

## Berlioz, Kastner, and Sax: Writing for and about the Early Saxhorn and Saxophone

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When Adolphe Sax moved to Paris in October of 1842 he quickly made friends with many influential members of the city's musical community, among them the composers Jean-Georges Kastner and Hector Berlioz, both of whom were authors of important treatises on orchestration. This article reveals how Kastner's and Berlioz's writings helped to promote Sax's new saxhorn and saxophone, demonstrates that the saxophone in the early years of its development was considered a brass instrument, and also identifies early works for Sax's "new" instruments by these composers.

### The saxophone

In the late 1830s Adolphe Sax was still working in Brussels in the atelier of his father, Charles-Joseph Sax, a leading builder of wind instruments. At this time Adolphe's principal claim to fame was his "improvements" to the bass clarinet, but he must have been at work also on the saxophone. In August of 1841 the younger Sax exhibited some of his musical instruments at the Brussels Industrial Exhibition, separately from his father. He enjoyed considerable success with the clarinets he displayed, earning a medal. But even though he had a saxophone in the exhibition hall, he apparently did not display it officially:<sup>1</sup> a report on this exhibition mentions a "Saxophone-basse, en cuivre, Réflecteur et bec, de nouvelle invention" ("bass saxophone, in brass, [with a] reflector and mouthpiece, newly invented").<sup>2</sup>

In March of 1842, Berlioz wrote about brass instruments for the *Revue et gazette musicale* de Paris, concentrating on the ophicleide. Near the end of this article he wrote about an instrument he apparently had not seen, but had been reported to him by a recent visitor to Sax's workshop in Brussels:

A precious invention for the beauty of the sound it gives to the ophiclides is that which has been made by Sax in Brussels. It involves the replacement of the mouthpiece (*embouchure*) [of the ophiclède] with the mouthpiece (*bec*) of a clarinet. Ophiclides thus become brass instruments with reeds; the difference in the sonority and timbre that results from those [instruments] of this system is so much to their advantage ... that very probably the *ophiclède a bec* will be in general usage in a few years.<sup>3</sup>

Berlioz calls this instrument a "beaked ophicleide," but there can be little doubt that he refers here to an early iteration of the saxophone.

Just a few weeks later, probably in early June of 1842, Sax visited Paris, where he met François Habeneck, conductor of the Opéra and director of the orchestral concerts at the Conservatoire, and Berlioz. He apparently demonstrated his bass clarinet and saxophone for Berlioz and also at a private performance organized by Habeneck at the Conservatoire, for Daniel-François-Esprit Auber, the director of the Conservatoire, and a few professors.<sup>4</sup> The impression he made can be gauged by the several reports that appeared shortly thereafter in the Paris musical press, among them an article by Berlioz in the *Journal des débats*:

The *Saxophon* ... is an instrument of brass rather similar to the ophicleide in its form, and supplied with nineteen keys. It is played not with a cupped mouthpiece (*embouchure*) ... but with a mouthpiece (*bec*) similar to that of the bass clarinet. The *Saxophon* will thus be the head of a new family, that of brass instruments with reeds. Its range is three octaves, from *BB♭* below the bass staff.... As to its sonority, it is of such a nature that I do not know a low instrument in use at present with which it can be compared. It is full, smooth, vibrant, and with enormous force, and susceptible to mellowness. This is much superior, to my thinking, to the low notes of the ophicleides, for their trueness, for the security of the tone, and moreover for its completely new character that does not resemble the timbres that one hears in today's orchestra.<sup>5</sup>

In October of 1842 Sax moved to Paris, where he set up shop in the rue Neuve Saint-Georges.<sup>6</sup> One of his principal objectives was to create entire series of instruments of the same basic type, homogeneous from top to bottom, with the same proportions and the same fingering. Specifically concerning valved brass instruments, he also sought to minimize sharp bends in the tubing and extend their range.

Kastner published his *Traité d'instrumentation* in 1837 and a companion volume, *Cours d'instrumentation*, in 1839. Berlioz's *Grand traité d'instrumentation et d'orchestration modernes* appeared early in 1844,<sup>7</sup> at very nearly the same time Kastner published supplements to both of his treatises.<sup>8</sup> All three of these publications had been substantially completed in the latter part of 1843, but were not actually printed until early in the following year.

The first edition of Berlioz's treatise mentions only the bass saxophone in *B♭*, ignoring Sax's other innovations. In earlier writings on instrumentation in various periodicals he had referred to the saxophone as a brass instrument, but in the first edition of the *Grand Traité* it appears in the section devoted to "Reed Instruments" (*Instruments à anche*). Here the author relates the instrument specifically to the clarinet family, while still recognizing its similarity to the ophicleide and that it is made of brass (Figure 1). He further states,

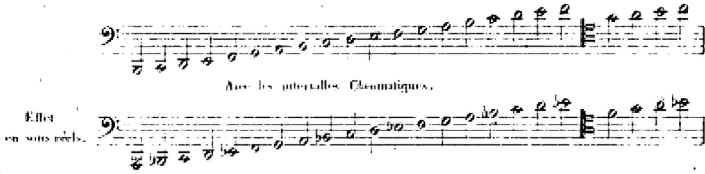
The timbre of the saxophone has something of the laborious and sad in the high notes. The low notes, on the contrary, are of a majesty that is, so to say, pontifical. It possesses like the clarinets the capability of increasing and diminishing the sound, which results, in the lower extremity of its range, in extraordinary effects that are absolutely appropriate. The saxophone, in pieces of a character mysterious and solemn, is, in my opinion, the most beautiful low voice [to be heard] up to the present day. It possesses at the same time [something of the character] of the bass clarinet and the harmonium, which

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## LE SAXOPHONE.

Est un grand instrument grave en cuivre, inventé par Ad. SAX qui lui a donné son nom. Il se joue, non pas avec une embouchure comme les Ophlééliques aux quels il ne ressemble sous aucun rapport, mais avec un bec de Clarinette Basse. Nous n'hésitons donc pas à le ranger parmi les membres de la famille des Clarinettes.

Le Saxophone est un instrument transpositeur en *S<sup>b</sup>*; son étendue est celle-ci.



