

BERLIOZ'S LOST OBOE?

**EXPLORING THE FORGOTTEN LAST GENERATION
OF THE SIMPLE-SYSTEM OBOE IN FRANCE**

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PHD THESIS

SEPTEMBER 2022

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ACKNOWLEDGMENTS

Professor Neil Heyde, my supervisor at the Royal Academy of Music and who over the course of researching this thesis has provided a wealth of insight and objective feedback, has been wonderfully supportive and an invaluable sounding board for my research over the years. I wish to thank him greatly for all of his critical guidance.

Funding for this research was made possible by the generous financial support of the Canadian Centennial Scholarship Fund. I would like to express my gratitude to the Maple Leaf Trust and to all of the donors who support the fund, and especially to Jill Cannon and to Dasha Shenkman for their encouragement.

Many scholars have been of tremendous help during the elaboration of this study. First and foremost, I would like to thank Geoffrey Burgess and Alain Girard, who have both been a source of inspiration over the past six years and provided a wide range of information and suggestions. Likewise, I am particularly indebted to Stefaan Verdegem, Alfredo Bernardini, Paolo Grazi, Giovanni Paolo Di Stefano, Sandro Caldini, Joel Raymond, Lola Soulier and the late Florence Badol-Bertrand, who all provided valuable insights through their enthusiastic correspondence.

Olivia Sham, whose beautiful piano playing can be heard on the recording that accompanies this written dissertation, has been very supportive and I wish to thank her for her excellent musicianship. The recording would not have been possible without the help of Elizabeth Kenny, Gabrielle Gale, Barbara Meyer, Jane Craxton, Holly Harman, Rainer Arndt, Andrew Hunter Johnston, Edmund Pickering and David Gleeson. Many thanks to each of them.

I also wish to thank the numerous friends and colleagues who, through their encouragement and support, have made this research project possible: Catherine Martin, Nicola Barbagli, Daniela Nuzzoli, Anne Pustlauk, Brian Clark, Lisandro Abadie and Akiko Sato, who was the first to suggest I undertake this investigation.

Furthermore, I would like to express my sincere appreciation to all of the performers and instrument builders who, through their participation in the surveys of this study, have provided a wealth of insights: H el ene Mourot, Leo Duarte, Mark Baigent, Masamitsu San'nomiya and Taka Kitazato; and Randall Cook, Henri Gohin, Mary Kirkpatrick, Filip Frydrysiak, Richard Earle, Matthieu Scohy, Sand Dalton and the late Marc Ecochard. This study is infinitely richer for their

contributions. Thanks are also due to David Fliri and Inga Klaucke for their help with many German translations.

The staff at the music divisions at the *Bibliothèque Nationale de France* (Richelieu-Louvois) and the British Library have been very helpful, and I wish to personally thank Richard Sutcliffe of the *Bibliothèque royale du Conservatoire de Bruxelles* for supplying unpublished facsimile material. Thanks are also due to Andrew Lamb of the Bate Collection (Oxford) for allowing me access to Brod's oboes.

The late Bruce Haynes, who began his career as a trailblazing performer of the hautboy and ended it as a renowned researcher, author, and university lecturer, has always been a guiding light on my career path, and I would like to thank him and Susie Napper for all of their support over the years. I would also like to take this opportunity to pay homage to my sorely missed friend and mentor, the late Washington McClain, for his guidance and inspiration. Thank you, dear Wash, for the inestimable contribution you have made to my personal journey.

Most of all, I am indebted to my mother, my lovingly remembered father, and to my companion Christophe Poupon for their love and incalculable support, and for encouraging me to continue pursuing my dreams. It is to them that I humbly dedicate this work.

ABSTRACT

With the HIP movement pushing its frontier inexorably forward into the nineteenth century, modern-day historical oboists are increasingly confronted with a widening gap in the workplace between demand and supply. While the evolution of the oboe and its repertoire in nineteenth-century France have been studied to varying degrees, and while a corpus of treatises aimed at amateurs was published during the period, there is a current paucity of historically accurate instruments available, and no research to date has taken a practice-led approach to investigating the specialised performance techniques required to make the nineteenth-century French oboe practicable in high-level professional settings.

