

Adrian von Steiger

“Agilité, homogénéité et beauté”.

## The Saxhorn in the Context of the Opéra and Military Music

The Romantic epoch is a main focus at the Bern University of the Arts. Its repertoire and instruments feature in teaching and research, as do issues of historically informed performance practice, and this is especially true for the brass department.<sup>1</sup> This paper offers an introduction into the Bern University of the Arts (HKB) research project dedicated to the saxhorn. Important in military and popular music, until now the saxhorn family was rarely addressed as a principal topic of research.

It is well recognised that historically informed performance of 19<sup>th</sup>-century music is especially challenging for brass players, mainly for the following reasons:

1. The family of brass instruments, the labrosones, is very diverse. There are major differences among national traditions, different variants of all types of instruments, and all this is further complicated by the technological developments in chromatic instruments.
2. The evolution of bass instruments. During the 19<sup>th</sup> century, bass instruments underwent a series of (r)evolutions. The search for a strong bass sound can be seen as a prime motor of these developments.
3. The search for new sounds during the 19<sup>th</sup> century, in addition to the existing, clear function of trumpet, horn, trombone and bass instruments. This led to experiments in bore profiles, for example the saxhorns, and to an evolution in the orchestral and wind-band sound. This development did not end in 1900, but continued throughout the 20<sup>th</sup> century.
4. A further challenge to research into brass instruments lies in the fact that organology has not been a core focus of academic musicology. Military and amateur bands and their music are the metaphorical “stepchildren” of traditional musicology, at least in the German-speaking world.

Within these processes – the evolution of sound, of bass instruments and of technological devices – the appearance of the saxhorn on the 19<sup>th</sup> century brass scene was a central event. The saxhorn added a new sound colour to the palette, offered strong support in

1 The term “Romantic” for our symposia here essentially means the long 19<sup>th</sup> century. The concept is not without controversy, as is discussed in Malou Haines article: *Romantique*, “un mot si dangereux” selon Fétis, in: *Généalogies du romantisme musical français*, ed. by Olivier Bara and Alban Ramaut, Paris 2012, pp. 47–63.

the bass and contrabass registers, and was a trendsetting solution as the complete homogenous family in terms of sound, fingering and notation. The fact that this remains a common concept down to today lets us forget that this was new in the 1840s. Adolphe Sax's sound concept was homogeneity. This is true for saxophones as well as for saxhorns.

The saxhorns appearance can be assigned to one particular day: the “concours” of the bands of the French Army on Tuesday 22 April 1845 at the Champ-de-Mars in Paris. This competition was organised in the context of the “réorganisation” of the French military bands in a period when they gained importance in the context of increasing nationalism in Europe. The saxhorns – and in wind-bands the saxophones too – were the new instruments presented at the competition by Adolphe Sax's orchestras. Their effect can be described as a “merged sound” of the bands (in German: “Mischklang”). On the other hand, the instruments presented by Sax's competitor Michele Carafa, including oboes, bassoons, ophicleides and invention trumpets and horns, resulted in a split sonority concept (“Spaltklang”). According to Hector Berlioz, the decision of the jury was clearly in favour of Sax's homogeneous sound.<sup>2</sup> Berlioz described the “agilité brillante dans les solos”, the “homogénéité par cette nouvelle famille instrumentale” and the “beauté des sons graves des tubas”. This “agility, homogeneity and beauty” led to the title of our research project about the saxhorn in the opera and in military music. The decision in favour of Sax and against Carafa went counter to the traditional sound of military bands in the first half of the 19<sup>th</sup> century. It signified the birth of a sound concept that has remained almost unchanged since then, down to today's wind and brass bands.<sup>3</sup>

The main aim of the HKB research project was to listen to the sound of Adolphe Sax's bands with saxhorns in the context of military and operatic stage bands performing music of the period in a historically informed manner. To achieve this goal, we carried out research into the saxhorn, organology, extant instruments, saxhorn makers, repertoire, tutors, mouthpieces, playing techniques, et cetera.

