saxophone," *Journal of the American Musical Instrument Society* 35 (2009): 97.

Patrick Gilmore's inclusion of the saxophone was responsible for introducing the instrument to audiences throughout the United States. Gilmore featured outstanding soloists such as Edward A. Lefebvre on every concert.¹⁰⁷ Lefebvre's performances with the Gilmore band were integral to the introduction and acceptance of the saxophone in the United States. The band toured extensively between 1873 and 1892 performing thousands of concerts.

The influence that Gilmore and Lefebvre had on the introduction and acceptance of the saxophone in the United States is undeniable. Considering Lefebvre's exposure to hundreds of thousands of listeners throughout the world, it was no exaggeration for

¹⁰⁷ Originally a clarinetist, Lefebvre was the most outstanding soloist in America from the 1870s through the 1890s and his concerts, for nearly twenty years with the Patrick Gilmore Band and later as 'The Saxophone King' with the John Philip Sousa Band, established him as an exceptional performer. He traveled extensively introducing the saxophone to audiences in Europe, America, and Africa. Determined to establish the saxophone as an instrument capable of the highest artistic expression, Lefebvre vigorously pursued a performing career as a soloist. He was also a consultant for the C.G. Conn Company, supervising the production of the first American-made saxophones. Lindemeyer, *Celebrating the Saxophone*, 30; Noyes, "Edward A. Lefebvre," 3. Dryer-Beers, "Influential Soloists," in Ingham, 37.

instrument manufacturer C.G. Conn to report on Lefebre's impact on the musical establishment:

...the result [of Lefebre's prominence] is, that a goodly portion of the reed and brass bands now include in their instrumentation one or more Saxophones, and in the near future this instrument will become as great a necessity [sic] as the clarinet now is, for the correct rendition of compositions arranged for a military band.¹⁰⁸

Vaudeville and Its Negative Connotations

Once firmly entrenched in wind bands throughout Europe and the United States, the saxophone began finding its way into popular music. This caused the instrument to become associated with the many disparaging stereotypes of these popular genres, particularly vaudeville and jazz. The social issues and specific playing techniques related to these styles began to affect the perception of the saxophone and further distance it from classical music.

By 1910, vaudeville had attained its place as a major form of show business in the United States. According to Clay Smith (1876-1930), an early fan and proponent of the saxophone, in the 1880s, "circuses and minstrels carried saxophone players to attract attention for advertising purposes as much as for their musical worth, their uses were so limited that they were really a novelty."¹⁰⁹ The never-ending search for something novel led the traveling vaudeville troops to incorporate solo and ensemble saxophone playing into their acts.¹¹⁰ Circus and minstrel saxophonists often exploited the various comic

¹⁰⁸ C. G. Conn's *Truth* 3, no. 1 (Feb., 1885): 7, quoted in Noyes, "E.A. Lefebre," 114.

¹⁰⁹ G. E. Holmes and Clay Smith, "The Saxophone is Coming Fast," *Dominant* (July 1915): 66, quoted in Bruce Vermazen, *That Moaning Saxophone: The Six Brown Brothers and the Dawning of a Musical Craze* (New York: Oxford University Press: 2001), 16.

¹¹⁰ Linemeyer, *Celebrating the Saxophone*, 32.

possibilities of the instrument's sound as well as the unfamiliarity of its appearance.¹¹¹ It was the comic potential of the saxophone that was beginning to draw musicians to the instrument more than anything else.¹¹²

From this environment appeared The Six Brown Brothers, a hugely popular saxophone playing vaudeville act of the early nineteen hundreds. The Brown Brothers were far from a serious group of musicians and despite the fame and notoriety they brought to the saxophone, did more to tarnish the perception of the saxophone as a serious classic instrument than any group in history.¹¹³