Engaging with an early nineteenth-century French oboe by Guillaume Adler (Paris, c.1835) that has been analysed as a case study, this thesis examines how the instrument's performance capabilities respond to the needs of current-day HIP in a professional context. By exploring this specimen's innate properties and the reciprocal relationship between player and instrument, the aim is to acquire embodied knowledge of the oboe in France between 1800 and 1850, in turn leaving a practical record of my findings for scholars and peers to mine according to their needs. The case study is structured as a database of this 185-year-old instrument's inherent attributes, using source materials including reeds, treatises and repertoire as a starting point, then segueing into a personal narrative recounting my own empirical experience with the instrument, and concluding with a folio of recordings.

Unearthing the performance techniques of the French oboe in its final phase as a keyed, simple-system *hautboy* and the corpus of neglected repertoire it was designed to perform provides a reassessment of the commonly-held view that the nineteenth century was a time of crisis in the history of the oboe.

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Pitch notation uses the Helmholtz system: middle C on the piano (known as 'low C' to oboists) is labelled C¹. The octaves above are designated as C², C³, etc.

DEFINITIONS

This thesis is concerned with the simple-system oboe in France, which emerged after the fall of Napoleon's *Premier Empire* (1815) and held sway until the instrument's mechanisation by the Triebert firm in the 1840s. This period in French history corresponds to both the Bourbon Restoration (1815-1830) and the July Monarchy under Louis-Philippe (1830-1848). During this period, four major Parisian musical establishments flourished and for referential purposes are briefly described below. For an in-depth account of the first three operatic institutions, all of which were partially or entirely funded by the state, see Johnson, James H. *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995); Carse, Adam. *The Orchestra from Beethoven to Berlioz: A History of the Orchestra in the first half of the Nineteenth Century* (New York: Broude, 1949); and Wild, Nicole. *Dictionnaire des théâtres parisiens au XIXème siècle* (Paris: Aux amateurs de livres, 1989).

Opéra de Paris

Founded in 1669 by Louis XIV as the *Académie d'Opéra*; renamed the *Académie Royale de Musique* in 1672 under Lully, who made ballet an important element of his staged productions; after the Revolution, renamed *Théâtre des Arts* in 1794, dropping all association with the royal family. Renamed *Théâtre de la République et des Arts* in 1797; then *Académie Impériale de Musique* after Napoléon was crowned Emperor in 1804 and during both *Empires* (1804-1814; 1852-1870). Renamed *Académie Royale de Musique* from 1814-1848.

In 1821, the Opéra moved to Salle Le Peletier (destroyed by fire in 1873), which had a capacity of 1900 spectators, and at which time it was popularly known as *Opéra Le Peletier*. Regulations stipulated that staged lyrical works must contain five acts and include at least one ballet, and be entirely dedicated to song and dance, with no spoken word permitted. Preferred subject matter was drawn from either antiquity or mythology. The orchestra, led from the violin by Habeneck from 1824 to 1846, was large by contemporary standards, mainly due to its substantial string section, and regularly counted up to eighty musicians during the second quarter of the nineteenth century. From 1817 onwards, the company gave three performances per week, on Monday, Wednesday and Friday nights.

World premières given at the *Opéra* include Gluck's *Orphée et Eurydice* (1774), *Iphigénie en Aulide* (1774), *Iphigénie en Tauride* (1779); Rossini's *Le siège de Corinthe* (1826) and

Guillaume Tell (1829); Auber's *La muette de Portici* (1828); Meyerbeer's *Robert le diable* (1831), *Les Huguenots* (1836), and *Le Prophète* (1849, incidentally the first opera to use electricity); Halévy's *La Juive* (1835); Berlioz's *Benvenuto Cellini* (1838); Auber's *Le lac des fées* (1839); and Adam's *Giselle* (1841). French adaptations of Mozart's works were also premiered at this theatre, including *Les noces de Figaro* (1793) and *Les Mystères d'Isis* (1801), a bastardised version of *Die Zauberflöte*.