Le Trille est possible sur toute l'étendue de cette gamme, mais je crois qu'on n'en devra faire qu'un usage très réservé.

Le timbre du Saxophone a quelque chose de pénible et de douloureux dans les sons aigus; les notes graves, au contraire, sont d'un grandiose pur; ainsi dire pontifical. Il possède comme les Clarinettes la faculté d'enfler et d'étendre le son, d'où résultent, surtout dans l'extrémité inférieure de son échelle, des effets inouis qui lui sont tout à fait propres. Le Saxophone, pour des morceaux d'un caractère mystérieux et solennel, est, à mon avis, la plus belle voix grave connue jusqu'à ce jour. Il tient à la fois de la Clarinette basse et de l'orgue expressif; ce qui indique suffisamment, je crois, qu'on ne doit, en général, l'employer que dans les mouvements lents. Il serait aussi admirable mis en évidence dans un *Solo*, qu'employé à soutenir et à colorer l'harmonie d'un ensemble de voix et d'instruments à vent.

Malgré la force extraordinaire de sa sonorité il est peu propre aux effets énergiques et brillants de la musique militaire.

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Figure 1: Berlioz, *Grande traité de instrumentation et d'orchestration* [1844], p. 151.

indicates sufficiently, I believe, that one should in general employ it only in slow movements. It can also be employed admirably in a solo that sustains and colors the harmony of an ensemble of voices and of wind instruments.

In spite of the extraordinary force of its sonority it is not very appropriate for energetic and brilliant effects in military music.<sup>9</sup>

Kastner discusses the saxophone in the supplement to his *Traité*—significantly, in the section devoted to brass instruments.<sup>10</sup> He gives four sizes of the instrument: soprano



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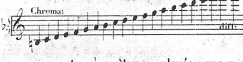
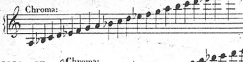
Le Saxophone est un instrument en cuivre armé de dix-sept clefs qui a pour embouchure une espèce de bec de clarinette, (le bec est très évasé à l'intérieur; l'anche ainsi que le bout du bec sont à peu près les mêmes que pour la Clarinette basse.) C'est donc un instrument en cuivre à anche, mais non point, comme on l'a dit, un Ophicléide perfectionné avec bec de Clarinette, car il diffère tout-à-fait de ce dernier par sa structure et par ses dimensions. Sous le rapport de la force et de la qualité du son, cet instrument possède de dès son origine une supériorité que beaucoup d'autres mettent des siècles à atteindre.

Il existe une famille entière de Saxophones, savoir:

- 1<sup>o</sup> Le Saxophone Soprano.
- 2<sup>o</sup> Le Saxophone Alto ou Ténor.
- 3<sup>o</sup> Le Saxophone Basse.
- 4<sup>o</sup> Le Saxophone Contrebasse.



Il y a deux sortes de Saxophones Soprano: l'un en UT, l'autre en SI b, dont voici l'étendue:


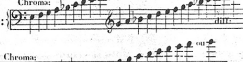
Saxophone en UT:  Effet: 

Saxophone en SI b:  Effet: 

Ces trois octaves ne peuvent guère être employées que par des virtuoses, on fera donc bien de s'en tenir pour l'orchestre à deux octaves et demie, par exemple:



Il y a deux sortes de Saxophones Alto ou Ténor, l'un en MI b, l'autre en FA, voici leur étendue:

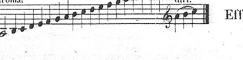

Saxophone Alto ou Ténor en MI b:  Effet: 

Saxophone Alto ou Ténor en FA:  Effet: 

Dans l'orchestre on fera bien de n'employer que l'étendue suivante:



Il y a des Saxophones Basses en UT et en SI b, en voici l'étendue:



Saxophone Basse en UT:  Effet: 

Saxophone Basse en SI b:  Effet: 

Dans l'orchestre on fera bien de n'employer que l'étendue suivante:

Il y a deux espèces de Saxophones Contrebasse: en FA, et en MI b, dont suit l'étendue:

Saxophone Contrebasse en FA:  Effet: 

Saxophone Contrebasse en MI b:  Effet: 

**Figure 2:** Ranges for saxophones from Kastner, *Supplément au Traité general d'instrumentation* [1844], 39.

in C or B $\flat$ , alto or tenor in F or E $\flat$ , bass in C or B $\flat$ , and contrabass in F or E $\flat$ , though it is unlikely that all these sizes were actually in production at this time (Figure 2). Kastner writes,

The saxophone is a new instrument that has been invented by Mr. Sax the younger.... This instrument is destined to take an important place in our orchestras and in our military music, as much from the nobility and beauty of its timbre as from the immense resources that it presents.

The saxophone is an instrument of brass with seventeen keys that has for its mouthpiece a type of clarinet beak.... It is thus a brass instrument with a reed but definitely not, as one [writer] has stated, an ophicleide perfected with a beak, because it differs completely from the latter by its structure and its dimensions.<sup>11</sup>

### The saxhorn

Adolphe Sax was slow to adopt the name “saxhorn,” initially preferring to call the members of what eventually became his best-known family of brasswinds “cylinder bugles” (*bugles à cylindres*), a term that clearly demonstrates the relationship of these instruments to the flugelhorn. The term apparently was coined by his father, Charles-Joseph Sax, who displayed *bugles à cylindres* and *trombones à cylindres*, as well as *cornets à pistons* and *à cylindres*, at the 1841 Brussels Exhibition.<sup>12</sup> M. E. Perrot, in his *Revue de l'exposition des produits de l'industrie nationale en 1841*,<sup>13</sup> remarks further on Charles-Joseph's brass instruments, recommending the *bugle à cylindres* as a replacement for the keyed trumpet: “The *bugle à cylindres*, as constructed by Mr. Sax [i.e., Charles-Joseph], seems to us to be destined to replace advantageously the ordinary keyed trumpet, for it combines all the qualities [of the latter instrument] with a much greater accuracy and a much greater evenness of sound.”<sup>14</sup>