The project band was formed by 28 members of the Swiss Army Band, conducted by Colonel Philipp Wagner (Illustrations 1, 2). This is the elite band of the Swiss military (note that in Switzerland there are no full-time professional wind bands). Most of the players were professional musicians or students of music in civilian life. Furthermore, this project was optional for them, so by participating they confirmed a personal interest in exploring historic instruments.

2 Hector Berlioz: Feuilletons, in: *Journal des débats*, Paris, 29 April 1845, p. 2; [www.hberlioz.com/feuilletons/debats450429.htm](http://www.hberlioz.com/feuilletons/debats450429.htm) (22 June 2018).

3 Roundtable discussions during the symposium led to the conclusion that the development towards such an instrumentation and a sound concept of wind bands would have happened independently of the result of this famous competition.



**ILLUSTRATIONS 1, 2** The Swiss Army Band, playing on period instruments of the 19<sup>th</sup> century for the Third International Romantic Brass Symposium, 4 February 2014 in Bern (photos: Daniel Allenbach)

A series of preliminary decisions was needed to achieve musical and scientific results:<sup>4</sup>

- The project concentrated on the brass instrumentation of cavalry bands (and excluded all musical and conservation challenges posed by woodwind instruments). It was decided to reconstruct the instrumentation of the 1860 decree of Napoleon III, which is slightly different from those of 1854 and 1845 (see Appendix A). This choice also allowed us to perform the purely brass pieces of the Saxbanda in the Paris Opéra in their original instrumentation (see Appendix C).
- For period saxhorns, cornets, trumpets and trombones, the project could rely on the Klingendes Museum (former Karl Burri Collection) in Bern, including instruments by Sax, Besson, Gautrot and other 19<sup>th</sup>-century French makers (Appendix B). Because many instruments were not restorable to playing condition, instruments were borrowed from other collections, such as those of Bruno Kampmann for original Sax saxhorns and of Koen Plaetinck for percussion, while other instruments were bought. All were restored to playability by Martin Mürner and examined through acoustic analysis by Rainer Egger before and after restoration. A few compromises were made for reasons of availability of players and/or instruments: slide trombones were used instead of cavalry valve trombones, three cornets instead of only two, two trumpets instead of four, and three saxhorn basses instead of four. The result was a brass band of 28 players.
- The project relied on period French instruments only. For saxhorns, Arnold Myers's bore profile analysis and his determination of the brassiness parameters were applied. Only saxhorns with brassiness comparable to the ones by Adolphe Sax were used in the project band (see Appendix B). Arnold Myers's and Eugenia Mitroulia's article in this book shows the results of this comparison of bore profiles of Sax's instruments with those of the other makers.
- Interfaces: In historical performance practice, the correct mouthpiece and stick is of great importance. All mouthpieces and sticks were originals or copies. Identical copies of mouthpieces were helpful in reaching a homogeneous sound within each register. This is especially true in our case, with such a diversity of instruments in terms of age, quality and maker.
- The band played at 435 Hz pitch, as the 1860 decree defines "diapason normal". Some of the project instruments were originally at this pitch. Others had to be tuned down, which rendered some of them more difficult to play.

4 Concerts of this band were given on 3 February 2014 at PSI, Villigen, our research partner's hall, on 4 February 2014 at the Theater National, Bern, for the symposium, and on 9 February in Brussels for the opening of the Sax200 exhibition at the Musée de la Musique. Some recordings are available online: [www.hkb-interpretation.ch/projekte/saxhorn](http://www.hkb-interpretation.ch/projekte/saxhorn) (22 June 2018).