Opéra-Comique

Founded c.1714, this opera house merged with the *Théâtre-Italien* in 1762, but the two companies split again c.1793. In 1783 the company moved to the original Salle Favart (which had a capacity of 1100 seats, but which burnt down in 1838) where it was strongly associated with the works of Grétry. In 1840, the company moved to the second Salle Favart (1500 seats), in turn also destroyed by fire in 1878, at which point it moved to the third (and current) Salle Favart.

Unlike the *Opéra de Paris*, spoken word at the Opéra-Comique was permitted, as seen in many of Gluck's and Grétry's lyrical works composed for this theatre. Works staged were generally of a lighter note, rarely portrayed death, and were often of a patriotic or political tone. Orchestral forces were somewhat smaller than at the Opéra de Paris, and counted between forty and fifty musicians during the second quarter of the nineteenth century.

First staged performances include Grétry's *Richard Coeur-de-lion* (1784); Dalayrac's *Nina* (1786); Boieldieu's *La dame blanche* (1825); Donizetti's *La fille du régiment* (1840); Berlioz's *La Damnation de Faust* (1846); Bizet's *Carmen* (1875); Offenbach's *Les Contes d'Hoffmann* (1881); Delibes' *Lakmé* (1883); and Massenet's *Manon* (1884).

Théâtre-Italien

Founded in 1680 as the *Comédie-Italienne* and by 1801 known as the *Théâtre de l'Opéra-Buffera*, this troupe performed Italian opera only (sung in Italian) and was a favourite of Napoleon's, who often attended performances. The *Théâtre-Italien* (named so as of 1814) gave the Parisian premières of Mozart's operas, including *Le nozze di Figaro* (1807), *Così fan tutte* (1809), and *Don Giovanni* (1811), and later, the premières of both *buffa* and *seria* works by Donizetti, Bellini and Rossini. The latter moved to Paris in 1824 to take up the theatre's direction. Prior to Rossini's arrival, the company's playbill featured works by composers now largely forgotten:

Cimarosa, Paisello, Sarti, Spontini, Zingarelli and others. Moving to the sumptuous Salle Ventadour in 1841, there were typically three staged performances per week, on alternating nights with the *Opéra*.

After 1791, a French law was passed that permitted almost anyone to open a public theatre. In addition to the three aforementioned opera houses, a panoply of over twenty-five theatres appeared in Paris at the dawn of the nineteenth century. These included the *Théâtre Feydeau*, *Théâtre des Bouffes-Parisiens*, *Théâtre de la Gaîté*, *Théâtre de l'Odéon*, *Théâtre Montansier*, *Théâtre du Vaudeville*, *Orchestre de la Porte-St-Martin*, and many others which collectively employed 636 musicians by 1848.

Société des concerts du Conservatoire

This institution, founded in 1828 and inspired by curiosity about Beethoven's music, gave a series of concerts at the *Salle du Conservatoire*, which at the time had a capacity of 956 seats. Its highly respected members were elected by peers ("*sociétaires*") who were all former graduates of the Conservatoire. *Sociétaires* were appointed by an executive committee and partook in roughly 60 services per year (these included rehearsals and concerts which always took place on Sundays). At its outset, the *Société* was composed of roughly 100 musicians. Tenure was for life, and membership was exclusive: *sociétaires* were not allowed to be involved with other concert-giving associations. Proceeds from each season were equally divided among members.

Conducted from the violin by Habeneck, the *Société* gave the Parisian premières of Beethoven's symphonies (as of 1828); Berlioz's *Symphonie fantastique* (1830), *Harold en Italie* (1834), *Roméo et Juliette* (1839); and of Mendelssohn's symphonies (1840s). Concerts were long by modern standards, often lasting over three hours. During Habeneck's tenure as *chef d'attaque*, the orchestra's string section was made up of over 60 musicians: 15 first violins, 14 second violins, 10 violas, 12 celli, and 9 double basses. The *Société* lasted until 1967, at which point it became the *Orchestre de Paris*. For an in-depth account of the association, see Holoman, D. Kern. *The Société des concerts du Conservatoire* (Berkeley: University of California Press, 2004).