Adolphe Sax's patent application of 1843 has often been characterized as the “saxhorn patent,” but the word “saxhorn” does not appear in the documentation (Figure 3).<sup>15</sup> The detail from Sax's 1843 patent in Figure 3a shows one of the bugles/flugelhorns depicted on the patent application.<sup>16</sup> It features Sax's version of *Berliner-Pumpfen*, or Berlin valves, calling them simply “cylinders” (*cylindres*). All of the instruments in the 1843 patent drawing are bell-front models, rather than the upright form, as shown in the 1845 patent drawings, which later became standard.<sup>17</sup> Beginning in mid-1844 the term “cylinder bugles” (*bugles à cylindres*) came to be used interchangeably with “saxhorn,” and not long thereafter the latter term largely supplanted the former. As is well known, the Distin Family Brass Ensemble, with their adoption of Sax's new brass instruments in early 1844, not long after the concert at Salle Herz (see below), was closely involved with this transition in terminology.<sup>18</sup>

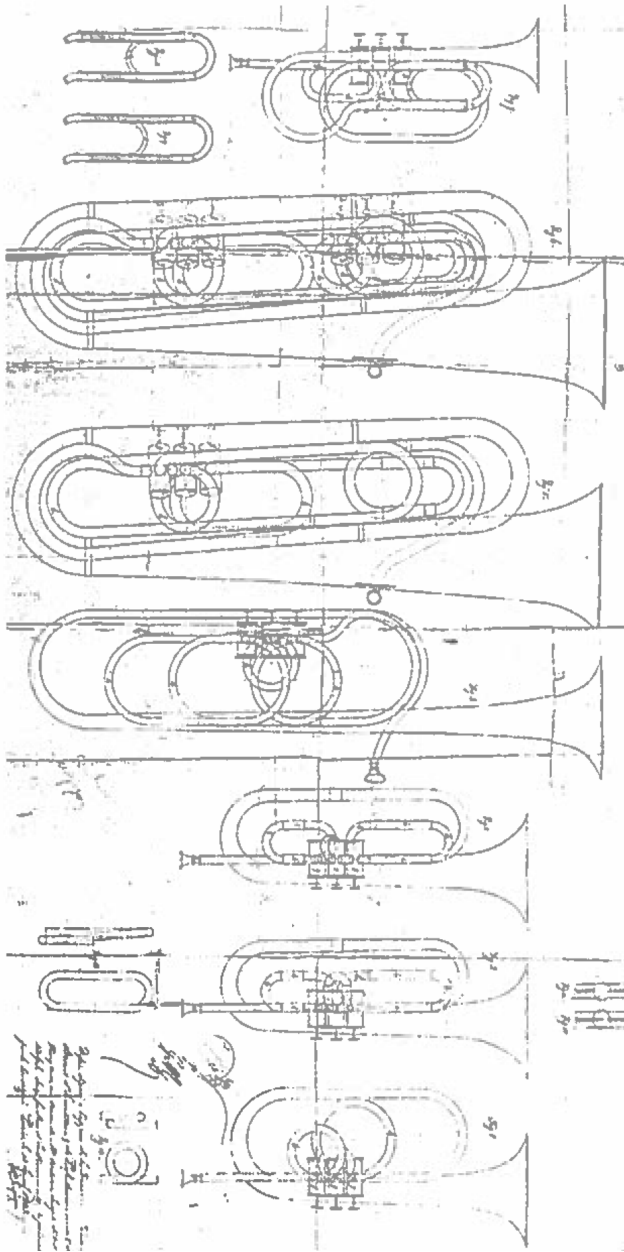
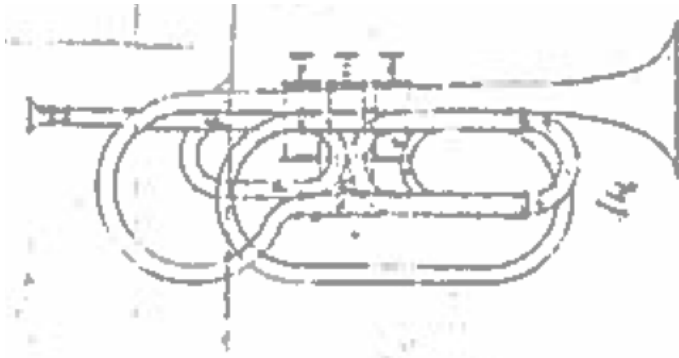


Figure 3: Drawings of bugles from Sax's 1843 patent.



**Figure 3a:** Detail: no. 3 from Figure 3.

In the supplement to his *Traité d'instrumentation*, Kastner devotes one section to the *bugle à pistons ou à cylindres* (flugelhorn) (Figure 4). He shows ranges for five different sizes of the instrument, *petit bugle* in  $E\flat$ , *bugle* in  $B\flat$ , *tenor* in  $E\flat$ , *bass* in  $B\flat$ , and *contrabass* in  $E\flat$ . All typically have three cylinders, according to Kastner, but some of the larger models have four or five.<sup>19</sup>

In late 1843, as both Kastner and Berlioz were putting the finishing touches on their new works on orchestration, additional information regarding Sax's new "cylinders" as applied to brass instruments appeared in the Parisian musical press. In August of that year Castil-Blaze praised Sax's "new" valves in an article in *La France musicale*,<sup>20</sup> and just a few weeks later Sax himself placed an advertisement for his *bugle à cylindre, trompette à cylindre, Tenor-Basse, Basse, et Contrebasse d'harmonie à trois, quatre, cinq, et six cylindres* in the same periodical (Figure 5).<sup>21</sup> Also in September of 1843, Henri Blanchard published an article about Sax in the *Revue et gazette musicale de Paris*, praising Sax's bugles for their superior sound and superior cylinder valves. In November of 1843 Gaetano Donizetti's opera *Dom Sébastien, Roi de Portugal* premiered at the Paris Opéra. In the supplement to his *Cours d'orchestration*, Kastner claims that Donizetti employed "two Bugles à 3 cylindres in  $B\flat$  (perfected by Mr. Sax the younger)."<sup>22</sup> If this is true, the occasion marks the first known appearance of the *bugle à cylindres* (i.e., saxhorn) in a public performance, yet no surviving performance materials for the opera reveal a part for this instrument, and Mary Ann Smart's critical edition of the opera does not mention the instrument.<sup>23</sup>

56 M<sup>r</sup> SAX fils, facteur distingué confectionne des Bugles à trois Cylindres, d'après ce système, d'une rare perfection. Il en a institué toute une famille savoir:

1<sup>o</sup> PETIT BUGLE À TROIS CYLINDRES EN MI  $\flat$ , dont voici l'étendue:

2<sup>o</sup> UN BUGLE EN UT OU EN SI  $\flat$ , dont l'étendue est:

3<sup>o</sup> UN BUGLE TÉNOR EN FA OU EN MI  $\flat$ , dont l'étendue est:

4<sup>o</sup> UN BUGLE BASSE EN SI  $\flat$ .