Playing the hit tunes of the day, The Six Brown Brothers were known to march or even dance across the stage. Their leader, Tom Brown, drew waives of laughter with his blackface mime and the repertoire of extramusical sounds he coaxed from his alto and soprano saxophones. With Tom, the other Brothers' extravagant clown costumes and glistening instruments promised what they consistently delivered: the latest music expertly played and a hilarious time listening to it (Fig. 10).¹¹⁴ In a review from Des Moines, Iowa in 1924, The Brother's ability to produce sound effects (in this case a wordless "conversation" with their saxophones) is explained:

The Six Brown Brothers make their saxophones do everything. Besides doing the conventional moaning and sobbing and wailing that most saxophones do, the Brown Brothers instruments have such an extensive though wordless vocabulary that in the novelty numbers they converse with all the ease they could if they actually did possess command of verbs, pronouns and the whatnot that goes to make up a conversation. Their saxophone conversation act has robbed melodrama of its catch

¹¹¹ Because production in American had not yet begun, professionals used most available saxophones and the instrument was not often available for scrutiny and would have attracted attention with its unfamiliar appearance. Vermazen, *That Moaning Saxophone*, 16.

¹¹² Ibid.

¹¹³ From its debut in 1908, the act entertained critics and theatergoers across North America in minstrelsy, vaudeville, musical comedy, and even a short film, as well as touring to high acclaim in England, Scotland, and Australia. Ibid., 11.

¹¹⁴ Ibid.

phrases, comedy of its stale jokes but preserved the spirit of both. There's a lilt and a dash and marvelous rhythm in their playing of popular numbers.¹¹⁵

Another review from the same time period echoes the ability of the act to generate less than musical sounds from their instruments:

The performance of the Brown brothers suggests that if primitive man had had the saxophone, speech might not have developed, for it would not have been needed. These horns do everything and with a quaint sufficiency.¹¹⁶

Still another review highlights not only their comic talents but suggests that when they so desired, The Six Brown Brothers were capable of a very musical performance:

The six Brown Brothers . . . make one forget the bitter hatred which has been gathering for weeks in regard to the neighbor's boy who is resolved to study the saxophone. Their saxophones talk and laugh. They engage in repartee and weep when the repartee hurts. Then, suddenly, they resolve to quit all nonsense and do some real music. And, as one listens, one grows tender hearted regarding the neighbor's boy, who is in the early stages of the saxophone, for the Brown sextette produces music as mellow and golden as sounds can be, that enchant the ear.¹¹⁷

¹¹⁵ "Glorified Vaudeville with at least three Top-Notchers and Julian Added-Berchel," unidentified newspaper, (Des Moines, Iowa) February-March 1924; quoted in Vermazen, *That Moaning Saxophone*, 237.

¹¹⁶ *Ibid.*, 236.

¹¹⁷ "At the Majestic," unidentified newspaper (Buffalo, New York), n.d., quoted in Vermazen, *That Moaning Saxophone*, 236.



Figure 2.2. The Six Brown Brothers in full regalia (ca. 1916). Image from <http://vitaphone.blogspot.com/>.

Because of the “low brow” connotations of this form of entertainment and the unorthodox playing techniques that were necessary in these ensembles, a negative stereotype developed regarding the saxophone. With the increasing inclusion of the saxophone in popular music in the 1910s and 20s, and due in no small part to its success in wind bands and vaudeville acts, a “saxophone craze” began in the United States, creating an explosion of amateur saxophonists that did nothing to improve the instrument’s reputation in the classical world. The Six Brothers could be responsible for the initiation of the American saxophone craze.¹¹⁸ In 1921, a piece in *Billboard* claimed, “To this sextet goes the credit for making the saxophone popular.”¹¹⁹

The “saxophone craze” began around 1914, when saxophones “increased and multiplied so that the instrument became, of all instruments, the best known to that

¹¹⁸ Mark Hulsebos, *Cecil Leeson: The Pioneering of the Concert Saxophone in America from 1921 to 1941* (PhD. diss., Ball State University, 1989), 15-16, quoted in Vermazen, *That Moaning Saxophone*, 13.