PREFACE

My encounter with historical oboes came at the age of 19, after five years of study on the modern oboe. As a teenage music student, I had always been attracted to the instrument's baroque repertoire and would often bring in transcriptions of viol suites by Marin Marais to private lessons with my first oboe instructor, Diane Lacelle. Despite her bewilderment, Diane always encouraged my inquisitiveness, suggesting early on that I should consider studying the baroque oboe because it might provide better career opportunities in the long run. In her studio, she had a 'Saxon' hautboy¹ copy in boxwood by Joel Robinson, which, because it was permanently assembled and mounted on a stand, struck me as more of an adjunct to the 'visual sweep' of the room than a musical instrument. The hautboy's graceful turnings and its 'sense of otherness' from my many-keyed blackwood instrument immediately intrigued me. Sensing this, Diane would often lend me CD and cassette recordings of Paul Goodwin, and I became fascinated by the tone colours and expressivity that his 'earlier' oboe produced. The sound was so foreign to what came out of my modern conservatoire model, and I quickly became infatuated with Goodwin's recordings of Händel sonatas and of concertos by Vivaldi, Albinoni, Telemann and Bach.

When I arrived at McGill University to study in the class of Theodore Baskin (principal oboe, *Orchestre symphonique de Montréal*), a fleeting discussion with one of the faculty members struck fear in me. It appeared I would eventually 'have to choose' between the oboe and the hautboy – excelling at both was not professionally viable, and the prospect of sacrificing years of investment training on the modern oboe was wholly unnerving. In addition, many professors were not overly fond of having their students 'moonlight' on other instruments, and Mr. Baskin encouraged me to spend as much time as possible focusing on the modern oboe. In an attempt to reconcile the two opposing worlds, I would often bring in what at the time felt like rather obscure pieces to my lessons, such as the C minor oboe sonata by Joan Baptista Pla, or Couperin's *Goûts-Réunis* (1724).

In 1999, when I heard that the late Washington McClain had recently relocated to Montreal, I took my first baroque oboe lesson with him. The encounter was to have an everlasting impact on my career as a performer. The next year, I completed my undergraduate degree on the modern oboe and enrolled in the Artist Diploma programme on the hautboy. More than a teacher, Washington quickly became a friend, mentor and role model, whose infectious laughter and

¹ This term, reclaimed by the late Bruce Haynes, is increasingly used in scholarly sources to define the two- or three-keyed eighteenth-century oboe, as it was known in English-speaking countries at the time. Its performers are therefore *hautboists*.

larger-than-life persona were always the highlights of any lesson. During this time, I was also fortunate to become one of the last hautboy students of the late Bruce Haynes, who was to have an equally profound impact on me as a performer and scholar, and whose teachings continue to be a source of inspiration. It was at this time, while studying with McClain and Haynes, that I became increasingly intrigued by the neglected works of lesser-known composers, and both oboists encouraged my curiosity.