5<sup>o</sup> UN BUGLE CONTREBASSE EN MI  $\flat$ .

Les étendues que nous venons de donner cidessus sont celles des Bugles à trois Cylindres, mais M<sup>r</sup> A. Sax fils en confectionne d'autres, notamment pour les tons graves SI  $\flat$  et MI  $\flat$ , à quatre et même cinq Cylindres; les 4<sup>o</sup> et 5<sup>o</sup> Cylindres servent à donner certaines notes graves qui n'existent pas sur le Bugle à trois Cylindres; en général les notes graves augmentent en proportion des cylindres, c'est-à-dire qu'on peut donner plus de notes graves avec 4 Cylindres qu'avec 3, et avec 5 qu'avec 4 Cylindres.

Sur ces instruments on peut jouer toute espèce de musique, dans tous les caractères et dans tous les mouvements, avec autant de facilité que de justesse.

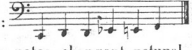


Comme on vient de le voir, dans toutes les étendues précédentes, les notes suivantes:  manquent, et ne peuvent être données que par des Bugles à 4 et à 5 Cylindres; ces notes changent naturellement de hauteur suivant l'Instrument, ainsi pour le Bugle en SI  $\flat$  basse elles représentent:  pour le Bugle Contrebasse en MI  $\flat$ , elles représentent:  &c.

Figure 4: Jean-Georges Kastner, *Supplément au Traité general d'instrumentation* [1844]), p. 36.



MANUFACTURE D'INSTRUMENS DE MUSIQUE, EN CUIVRE ET EN BOIS,  
**D'ADOLPHE SAX ET C<sup>IE</sup>,**  
 10, rue Neuve-Saint-Georges.  
 Nouveaux Instrumens : Bugle à cylindre ; — Trompette à cylindre ;  
 — Cor ; — Trombone ; — Ténor-Basse ; — Basse ; — Contre-Basse  
 d'harmonie à trois, quatre, cinq ou six cylindres ; — Nouvelles clari-  
 nettes soprano, alto et basse ; — Instrumens ordinaires, etc., etc.  
 Voir dans *la France Musicale* du 27 août 1843, l'article de M. CASTIL-  
 BLAZZ, sur les instrumens de l'invention de M. Adolphe Sax.

Figure 5: Adolphe Sax, advertisement in *La France musicale*, 24 September 1843.

### Early performances with Sax's "new" instruments

Sax's "cylinder bugles" and his saxophone were very much in evidence in an informal gathering he organized at his atelier in December 1843, as described in an unsigned report in the *Revue et gazette musicale*.

In the course of the week just passed, an imposing *séance* took place at Mr. Adolphe Sax's establishment. This young and skillful artist, whose incontestable talent has aroused up to this time such unjust opposition, assembled in his workshop many judges competent to submit to their disinterested appreciation the different instruments of his invention that have made him so many enemies. Messieurs Meyerbeer, Spontini, Berlioz, Kastner, General Rumigny, and many distinguished composers and journalists listened with keen interest to the *clarinette-basse* and *clarinette-soprano*, both perfected by Mr. Adolphe Sax. The *trompette à cylindres*, the *bugle à cylindres*, the brilliant sonority of which was demonstrated by Mr. Arban, the *bugle basse*, the *bugle-contrebasse*, and above all the *saxophone*, a true creation of genius, were heard with admiration by this elite audience.<sup>24</sup>

The report does not identify the music played on this occasion, but just a few weeks later, on 3 February 1844, Berlioz organized a concert of his own music at the Salle Herz. Probably at Sax's instigation, Berlioz arranged a *Hymne* for a sextet of Sax's instruments, including cylinder bugles, saxophone, and soprano and bass clarinets. Maurice Bourges reviewed the concert in the *Revue et gazette musicale*.

The *Hymne*, transcribed for six wind instruments of Mr. Adolphe Sax, is not the original version of this piece.... [Originally] composed with words, this hymn was sung at Marseille with great success. In reducing it for an

instrumental sextet, the composer wanted simply to offer Mr. Adolphe Sax the occasion of demonstrating in public some of his inventions or improvements [to wind instruments], the merits of which almost all the composers and distinguished critics of the time have appreciated. This was the general impression felt by the listeners. The *petite trompette à cylindres* in E♭, the *petit bugle à cylindres* in E♭, the *grand bugle à cylindres* in B♭, the soprano clarinet, the bass clarinet, and the saxophone, exhibited a beautiful timbre and a sonority as full as it was satisfying....