- Although saxhorns are not that different from their descendants, they have to be studied like every historical instrument in terms of mouthpiece, dynamics and especially articulation. The players were able to keep the instruments at home for five months and were coached by Krisztián Kováts and Reimar Walthert.
- The main repertoire of saxhorns in the 19<sup>th</sup> century can be divided into two categories: On one hand those of the military and civil bands, and on the other hand those of the “Saxbanda” in the Paris Opéra, which played all the military bands on the stage of the Grand Opéra: from Berlioz’s *Les Troyens* via Verdi’s *Jérusalem* to Saint-Saëns’s *England of Henry VIII*. Thanks to Ignace De Keyser, who allowed us to copy his material for all the original scores and parts of the Paris Opéra requiring Sax instruments, we now have scores of most of the stage music of the Saxbanda in our archive, both as Sibelius files and recorded by our band in the original instrumentation (Appendix C).<sup>5</sup> This material, together with our stock of instruments, can from now on be hired from the НКВ.

For the military and ensemble repertoire the project relied on printed music only, comprising compositions by Charles-Alexandre Fessy, Jean-Baptiste Victor Mohr, Jean-Baptiste Schiltz, Jean-Georges Kastner, Louis-François Blancheteau, Jules Demersseman, Edmond Juvin, et cetera (Appendix C). It would of course be very interesting to find manuscripts, say, of arrangements of popular and opera music made by the “chefs de musique” for their bands – this was the repertoire of the 100 infantry and 54 cavalry regiment bands in the French garrison towns. They played a concert twice a week in their local music pavilion, the “kiosque” (where the cavalry bands played non-mounted).<sup>6</sup>

**Conclusion** The НКВ research project “Agilité, homogénéité et beauté” about Adolphe Sax and the saxhorn in military bands and opera had two goals: (1) To increase our knowledge of the saxhorn through research and an international symposium in Bern. The Appendices list music and instruments now available at НКВ. (2) To recreate a French cavalry brass band of the 19<sup>th</sup> century with period instruments, playing in the best practice of historically informed performance regarding repertoire, interfaces and playing techniques. The concerts of this band – despite our being aware of all the systematic criticism and caution required concerning so-called “authentic” performances – showed

- 5 As most of the stage music for this Saxbanda is very short, we asked young composers studying music and media art for a composition combining these Saxbanda excerpts with electronic music, in analogy to the restoration of historical architecture with obviously different, modern materials.
- 6 Thierry Bouzard: *Les usages musicaux dans l’armée française de 1815 à 1914*, unpublished Master thesis, Université du Littoral, 2011, p. 128.

how vivid and attractive the concerts of such bands must have been in terms of sound, repertoire and virtuosity during the Second Empire.

Thanks to the cooperation of many of the international scholars on Sax and on brass instruments of the time, our project and the symposium successfully increased our knowledge on these topics (for all relevant materials, see the project website [www.hkb-interpretation.ch/projekte/saxhorn](http://www.hkb-interpretation.ch/projekte/saxhorn)).

**Appendix A) Instrumentation of cavalry bands** Saxhorn designations vary; for example, “soprano” and “contralto” are both used for the B $\flat$  instrument. The instruments are therefore specified here by their nominal pitch, while other authors use the instrument length in feet.<sup>7</sup>

	Concours 22. 4. 1845	Decree 19. 8. 1845	Decree 16. 8. 1854	Decree 26. 3. 1860
Saxhorn/Saxotromba:				
Suraigu B $\flat$			1	1
Soprano E $\flat$	2	2	2	1
Contralto B $\flat$	4	7	4	4
A $\flat$		2	2	1
Alto E $\flat$	4	2 + 2 <sup>8</sup>	4	3
Bariton B $\flat$		3	2	2
Basse B $\flat$ (4 pistons)	4	3	4	4
Contrebasse E $\flat$	3	3	2	1
Contrebasse B $\flat$			2	1
Cornet	2	2	2	2
Trompette à cylindres <sup>9</sup>		4	6 <sup>10</sup>	4
Trompette d'harmonie		2	?	
Trombone à cylindres	2	1	6 <sup>11</sup>	3 <sup>12</sup>
Trombone à coulisse	2	3	?	
Batteries <sup>13</sup>	?	?	?	?