After completing graduate studies at McGill, a vacancy at Tafelmusik, McClain's former orchestra, opened up for the position of second oboe. I jumped at the opportunity and ended up winning the audition. As a fledgling core member of Tafelmusik (based in Toronto and at the time branded as 'Canada's Period Orchestra'), the years 2003 through 2007 were highly formative as I 'learnt on the job' with the orchestra, whose repertoire at the time extended from the French baroque operas of Lully (c.1660) up until the canonical works of the late classical period, including Beethoven's Ninth Symphony (1824) and Schubert's Unfinished Symphony (1822). Owing to a lack of appropriate instruments and expertise among the orchestra's woodwind section, the ensemble's repertoire systematically stopped around 1820. And while I had always had a predilection for eighteenth-century repertoire, I remember daydreaming of past performances of Mendelssohn's Third, Sibelius' Second, and Shostakovich's Fifth symphonies, which had always been my favourite orchestral works, and wondering if I would ever be able to perform later repertoire again.² By the time I joined Tafelmusik, I had given up the 'modern' oboe and sold my Lorée conservatoire model. Because the Canadian early music scene provided exceedingly few opportunities to pursue historical performance of nineteenth-century repertoire, I focused my efforts elsewhere, and in 2003 and 2006 was awarded research grants from the *Conseil des arts et des lettres du Québec* to reintegrate Marin Marais' *Pièces de viole* into the oboist's repertoire, ending in conferences on the subject at Canadian universities and a solo recording.³ I then founded Notturna in 2006, a chamber collective that I continue to use as a platform to excavate, perform and record unexplored repertoire for oboe, and at the time of writing have produced seven commercial recordings of previously unpublished and unrecorded works.⁴

² It was in fact a recording of the Strauss oboe concerto, given to me by my mother when I was 14, that made me decide to switch from studying the clarinet to the oboe. Because of the soloistic clarinet part in the concerto's first movement, not comparing the timbre of the two instruments was impossible, and I was immediately hooked by the oboe's more mordant, piercing tone.

³ This CD, entitled *Marais: Suites for oboe*, is available on the Audax label, ADX13702.

⁴ Works by Janitsch, Graun, Krause, Marais, Molter, Philidor, Abel and Grétry, available on the ATMA and Sony/Deutsche Harmonia Mundi labels.

Moving to France in 2008, I discovered a wealth of opportunities for nineteenth-century historical performance, and soon began an ongoing collaboration with the Cologne-based period orchestra *Die Kölner Akademie*. Here was an ensemble that took a critical approach to the performance of music from *all* periods, from Schütz to Stravinsky. In 2016, the opportunity came to record Mendelssohn's piano concertos with Ronald Brautigam, an experience that put me face-to-face with several predicaments faced by historical wind players in today's working environment. In preparing for the recording project, I was immediately struck by my own lack of appropriate 'hardware.'

In 2013, I had obtained a French ten-keyed oboe by Guillaume Adler, c.1830, from an antiquarian in London, and because the Mendelssohn concertos dated from that same period, I resolved to use the Adler for the recording. But because the instrument was French, I just as quickly experienced burgeoning feelings of illegitimacy. Would the conductor and my colleagues notice the discrepancy? To make matters worse, I hadn't ever really studied the romantic oboe, and the fear of being ratted out as an 'imposter' quickly seized me. Was I legitimate? Would my training as a modern oboist and historical *hautboïste* be sufficient? Adding fuel to the fire, it was announced that the concertos would be recorded at 438 Hz, and I struggled to get the Adler oboe 'up to pitch,' assuming it was my lack of expertise rather than anything to do with the instrument.

When I arrived at the first rehearsal, I was struck by a seemingly carefree, 'whatever works' approach from my colleagues in the woodwind section. Looking around, I discretely observed a hodgepodge instrumental park made up of cylindrical Boehm flutes from the 1850s; replicas of classical, Mozart-type bassoons with shortened crooks; and completely modern clarinets 'pulled out' to lower their pitch. Most perplexing of all was my second oboe colleague, who arrived with an oboe by Otto Mönnig c.1915, an instrument that would have been used to premiere the late works of Mahler. I was quickly seized by a feeling of frustration and helplessness. Why had I panicked about finding the 'right' tool? If everyone else could play on 'whatever worked', then why couldn't I?⁵ I also found it hard to reconcile the fact that the Mendelssohn concertos would be recorded at the seemingly arbitrarily-chosen pitch of 438 Hz. When I inquired as to why it was so high (wasn't Mendelssohn supposed to be played at 430 Hz?), I was informed it was because the piano had been 'tuned higher than 430 Hz' and 'sounded better' at that pitch. A year later, I experienced a relapse in bewilderment with the same ensemble during a recording of Offenbach. While it was announced that we would record the two *opérettes* using 'period' instruments, the pitch would be 442 Hz, and I wondered if anyone cared that *diapason normal*, which fixed A' at 435 Hz, was established in Paris in 1859, right before the two lyrical works in question were

⁵ Of course, one wonders how genuinely consistent historical situations must have been, and as we will see later on, various types of oboes did coexist in the nineteenth century.

composed. In the recording session, I again dubiously took note of metal Boehm flutes and even a colleague proudly brandishing their Yamaha clarinet.