Public opinion has ratified the efforts of Mr. Adolphe Sax by its approval. All recognize that the performers have not had the time to familiarize themselves sufficiently with these new instruments, in spite of their undeniable talent. But this is only a secondary issue. Other, more specialized tests, prepared over a longer period of time, have concluded by conveying the conviction [of success] in all impartial minds.<sup>25</sup>

In spite of the positive tone of Bourges's review, his closing lines suggest that the demonstration of Sax's instruments was not altogether successful. Joseph d'Ortigue, in a review in *La France musicale*, was more explicit, stating that although the sound of Sax's instruments created the illusion of a "sonorous organ," the public was not pleased.<sup>26</sup> Oscar Comettant, in his biography of Sax, provides the only report that identifies the performers: [François] Dauvernay [*sic*] on the *trompette suraiguë*, [Jean-Louis] Dufresne on the *petit cornet*, [Jean-Baptiste] Arban on the bugle, Leperd on the clarinet, [Edouard] Duprez on the *clarinette-basse*, and Sax himself on the saxophone.<sup>27</sup>

An unsigned review in *Le Ménestrel* was also quite positive, remarking that

one chiefly admired the bass clarinet and the saxophone, of which some solo passages permitted the appreciation of the fullness, evenness, power, and majestic gravity of their tone. The victory won that evening by Mr. Sax provided a better response to his detractors than all the writings and all the judgments in the world.<sup>28</sup>

The *Hymne* mentioned in Bourges's review was probably an arrangement of Berlioz's *Chant sacré* (H. 44), published in a collection entitled *Neuf melodies* in 1829, which was revised and orchestrated for a performance in Marseille in December 1843 (see Figure 6).<sup>29</sup> As arranged for the concert in the Salle Herz, it is the only composition for which Berlioz ever provided a part for saxophone and one of a very few in which he used Sax's brasses; unfortunately, the music does not survive.<sup>30</sup> The various reports differ on the precise identification of the brass instruments, though there was at least one *bugle à cylindres*, which of course was a saxhorn in all but name.

The image displays a musical score for six saxophones and piano accompaniment. The top section shows the individual parts for: clarinet, bass clarinet, piccolo trumpet (cylinders), piccolo euphonium (cylinders), grand euphonium (cylinders), and [bass] saxophone. The bottom section shows the piano accompaniment with four staves. The score is in 3/4 time and includes dynamic markings such as *sf* (sforzando) and *pp* (pianissimo).

**Figure 6:** Berlioz, *Hymne*, mm. 3–19, arranged by the present author from Berlioz’s *Chant sacré* (H. 44, 1829) for six instruments of Sax. All instruments notated at concert pitch. Original a major third lower.

### Kastner’s biblical drama, *Le dernier roi de Juda*

In the supplement to his *Cours d’orchestration*, published in the spring of 1844, in a brief section devoted to the saxophone, Kastner remarks that

The timbre of the saxophone is certainly of a nobility and a magnificence that nothing [i.e., no other instrument] approaches. No doubt the finest masters will be eager to apply this precious invention, above all, in scenes of a grave,

solemn, or religious character. We have been among the first to employ the saxophone, in our biblical drama *Le dernier Roi de Juda*.<sup>31</sup>

This work—variously referred to as a biblical drama, biblical opera, or oratorio—received its premiere performance in a concert version at the Conservatoire on 1 December 1844. The libretto is by Maurice Bourges. Berlioz reviewed it in the *Journal des débats*,

The image shows a page of handwritten musical notation for the Overture to *Le dernier roi de Juda*. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left include Flute, Grand Flute, Hautbois, Clarinettes (in Bb), Bassons, Cor en Fa, Cor en Ut, Saxhorns (in Bb), Trompettes (in Fa), Timbales (in Fa-ut-11b), Trombones (1-2-3), Saxhorn Bass (in Ut), Violon 1, Violon 2, Altos, Violoncelles, Contrebasses, Triangle, Tambour, and Cymbales. The notation includes various musical symbols such as clefs, time signatures, notes, rests, and dynamic markings. The title 'Le dernier Roi de Juda' is written at the top, along with 'Grand Opéra biblique en quatre actes'. A small box with the number '6144' is visible in the upper right corner of the manuscript page.

Figure 7a: Kastner, Overture to *Le dernier roi de Juda*. Boston, Public Library, ms. M.403.78, p. 1. Reprinted by permission.

commenting favorably on a solo for *bugle à cylindres* in the overture, performed by Arban.<sup>32</sup> The score of the overture actually specifies three saxhorns, which as we know are essentially identical to *bugles à cylindres*.

The manuscript score of this work is in the Bibliothèque nationale de France (ms 14475), but the score of the overture, which is in a different hand, is in the Boston Public Library (M.403.78). The overture (Figure 7a), has a staff for two *divisi* soprano saxhorns in B $\flat$  and another staff for bass saxhorn in C (Figure 7b). A brief solo for soprano saxhorn appears in the overture (Figure 7c), but there is no part specifically designated for a saxhorn in the opera proper. Since Berlioz specifically mentions Arban's presence in the orchestra, it is unlikely that the young virtuoso played only in the overture. Surely he played the part marked *Bugles à cylindres* that appears only in the work's finale, but he probably also played one of the cornet parts in other numbers of the work as well.



Figure 7b: Detail of Figure 7a, showing designations for brass parts.



Figure 7c: Kastner, Overture to *Le dernier roi de Juda*, detail, saxhorn solo.

N<sup>o</sup> 8

*Allarg. Adagio. Chœur et Air*

The musical score is written on 20 staves. The instruments listed on the left are:

- P. Flute
- Flute
- V. Flute
- Hautbois
- Clarinettes en la
- Clarinets
- Cor en la
- Cor en fa
- Corne de basset
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets
- Clarinets

The score is written in a historical style with various musical notations, including clefs, time signatures, and dynamic markings. The tempo is marked 'Allarg. Adagio.' and the title is 'Chœur et Air'.

**Figure 8a:** Kastner, *Le dernier roi de Juda* (Paris, Bibliothèque nationale de France, ms. 14475), part 1, no. 8, “Chœur et air,” p. 173. Reprinted by permission.

As for the saxophone in Kastner's biblical drama, no reports from the time tell us who played the part, though quite likely it was Sax himself. Six of the nineteen scenes in the biblical drama proper have a part for saxophone, but the instrument does not appear in the overture. It is used sparingly in the opera and is always notated in bass clef. In No. 8 of Act I, "Choeur et Air," next to the designation *saxophone en ut*, the word *basse* has been entered in a different hand, thereby offering further evidence that Sax's first iteration of the instrument was a bass (Figures 8a, 8b).<sup>33</sup> The saxophone usually doubles the cellos and contrabasses, though it has solos in two very brief passages near the beginning of part 2 (Figure 8c). Undoubtedly because the saxophone was new to the orchestra, its position in Kastner's score is inconsistent. In the opening number of the opera proper it appears at the bottom of the brace that carries the brass and timpani, while in the opening number of part 2, it appears at the very bottom of the score, below the strings.