- 7 See Malou Haine: *Adolphe Sax, Bruxelles 1980*, pp. 103, 105, 113; Guy Estimbre/Jean-François Madeuf: *Les fanfares en France. Vers une instrumentation standardisée, 1845–1889*, in: *Paris – un laboratoire d'idées. Facture et répertoire des cuivres entre 1840 et 1930. Actes du colloque, Paris 2010*, pp. 162–196, here pp. 167, 170, 173; Eugenia Mitroulia: *Adolphe Sax's Brasswind Production with a Focus on Saxhorns and Related Instruments*, Edinburgh 2011, pp. 494, 497, 499, [www.era.lib.ed.ac.uk/handle/1842/5490](http://www.era.lib.ed.ac.uk/handle/1842/5490) (25 June 2018).
- 8 2 saxhorns E $\flat$  and 2 “saxo-tromba”, presumably also E $\flat$ . For example *Kastners Marche, Musique de cavalerie* shows this instrumentation of 2 saxhorns and 2 saxotrombas in the alto register.
- 9 “Cylindres” does not mean rotary valves but Berlin valves, as can be seen on the plates.
- 10 Not defined whether valved or not.
- 11 Not defined whether valved or not.
- 12 Valve trombone according to the plate given with the decree.
- 13 The number of players is never mentioned for cavalry bands. According to the scores they must have played at least at three. A total number of players in the band can therefore not be determined.

**Appendix B) Instruments** The project used instruments from several collections such as the Klingendes Museum (former Burri Collection) in Bern,<sup>14</sup> the Bruno Kampmann Collection in Paris, and drums of Koen Plaetinck, Brussels. Only the instruments available in Bern are listed here. They have been restored to playable condition but are now in storage. Most of them can be made playable at low cost. They were played at 435 Hz pitch, but most of them can also be played at 440 Hz.

Type	Maker	No. <sup>15</sup>	B <sup>16</sup>	Mouthpiece	Remarks
Saxhorns:					
Sopranino E♭	Protin Frères	5006	0.554	copy	Upright bell. Triller key at the bell
Soprano B♭	Margueritat	139	0.598	copy	Upright bell
Soprano B♭	Pélisson Frères	5007		copy	Upright bell
Alto F	Gautrot	293	0.536	historic	New tuning slide for E♭. Licence Sax 6480
Alto E♭	Sax No. 31215	297	0.573	historic	3004
Alto E♭	Sax No. 27325	5013		historic	
Alto E♭	Lecomte	6001	0.537	historic	3005
Bariton C	Couturier	5015	0.610	historic	3011 Crook and new tuning slide for B♭
Basse B♭	Besson	136	0.461	historic	3013 Doigté ministériel: 3 <sup>rd</sup> valve major third. Good instrument, also for solo use
Basse B♭	Martin	1121	0.467	historic	
Contrebasse E♭	Michaud (?)	5022	0.396	historic	3020 Doigté ministériel: 3 <sup>rd</sup> valve major third
Contrebasse B♭	David	5014	0.483	historic	3007
Cornet B♭	Sax No. 39378	072		original	silver-plated, see Illustration 3
Cornet B♭	Jacquot	1132		copy	
Trumpet F/E♭	Besson	088		historic	
Trumpet F/E♭	Courtois/Egger	5027		copy	Egger copy of a ca 1855 Antoine Courtois
Trombone B♭	Courtois	147		copy	Gold-plated. 1 <sup>er</sup> Prix Victor Souchon 1874
Trombone B♭	Besson	148		copy	
Trombone B♭	Thibouville	5020		copy	
Trombone B♭	Pihan	5021		copy	

<sup>14</sup> For its catalogue see [www.klingendes-museum-bern.ch/en/the-collection/catalogue](http://www.klingendes-museum-bern.ch/en/the-collection/catalogue) (last consulted on 16 December 2019).