¹¹⁹ Edward Haffel, “B. F. Keith’s Palace New York,” *Billboard*, (July 2, 1921) 9, quoted in Vermazen, *That Moaning Saxophone*, 12.

general public that frequents dance halls and likes to dine or sup to music.”¹²⁰ From 1919-1925 American companies manufactured and sold over 500,000 saxophones. Between the years 1921 and 1924 the saxophone outsold all other instruments, producing an onslaught of amateur saxophonists. By 1930 over a million saxophones existed throughout the world.¹²¹ Marvin Kirvin wrote this regarding the craze:

There have since been similar crazes (accordions, and banjos, for example, are cyclically popular) and it is not unusual for one instrument to be a “best seller.” But for sheer volume, still, no one instrument has yet attained the mass appeal of the saxophone during the 1920’s.¹²²

Unfortunately, this distinction had an adverse effect on the perception of the saxophone. The fact that Kirvin compared the “saxophone craze” to those of the accordion and banjo reflects how the instrument was being transformed into a “novelty” in popular consciousness. The popularity of the saxophone itself in the early twentieth century can be traced to ensembles touring the vaudeville circuit.¹²³ Also, starting in the late 1910s, the instrument became a standard of dance bands. In 1926 the first book on orchestration for such ensembles declared that the “backbone” of the modern dance orchestra was a trio of saxophones and that “the saxophone individualizes the American dance orchestra,” separating it from other ensembles that did not include the saxophone.¹²⁴ By the early 1920s “hot jazz” styles were becoming established in dance bands, resulting in the emergence of saxophone soloists that culminated with the

¹²⁰ Percy A. Scholes, *The Oxford Companion to Music*, 10th ed., ed. John Owen Ward (Oxford: Oxford University Press, 1970), 914, quoted in Vermazen, *That Moaning Saxophone*, 14.

¹²¹ Joseph M. Murphy, “Saxophone Instruction in American Music Schools before 1940,” *The Bulletin of Historical Research in Music Education* 18 (September 1996): 6.

¹²² Martin Kirvin, “A Century of Wind Instrument Manufacturing in the United States” (PhD diss., University of Iowa, 1961), 122, quoted in Murphy, “Saxophone Instruction,” 6.

¹²³ Richard Ingham, “The Saxophone Quartet,” in *The Cambridge Companion*, 71.

¹²⁴ Arthur Lange, *Arranging for the Modern Dance Orchestra* (New York: A. Lange, 1926) ix, 40, quoted in Vermazen, *That Moaning Saxophone*, 14.

saxophone becoming, arguably, the most popular instrument in jazz.¹²⁵ This newfound enthusiasm for the saxophone began to influence whatever respect, if any, the saxophone had attained in the classical world.

With the “saxophone craze” at its peak, the combination of jazz, vaudeville and amateur players had led to saxophone techniques that were distasteful to classically trained musicians. These included the various non-musical sounds employed by the Six Brown Brothers as well as techniques idiosyncratic to jazz such as scoops, bends, and heavy, wide vibrato. H. Benne Henton was a saxophone soloist with the Patrick Conway band from 1916-19 and the John Philip Sousa band from 1919-20.¹²⁶ Being that Henton’s career was peaking at the height of the saxophone’s popularity, he was in a unique position to comment on the affect that the amateur players and popular styles had had on how the saxophone was being played. An article in the May 1923 issue of *Jacob’s Band Monthly* presents what seems to be a “state of the saxophone address” by H. Benne Henton.¹²⁷ The following excerpt suggests what audiences may have experienced during the early years of the “saxophone craze.” In response to a question regarding “good tone on the saxophone,” Henton said this:

Jazz foolishness and trick saxophone playing seem to be a thing of the past. Of course there may be a few orchestras in remote places doing that sort of thing, but I have not heard a wail, or a sneeze, or any of those similar disgusting things for over a year. Within that time I have listened to nearly all of the more prominent dance and café orchestras in the east

¹²⁵ Vermazen, *That Moaning Saxophone*, 14.