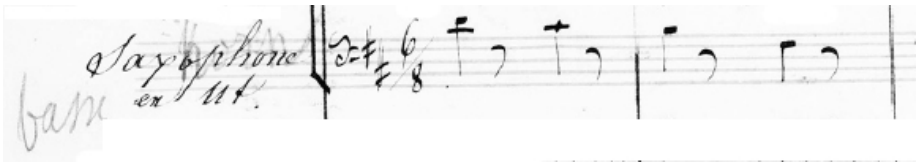


Figure 8b: Detail of Figure 8a. Bibliothèque nationale de France.

### Writing for and about Sax's instruments after 1844

After 1844 Kastner wrote extensively for and about Sax's instruments. He published the earliest solo works for saxhorn and piano, *Adagio et grande polonaise brillante* (1846) and *Fantasie et variations brillantes* (1847), both dedicated to Arban.<sup>34</sup> He also dedicated his *Méthode complète et raisonnée de saxophone*, the first method book for the instrument, to Sax.<sup>35</sup> This book contains the earliest solo for saxophone, *Variations faciles et brillantes*, for alto saxophone in E $\flat$  and piano, as well as a sextet for saxophones—two sopranos in C, one alto in F, two basses in C, and one contrabass in F.<sup>36</sup>

Kastner's *Manuel général de musique militaire* (1848),<sup>37</sup> certainly a more influential book in the long run than his treatises on orchestration, is redolent with praise for Sax and his instruments and contains copious illustrations of them. Among Kastner's more unusual creations are his nine *livres-partitions*, literally "book-scores," which he published between 1849 and 1856.<sup>38</sup> These are essays of a mystical, phenomenological, and/or historical nature, with musical interpolations, most of which have parts for Sax's "new" instruments. The "Pas de redouble" from *Les voix de Paris*, for example, is scored for four saxophones, seven saxhorns, two saxotrombas, two Sax bass clarinets, and one Sax bassoon, in addition to horns and trumpets with Sax's *cylindres*.

*N. 11. Chœur. Troisième Partie*

*Andante ben moderato.*

**Figure 8c:** Kastner, *Le dernier roi de Juda*, part 2, no. 11, “Chœur,” p. 1.  
Bibliothèque nationale de France. Reprinted by permission.

After the performance of his *Hymne* at the Salle Herz in 1844, Berlioz never scored for the saxophone again. He wrote only sparingly for saxhorns, including a part for soprano saxhorn in the march he added to his *Te Deum* (Op. 29, H. 118) in the early 1850s. Arban's execution of this part created a sensation when the revised version of the work was performed in 1855.<sup>39</sup> In his opera *Les Troyens* (H. 133, 1856–58), Berlioz wrote parts for nine off-stage saxhorns of various sizes.<sup>40</sup> The second edition of



his orchestration treatise (1855) includes a section entitled “New instruments” (*nouveaux instruments*) which provides somewhat detailed information on saxophones and saxhorns, followed by cursory descriptions of saxtrombas and saxtubas.<sup>41</sup>

### Conclusion

Berlioz and Kastner were only two of Sax’s many well-connected Parisian friends, but as authors of the earliest comprehensive treatises on orchestration and instrumentation, what they wrote about the saxhorn and saxophone, arguably the most important of Sax’s “new” instruments, exerted considerable influence on later generations of composers. The compositions both men wrote for saxhorn and saxophone in the crucial year of 1844 had little or no lasting influence: neither was published nor, as far as is known, ever given a second performance. Kastner, however, continued to write extensively for and about both families of instruments, and other composers soon followed suit.<sup>42</sup> Berlioz’s *Grand Traité* clearly overshadowed Kastner’s treatises on orchestration, but the latter’s treatise on military music, with its copious illustrations, was widely read, as was his saxophone method.

Adolphe Sax was not a shrinking violet; he was quite adept at promoting himself. But it is always nice to have a little help from your friends.

*I should like to thank the following people for their generous assistance in the preparation of this article: Albert R. Rice, Charlotte Kulzyinski, and Robert Howe.*

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### Notes

<sup>1</sup> See Georges Kastner, *Manuel général de musique militaire à l’usage des armées françaises* (Paris: Firmin Didot Freres, 1848), 233. Kastner states that an unknown person damaged the saxophone at the 1841 Brussels Exhibition by kicking it. Since Kastner was not present at the 1841 Industrial Exhibition in Brussels, his account probably was based on Sax’s own recollections.

<sup>2</sup> *Catalogue des produits de l’industrie belge admis à l’exposition de 1841*, 2nd edn. (Brussels: Société Typographie Belge, 1841), 252. According to Albert R. Rice (personal communication, June 2017), “The reflector was a metal plate that was attached to the bell of different woodwinds,

such as the bass clarinet, to amplify the sound. although none have survived, in one of the early Brussels-made bass clarinets of circa 1840, there is an armature by which the reflector may be attached.”

<sup>3</sup> Hector Berlioz, “Instrumentation,” *Revue et gazette musicale de Paris*, neuvième année, no. 11 (13 March 1842): 99–100. “Une invention précieuse pour la beauté du son qu’elle donne aux ophicléides, est celle que vient de faire à Bruxelles M. Sax. Il s’agit du remplacement de l’embouchure par un bec de clarinette. Les ophicléides devaient ainsi des instruments de cuivre à anches; la différence de sonorité et de timbre qui résulte pour eux de ce système est tellement à leur avantage, au dire de tous ceux qui ont pu en juger, que, très probablement, l’ophicléide à bec deviendra d’un usage général dans quelques années.”

<sup>4</sup> See Stephen Cottrell, *The Saxophone* (New Haven / London: Yale University Press, 2013), 43.