<sup>15</sup> Number in the collection in the Klingendes Museum, Bern (former Burri collection).

<sup>16</sup> Brassiness parameter (see article by Mitroulia/Myers on pp. 18–34 in this book).



**ILLUSTRATION 3** Cornet by Adolphe Sax, Nr. 39378, silver-plated, with engraved embellishments, Sax's number also stamped on mouthpiece and shank; can be dated to 1876 (according to the online list by Arnold Myers and Eugenia Mitroulia: [www.homepages.ed.ac.uk/am/gdsl.html](http://www.homepages.ed.ac.uk/am/gdsl.html), 22 June 2018). Klingendes Museum (former Burri Collection), Bern, No. 072 (photo: André Roulier)

### Appendix C) Music: Original parts and/or scores, Sibelius files and recordings by the project band

- C1) Stage music for saxbanda with saxhorns from the following operas:<sup>17</sup>
- Giuseppe Verdi (1813–1901): *Jérusalem* (première at Paris Opéra in 1847)
  - Giacomo Meyerbeer (1791–1864): *Le Prophète* (1849)
  - Giacomo Meyerbeer: *L'Étoile du nord* (1854)
  - Hector Berlioz (1803–1869): *Les Troyens*, op. 29 (composed 1856–58, not performed at the Paris Opéra)
  - Giacomo Meyerbeer: *L'Africaine* (1865)
  - Giuseppe Verdi: *Don Carlos* (1867, only score, no parts, no recording. Written for nouveaux saxhorns with pistons indépendents).<sup>18</sup>
  - Charles Gounod (1818–1893): *Faust* (1869)

<sup>17</sup> We are very grateful to Ignace De Keyser for allowing us to use his Saxbanda material; see his article Adolphe Sax and the Paris Opéra, in: *Brass Scholarship in Review. Proceedings of the Historic Brass Society Conference at the Cité de la Musique, Paris, 1999*, ed. Stewart Carter, New York 2006 (Bucina, Vol. 6), pp. 133–169.

<sup>18</sup> *Ibid.*, p. 147.



- Victorin de Joncières (1839–1903): *La Reine Berthe* (1878)
  - Camille Saint-Saëns (1835–1921): *Henri VIII* (1883)
  - Jules Massenet (1842–1912): *Le Mage* (1891)
- NB: Many operas did not require saxhorns, for example *Le juif errant* uses saxtubas, *Aïda* uses trumpets, et cetera.
- C2) Compositions for French period brass (cavalry) bands with saxhorns:
- Charles-Alexandre Fessy (1804–1856): *Six Fanfares pour la Cavalerie* (1856. Composé expressément pour les Instruments d'Adolphe Sax). 1<sup>re</sup> suite: Pas redoublé – Polka – Valse; 2<sup>e</sup> suite: Bolero – Galop – Pas redoublé. Edited by Adolphe Sax BNF VM27-1439 (1/2).
  - Edmond Juvin (1811–1895): *Grand Nonetto op. 3* (1847/48. Dédié à toutes les Fanfares de l'Armée). Andante maestoso/Allegro moderato – Andante con moto – Chasse: Allegro – Finale: Allegretto.
  - Jean-Baptiste Victor Mohr (1823–1891): *Divertissement*. Printed by Gambaro éditeur No. 812. BNF VM7-13979
  - Dallée (?): *Chemin de fer de Munich, de Streeck* (Arrangé pour la nouvelle Instrumentation). Printed by Gambaro éditeur No. 888. BNF L.10.655. This piece was published for mixed wind band with additional parts for cavalry bands.
  - Charles Gounod (1818–1893), arr. Schiltz: *Marche religieuse*.<sup>19</sup>
  - Jean-Georges Kastner (1810–1867): *Marche* (“musique de cavallerie”) aus *Les cris de Paris* (1857).<sup>20</sup>
  - Peter Benoit (1834–1901): *Ouverture phantastique* (1856).<sup>21</sup>
  - Louis Girard (?): A series of arrangements of pieces by Beethoven, Rossini, Halévy, et cetera for the Gautrot Band; a number of them are for pure brass band (“petite” or “moyenne fanfare”, or “grande fanfare” including saxophones ad lib.). All published by Editions Gautrot Ainé. BNF L.3575 (14).
  - Jules Demersseman (1833–1866), all published by Adolphe Sax:
    - Introduction et Variations sur “Le Carnaval de Venise”, BNF VM7-14440
    - La Chasse dans le bois. Introduction et valse (1866), BNF VM7-14441
    - Retraite des Fanfares, BNF VM7-14442
    - Le Vainqueur. Pas redoublé pour fanfare, BNF VM7-14443
    - Marche des Géants, pour les nouveaux instruments Sax, BNF VM20-8