¹²⁶ Henton was apparently inspired to begin playing the saxophone after hearing the popular saxophone comedian, Knox Wilson. In 1904, Henton took part in a performance of Strauss’s *Symphonia Domestica*, where he was chosen by Strauss to lead the saxophone section in the first performance of the work using the instrumentation designated by the composer. He was also one of the first saxophonists to record extensively. The October 1916 issue of Victor’s “record supplement called him, ‘The Paganini of the Saxophone.’ Harry Burdette Hindson, “Aspects of the Saxophone in American Culture, 1850-1980” (DMA diss., University of Wisconsin, 1992), 21, quoted in Hester, “Saxophone Soloists,” 48-9.

and middle west . . . it has also marked the exit of those who could not read but who managed to get by for a time with faking.”¹²⁸

As H. Benne Henton had observed, an upswing in saxophone playing began in the early 1920s. There was a resurgence of symphonic and concert music that incorporated the saxophone and the first serious concert saxophonists appeared in the 1930s. Cecil Leeson, Sigurd Rascher, and Marcel Mule all brought legitimacy to the saxophone through concertizing, teaching, and promotion of the instrument. This inspired twentieth-century composers to write many of the standard pieces in the instrument’s modern repertoire. Paul Creston’s *Sonata Op. 19* (1939) was written for Leeson; Jacques Ibert’s *Contertino de Camera* (1935) and Alexander Glouzanov’s *Concerto in Eb, Op. 109* (1934) were written for Rascher.¹²⁹ But, like the earlier compositions for the saxophone, they are solo pieces written to showcase the saxophone’s capabilities. They have done nothing to enhance the saxophone’s likelihood of attaining a permanent position in the orchestra.

The perception of the saxophone as a classical instrument remained unchanged through the 1920s. The distinctive techniques associated with vaudeville and jazz music were unpopular among classical musicians. Even some early concert saxophonists found these techniques to be counter-productive in the saxophones struggle for acceptance as serious instrument. Sigurd Rascher shared his own beliefs regarding the influence of jazz on modern saxophone playing and the effect it was having on the perception of the saxophone as a classical instrument.

There is one musical instrument of modern times which has given rise to more controversies than any other. This new arrival has aroused disputes, calumnies, hatred, admiration, praise, enthusiasm, profanation,

¹²⁸ *Jacob’s Band Monthly*, May 1923, 74-5, 77; quoted in Hester, “Saxophone Soloists,” 57.

¹²⁹ Liley, “The Repertoire Heritage,” in Ingham, 55.

vulgarization, and so forth . . . with a tone that penetrates in the hearers heart . . . stimulating it-in accordance with its musical-ethical expression- to enthusiastic support or to scornful rejection . . . Then came the rapid development of dance music, chiefly in America in form of jazz. The saxophone with its unrivaled power of expression . . . was welcomed in this field . . . Today, the vulgar, obtrusive sound of the saxophone is so generally accepted that it is commonly known as “saxophone tone.” . . . No wonder that serious musicians disdain the saxophone!¹³⁰

The saxophone’s use in various popular music styles of the early twentieth century resulted in the instrument being completely and decisively disregarded as a serious classical instrument. The saxophone’s ability to produce unmusical comedic sounds made it impossible to command respect from orchestral composers. What little progress the saxophone had made in becoming an orchestral instrument was completely undermined by its association with popular music. In the view of classical musicians and composers, the perception and reputation of the saxophone had been permanently tarnished as a result of its success in popular music. This attitude has remained fundamentally unchanged since the early twentieth century.

Vincent “Jimmy” Abato, who was twenty-five when he was named principal clarinetist with the New York Philharmonic, sums up the effects of popular music on the view of the saxophone. Abato was a closet saxophonist who had been playing the instrument since he was thirteen and often performed in jazz clubs after his concert hall gigs to supplement his income. He was one of the first American saxophonists to develop a viable career playing classical music. He received a scholarship from the Juilliard School of Music to study clarinet: “But at Juilliard, the saxophone was taboo. When my

¹³⁰ Sigurd Rascher, “A Musical Instrument of Modern Times,” <http://www.classicsax.com/index.php/adolphe-sax-institute/53-a-musical-instrument-of-modern-times>; (accessed 19 June 2011).

professor learned I was playing saxophone he said, ‘Don’t you ever mention that instrument in this class or I’ll take that scholarship away from you.’”¹³¹

¹³¹ Segell, *The Devil’s Horn*, 254.