<sup>5</sup> Berlioz, “Instrumentation,” *Journal des débats* (12 June 1842). “Le Saxophon ... est un instrument de cuivre assez semblable à l’ophicléide par sa forme, et armé de dix-neuf clefs. Il se joue non pas avec une embouchure, comme les autres instruments de cuivre, mais avec un bec semblable à celui de la clarinette-basse. Le Saxophone serait ainsi le chef d’une nouvelle famille, celle des instruments de cuivre à anche. Son étendu est de trois octaves, en partant de si bémol grave au dessous des portées (clef de fa); son doigté est à plus près le même que celui de la flûte ou la deuxième partie de la clarinette. Quant à la sonorité, elle est de telle nature que je ne connais pas un instrument grave actuellement en usage qui puisse, ce rapport, lui être comparé. C’est plein, moelleux, vibrant, d’une force énorme, et susceptible d’être adouci. C’est fort supérieur, à mon sens, aux notes graves des ophicléides, pour la justesse, pour la fixité du son, dont le caractère d’ailleurs est tout-à-fait neuf et ne rassemble à aucun des timbres qu’on entend dans l’orchestre actuel.”

<sup>6</sup> Jean-Pierre Rorive, *Adolphe Sax: His Life, His Creative Genius, His Saxophones, a Musical Revolution* (Thionville: Gérard Klopp, [2014]), 33.

<sup>7</sup> Hector Berlioz, *Grand Traité d’instrumentation et d’orchestration modernes* (Paris: Schonenberger, [1844]).

<sup>8</sup> G[eorges] Kastner, *Traité général d’instrumentation*, 2e. edition (Paris: Prilipp, [1844]). The first part of this publication is an unaltered reprint of the first edition of the original 1837 print of the *Traité général d’instrumentation*. Appended to it is Kastner’s *Supplément au Traité général d’instrumentation* (Paris: Prilipp, [1844]). The second edition of the *Traité* proper and the *Supplément* were available for sale separately.

Idem, *Cours d’instrumentation, considéré sous les rapports poétiques et philosophiques de l’art, à l’usage des jeunes compositeurs* (Paris: Meissonnier, [1839]). The supplement to the *Cours d’instrumentation* has no title page and no indication of a date or publisher. Apparently it was appended to the original edition of the work and the two items were sold as a unit.

<sup>9</sup> Berlioz, *Grand Traité*, 151. “Le timbre du Saxophone a quelque chose de pénible et de douloureux dans les sons aigus, les notes graves, au contraire, sont d’un grandiose pour ainsi dire pontifical. Il possède comme les Clarinettes la faculté d’enfler et d’éteindre le son, d’où résultant, surtout dans l’extrémité inférieure de son échelle, des effets inouïs qui lui sont tout à fait propres. Le Saxophone, pour des morceaux d’un caractère mystérieux et solennel, est, à mon avis, la plus belle voix grave comme jusqu’à ce jour. Il tient à la fois de la Clarinette basse et de l’

orgue expressive, ce qui indique suffisamment, je crois, qu' on ne doit, en general, s'employer que dans les mouvements lents. Il serait aussi admirable mis en evidence dans un Solo, qu'employé à soutenir et à colorer l'harmonie d' un ensemble de voix et d'instruments à vent.

“Malgré la force extraordinaire de sa sonorité il est peu proper aux effets énergiques et brillants de la musique militaire.”

<sup>10</sup> Georges Kastner, *Supplément au Traité général*, 38–40.

<sup>11</sup> *Ibid.*, 39–40. “Le SAXOPHONE est un instrument nouveau qui a été inventé par M.<sup>r</sup> Sax fils, d’où il a pris le nom de Saxophone. Cet instrument est destiné à prendre une place importante dans nos orchestres et dans nos Musiques Militaires, tant par la noblesse et par la beauté de son timbre, que par les immenses ressources qu’il présente.

“Le Saxophone est un instrument en cuivre armé de dix-sept clefs qui a pour embouchure une espèce de bec de clarinette.... C’est donc un instrument en cuivre à anche, mais non point, comme un l’a dit, un Ophicléide perfectionné avec bec de Clarinette, car il diffère tout-à-fait de ce dernier par sa structure et par ses dimensions. Sous le rapport de la force et de la qualité du son, cet instrument possède dès son origine une supériorité que beaucoup d’autres mettent des siècles à atteindre.”

<sup>12</sup> *Catalogue des produits de l'industrie belge ... de 1841*, 2nd edn., 252. I am grateful to Albert R. Rice for supplying me with a copy of this publication (personal communication, June 2017).

<sup>13</sup> Brussels: the author, 1841. I am grateful to Albert R. Rice for supplying me with a copy of this publication (personal communication, June 2017).

<sup>14</sup> “Le bugle à cylindres, tel que construit M. Sax, nous paraît destiné à remplacer avec avantage la trompette à clé ordinaire dont il réunit d’ailleurs toutes les qualités avec une plus grande justesse et une plus grande égalité des sons.”

<sup>15</sup> Eugenia Mitroulia and Arnold Myers, “Adolphe Sax: Visionary or Plagiarist?” *Historic Brass Society Journal* 20 (2008): 93–141, here 104.

<sup>16</sup> *Ibid.*, 93–95.

<sup>17</sup> For a comprehensive discussion of Sax’s patents, changes in the design of the instrument, and the shift in terminology for *bugle à cylindres* to saxhorn, see Eugenia Mitroulia, “Adolphe Sax’s Brasswind Production with a Focus on Saxhorns and Related Instruments” (Ph.D. diss., University of Edinburgh, 2011), 105–67.

<sup>18</sup> See Adam Carse, “Adolphe Sax and the Distin Family,” *Galpin Society Journal* 6 (1946): 193–201; and Eugenia Mitroulia and Arnold Myers, “The Distin Family as Instrument Makers and Dealers,” *Scottish Music Review* 2 (2011): 22–20.

<sup>19</sup> Kastner, *Supplément au Traité général*, 35–37.

<sup>20</sup> Castil-Blaze, “Adolphe Sax,” *La France musicale* 6, no. 35 (27 August 1843): 277–78, here 278.

<sup>21</sup> *La France musicale* 6, no. 39 (24 September 1843): 316.

<sup>22</sup> Kastner, supplement to *Cours d'instrumentation* [1844], 9. “deux Bugles à 3 cylindres en *Sib* (perfectionnés par M.<sup>r</sup> Sax fils).”