**19** Reproduction in Mitroulia: *Adolphe Sax's Brasswind Production*, pp. 518 ff.

**20** Reproduction *ibid.*, pp. 522 ff.

**21** For further information see Luc Vertommen: *Some Missing Episodes in Brass (Band) History*, Zevantem 2011, pp. 237 ff.

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## DAS SAXHORN

Adolphe Sax' Blechblasinstrumente im Kontext ihrer  
Zeit. Romantic Brass Symposium 3 • Herausgegeben von  
Adrian von Steiger, Daniel Allenbach und Martin Skamletz

MUSIKFORSCHUNG DER  
HOCHSCHULE DER KÜNSTE BERN

Herausgegeben von Martin Skamletz  
und Thomas Gartmann

Band 13



Dieses Buch ist in gedruckter Form im April 2020 in erster Auflage in der Edition Argus in Schliengen/Markgräflerland erschienen. Gestaltet und gesetzt wurde es im Verlag aus der *Seria* und der *SeriaSans*, die von Martin Majoor im Jahre 2000 gezeichnet wurden. Gedruckt wurde es auf Eos, einem holzfreien, säurefreien, chlorfreien und alterungsbeständigen Werkdruckpapier der Papierfabrik Salzer im niederösterreichischen Sankt Pölten. Das Vorsatzpapier *Caribic cherry* wurde von Igepa in Hamburg geliefert. *Rives Tradition*, ein Recyclingpapier mit leichter Filznarbung, das für den Bezug des Umschlags verwendet wurde, stellt die Papierfabrik Arjo Wiggins in Issy-les-Moulineaux bei Paris her. Das Kapitalband mit rot-schwarzer Raupe lieferte die Firma Dr. Günther Kast aus Sonthofen im Oberallgäu, die auf technische Gewebe und Spezialfasererzeugnisse spezialisiert ist. Gedruckt und gebunden wurde das Buch von der Firma Bookstation im bayerischen Anzing. Im Internet finden Sie Informationen über das gesamte Verlagsprogramm unter [www.editionargus.de](http://www.editionargus.de), zum Institut Interpretation der Hochschule der Künste Bern unter [www.hkb.bfh.ch/interpretation](http://www.hkb.bfh.ch/interpretation) und [www.hkb-interpretation.ch](http://www.hkb-interpretation.ch). Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über [www.dnb.de](http://www.dnb.de) abrufbar. © der zeitgleich erschienenen digitalen Version: die Autorinnen und Autoren, 2020. Dieses Werk ist lizenziert unter einer [Creative Commons Namensnennung-Nicht kommerziell 4.0 International](https://creativecommons.org/licenses/by-nc/4.0/) Lizenz (CC BY-NC 4.0). DOI: <https://doi.org/10.26045/kp64-6177> ISBN 978-3-931264-93-2