Conclusion

From its earliest days, the saxophone was well received by the musical community. Approving reviews from outstanding composers and musicians who supported Adolphe Sax quickly followed his introduction of the saxophone. Many believed the saxophone had all the qualities to enhance the orchestra's sound and thus predicted its success and rapid implementation in the orchestra. Some composers wrote parts for the saxophone in an attempt to implement the instrument in the orchestra, and many stated they believed the saxophone had many qualities that could enhance and expand the orchestra's sound. Composers predicted its success and rapid implementation in the orchestra.

Sax's initial intent was to create a bass instrument that was an alternative to the bassoon and ophicleide, neither of which Sax was particularly fond of. A gifted and self-assured instrument maker, Sax eventually produced an entire family of saxophones that many felt could bridge the gap in timbre between the brass and string sections of the orchestra. Hector Berlioz, especially, hailed the superiority of Sax's designs and felt the instrument would make a fine addition to the orchestra. Other prominent composers of the time, including Rossini and Meyerbeer, were also proponents of the newly invented saxophone. All facts considered, it becomes clear that there were other mitigating circumstances that negatively influenced the perception of the saxophone.

Because of his many achievements and fierce defense of his skills, Sax created an immediate rivalry with the established instrument manufacturers in Paris. His competitors purposely sabotaged the introduction of the saxophone and its use in the orchestra. Feeling threatened by Sax and the growing popularity of his instruments, his rivals

formed a unified front against him and were able to influence musicians and composers to reject the instrument.

The saxophone's omission from the orchestra was also due to the lack of professionally trained players. Although Adolphe Sax himself was appointed as instructor of saxophone at the Paris Conservatory in the 1860s, he was dismissed after only a few years and lessons were not offered again until 1942. Consequently the saxophone, on the limited occasions it was required, was played or doubled by musicians who considered it a secondary instrument. This lack of competent teachers and players resulted in unsatisfactory performances that gave composers an inaccurate representation of the possible applications of the saxophone.

The saxophone continued to be overlooked through the remainder of the nineteenth century, well after Sax's patents had run out and his rivals had accomplished their objective. The orchestra continued to include new and improved instruments with the exception of the saxophone, which was making its way into other genres. It was rapidly assimilated into military bands and by the turn of the century could be found in vaudeville acts and other similar genres as a novelty instrument. All of these factors combined suggest why the saxophone never became part of the orchestra. Whether these factors were intentional, as was the case during the instrument's introduction, or consequential due to its popularity in mainstream music, it has left the saxophone with a limited repertoire that begins nearly ninety years after its invention.

Epilogue

The saxophone has endured a tumultuous history. From the struggles of its genius but often-maligned inventor, Adolphe Sax, to its eventual success in twentieth-century popular music, the saxophone has fought an uphill battle for acceptance as a classical instrument. The saxophone is now so completely associated with popular music that most people, musicians included, would find it hard to believe that Adolphe Sax created the instrument to be a bass voice in the orchestra. The saxophone has been undermined, sabotaged, misplayed, and victimized by political, social, and professional prejudice. Yet, despite these obstacles the saxophone has become one of the most popular and recognized instruments of the past hundred years, having proven its versatility in a wide range of music styles. But its path toward acceptance as a classical instrument has been difficult, and the saxophone continues to suffer from long-held misconceptions and stereotypes.

It is difficult to state with certainty what Adolphe Sax envisioned as the ideal orchestral application for the saxophone. However, an excellent illustration of the saxophone's orchestral capabilities is Sergey Prokofiev's *Lieutenant Kijé*, the composition that inspired this thesis. In *Kijé*, the tenor saxophone performs as an equal to the standard orchestral instruments, alternating between harmonic and melodic functions throughout the work. Prokofiev does not reserve the saxophone for select solo sections. There are important and exposed solos in *Kijé*, but the saxophone is repeatedly used in combination with other instruments and blends beautifully with the flute, clarinet, oboe, bassoon, horn, trombone, and cello. The saxophone is treated as an ensemble member, not as a novel-sounding outsider that briefly makes an appearance as a solo instrument.