<sup>23</sup> For the first edition of the score, see Gaetano Donizetti, *Dom Sébastien: opéra in five acts* (1843; rpt., New York: Garland, 1980). For the critical edition, see Donizetti, *Dom Sébastien, roi de Portugal: opéra en cinq acts*, ed. Mary Ann Smart (Milan: Ricordi, 2003).

<sup>24</sup> *Revue et gazette musicale de Paris* 11, no. 53 (31 December 1843): 445.

<sup>25</sup> Maurice Bourges, "Concert de M. H. Berlioz," *Revue et gazette musicale de Paris* 11, no. 6 (11 February 1844): 43–44, here 43. "L'Hymne, transcrit pour les six instruments à vent de M. Adolphe Sax, n'avait pas originairement la destination que M. Berlioz lui a assignée dans ce concert. Composé sur des paroles, cet hymne a été chanté à Marseille avec grand succès. En le réduisant pour en faire un sextour instrumental, l'auteur a voulu simplement offrir à M. Adolphe Sax l'occasion de produire en public des inventions ou des perfectionnements, dont presque tous les compositeurs et les critiques distingués de l'époque ont apprécié la mérite. Voici l'impression généralement éprouvée par l'auditoire. La petite trompette à cylindres en mi bémol, le petit bugle à cylindres en mi bémol aussi, le grand bugle à cylindres en si bémol, la clarinette-soprano, la clarinette-basse et le saxophone, ont paru d'un beau timbre et d'une sonorité aussi pleine que satisfaisante. Si les praticiens ont seuls le droit de prononcer sur les difficultés du mécanisme, dont ils sont les juges naturels, toute oreille bien conformée et tant soit peu exercée est compétente pour apprécier la qualité de son d'un instrument. L'opinion publique a ratifié par ses suffrages les tentatives de M. Adolphe Sax, tout en reconnaissant que, malgré leur talent incontestable, les exécutants n'avaient pas eu le temps de se familiariser assez avec ces instruments nouveaux; mais ceci n'est que secondaire. D'autres épreuves plus spéciales et préparées de plus longue main finiront par porter la conviction dans tous les esprits exempts de partialité" [italics original].

<sup>26</sup> Joseph d'Ortigue, "Deuxième concert de M. H. Berlioz," *La France musicale* 7, no. 6 (12 February 1844): 45–46.

<sup>27</sup> Oscar Comettant, *Histoire d'un inventeur au dix-neuvième siècle: Adolphe Sax, ses ouvrages et ses lutes* (Paris: Pagnerre, 1860), 51.

<sup>28</sup> *Le Ménestrel*, onzième année, no. 526 (11 February 1844). "[O]n a principalement admire la clarinette basse et le saxophone, dont quelques phrases en solo permettaient d'apprécier le rondeur, l'égalité, la puissance, et la majestueuse gravité; la Victoire remportée ce soir-là par M. Sax répond mieux à es detracteurs que tous les articles et toutes les raisons du monde."

<sup>29</sup> See Berlioz's letter of 21 November 1843 to A. Lecourt in Marseille, transcribed in Hector Berlioz, *Correspondance générale*, ed. Pierre Citron, vol. 3, 1842–50 (Paris: Centre National de Recherche Scientifique, 1972), item 867, pp. 139–40. See also Hector Berlioz, *New Edition of the Complete Works*, vol. 12a, *Choral Works with Orchestra (I)*, ed. Julian Rushton (Kassel et al.: Bärenreiter, 1991), xi. The present author's arrangement of mm. 3–19 (Figure 6) is based on Rushton's edition.

<sup>30</sup> See Robert S. Howe, "The Invention and Early Development of the Saxophone, 1840–55," *Journal of the American Musical Instrument Society* 29 (2003): 97–180, here 115.

<sup>31</sup> Kastner, supplement to the *Cours d'instrumentation*, 10. "Le Timbre tout-a-fait à part du Saxophone est d'une noblesse et d'une magnificence dont rien n'approche; nul doute que les premiers Maitres ne se s'empresent d'appliquer cette précieuse invention surtout, dans les scenes d'un caractère grave, solennel ou religieux. Nous avons été des premiers à employer le Saxophone dans notre Drame Biblique, *Le dernier Roi de Juda*."

<sup>32</sup> Berlioz, "Concert de Mr Kastner. Le roi de juda, opéra biblique in deux actes," *Journal des débats*, 11e année (6 December 1844) [unnumbered page].

<sup>33</sup> Kastner (*Supplément au Traité*, 39) indicates that the bass saxophone could be pitched either in C or B $\flat$ .

<sup>34</sup> Both works published in Paris by Brandus.

<sup>35</sup> Paris: Troupenas, 1846; 2nd edn., Paris: Brandus, 1850.

<sup>36</sup> Both the solo for alto saxophone and piano and the saxophone sextet are dedicated to Adolphe Sax.

<sup>37</sup> Paris: Firmin Didot Frères.

<sup>38</sup> I am grateful to Ignace de Keyser for providing me with copies of several of Kastner's *livres-partitions*. An excerpt from Kastner's *Pas de redouble* appears in my article "Kastner, the Distin Family, and the Emergence of 'New' Brasswind Instruments by Adolphe Sax," in *Das Saxhorn. Adolphe Sax' Blechblasinstrumente im Kontext seiner Zeit*, ed. Adrian v. Steiger, Daniel Allenbach, and Martin Skamletz, *Musikforschung der Hochschule der Künste Bern*, vol. 13 (Schliengen: Argus, forthcoming).

<sup>39</sup> Hugh Macdonald, *Berlioz's Orchestration Treatise: A Translation and Commentary* (Cambridge / New York: Cambridge University Press, 2002), 304.

<sup>40</sup> *Ibid.*

<sup>41</sup> Berlioz, *Grand Traité d'instrumentation et d'orchestration, nouvelle édition, augmenté par l'Art du chef d'orchestre* (Brussels: Henri Lemoine, [1855]), 284–86.

<sup>42</sup> The history of the saxhorn family in the second half of the nineteenth century resides principally in the realm of ensemble music; see, *inter alia*, Carse, "Adolphe Sax and the Distin Family." Regarding the saxophone family, see Cottrell, *The Saxophone*, ch. 3.