The saxophone appears in all movements of *Kijé*, performing a duet with nearly all of the aforementioned instruments. The composition proves that the early descriptions of the saxophone's quality of tone and ability to blend with other instruments were accurate.

Lieutenant Kijé reveals the true potential of the orchestral saxophone.

Unfortunately, the saxophone was overlooked as a serious classical instrument for nearly a century, and an opportunity to expand the possibilities of the orchestra was lost.

Bibliography

- Anthrop, William Foster. *Hector Berlioz; Selections from his Letters, and Aesthetic, Humorous, and Satirical Writings*. New York: Henry Holt and Company, 1879.
- Deans, Kenneth N. "A Comprehensive Performance Project in Saxophone Literature with an Essay Consisting of Translated Source Readings in the Life of Adolphe Sax." DMA diss., University of Iowa. 1980.
- Hemke, Frederick L. "The Early History of the Saxophone." DMA diss., University of Wisconsin, 1975.
- Hester, Michael Eric. "A Study of the Saxophone Soloists Performing with the John Philip Sousa Band: 1883-1930." DMA diss., University of Arizona, 1995.
- Horwood, Wally. *Adolphe Sax 1814-1894, His Life and Legacy*. England: Egon Publishers Ltd. 1980.
- Howe, Robert S. "The Invention and Early Development of the Saxophone, 1840-55." *Journal of the American Musical Instrument Society* 29 (2003): 97-180.
- Ingham, Richard, ed. *The Cambridge Companion to the Saxophone*. Cambridge: Cambridge University Press, 1998.
- Kochnitzky, Léon. *Adolphe Sax and his Saxophone*. 4th ed. Chicago: North American Saxophone Alliance, 1985.
- Kool, Jaap. *The Saxophone*. Translated by Lawrence Gwozdz. Baldock, Hertfordshire, England: Egon Publishers, 1931/1987.
- Lindemeyer, Paul. *Celebrating the Saxophone*, New York: William Morrow, 1996.
- Macdonald, Hugh. ed. *Berlioz's Orchestration Treatise, A Translation and Commentary*. Cambridge: Cambridge University Press, 2002.
- McBride, William. "The Early Saxophone in Patents 1838-1850 Compared." *The Galpin Society Journal*, 35 (March 1982): 112-121.
- Murphy, Joseph M. "Saxophone Instruction in American Music Schools before 1940." *The Bulletin of Historical Research in Music Education*, 18 (September 1996): 1-12.

Noyes, James Russell. "Edward A. Lefebre (1834-1911): Preeminent Saxophonist of the Nineteenth Century." DMA diss., The Manhattan School of Music, 2000.

Raganato, Emanuele. "Saxophone Manufacture in Italy: A Short Survey." *The Galpin Society Journal* 58 (May 2005): 58-65.

Rascher, Sigurd. "A Musical Instrument of Modern Times," Available from <http://www.classicsax.com/index.php/adolphe-sax-institute/53-a-musical-instrument-of-modern-times>; Accessed 16 June 2011.

Rice, Albert R. "Making and Improving the Nineteenth-Century Saxophone." *Journal of the American Musical Instrument Society* 35 (2009): 81-122.

Segell, Michael, *The Devil's Horn: The Story of the Saxophone, From Noisy Novelty to King of Cool*. New York: Farrar, Straus and Giroux, 2005.

Vermazen, Bruce. *That Moaning Saxophone: The Six Brown Brothers and the Dawning of a Musical Craze*. New York: Oxford University Press, 2001.

Waterhouse, William, and Lyndesay G. Langwill. *The New Langwill Index: Dictionary of Musical Wind-instrument Makers and Inventors*. London: Bingham, 1993.