In discussing these jarring professional experiences with other historical oboist colleagues, I quickly realised that a gap was forming between supply and demand. While we were increasingly being called upon to perform nineteenth-century repertoire, there was an extreme paucity of historically-accurate instruments, and being repeatedly faced with this paradox galvanised my commitment to formally interrogating these issues in the framework of the following thesis. And while on the one hand, my motivation for undertaking this research project has been pragmatic, in that my professional experience as an oboist with leading period orchestras⁶ has made me acutely aware of the contradictions currently faced by historical woodwind players in today's working environment, an intrinsic interest in the history and evolution of the oboe has provided an additional impetus for my investigations and my goal has also been one of personal development and fulfilment. Like many HIP⁷ musicians, research has always been an integral part of my approach to performance, and I have seen the undertaking of this doctoral study as a means of documenting the investigations I carry out in my own practice to keep abreast of rapidly changing fashions in the field.

Before addressing the 'oboe-centric' gap mentioned above (created by a flagrant lack of the appropriate tools required to achieve our professional and artistic goals as performers), I will take the opportunity here to report on a more global imbalance faced by all HIP musicians, one that I have repeatedly experienced in current professional practice. Faced with a spectrum that has historical accuracy on one end and modern acceptability on the other, HIP performers are repeatedly required to position themselves on it and navigate the gulf that continues to divide the two worlds. And while it is not my intention here to reopen the ongoing and still-hot debate of 'authenticity',⁸ the fact that we hear music differently today than our ancestors did two hundred years ago is a given that everyone can agree upon.⁹ As numerous authors have noted, since the

⁶ These include Les Arts Florissants, Les Musiciens du Louvre and Pygmalion in France; Concerto Köln, Balthasar-Neumann Ensemble, and Die Kölner Akademie in Germany; Anima Eterna, Vox Luminis and La Petite Bande in Belgium; The Gabrieli Consort, The Hanover Band and Arcangelo in the UK; Il Pomo d'Oro and Accademia Bizantina in Italy; Capella Cracoviensis and the Wroclaw Baroque Orchestra in Poland; and various other ensembles such as Tafelmusik and Ensemble Arion in Canada; the Australian Brandenburg Orchestra; the Helsinki Baroque Orchestra; Suomalainen Barokkiorkesteri (the Finnish Baroque Orchestra); and MusicAeterna (Russia).

⁷ This abbreviation for 'historically-informed performance' has been used throughout this study for the sake of brevity.

⁸ The issue is addressed in the many influential writings of Harnoncourt, Hogwood, Dart, Taruskin, Haynes, Butt, Jenkins, Brown, Rink and others.

⁹ On this, Harlow observes that "as modern listeners, we encounter music of the past from our own historically derived aesthetic experience." Martin David Harlow, "Viennese chamber music with clarinet

1990s the HIP movement has witnessed a slow but steady shift, which, shedding the oppressive weight of ‘authenticity’ touted by the movement’s pioneers, is increasingly unapologetic in adopting a ‘selective use of historical evidence.’¹⁰ Indeed, through my own involvement with period ensembles across Europe, I have experienced and even matured in this increasingly self-assured and somewhat insouciant environment which some have labelled ‘postmodernist’¹¹ or even ‘cross-fertilised,’¹² as it represents a new aesthetic that incorporates elements drawn from both historicising ‘Early Music’ culture and more mainstream aesthetics. Today, we cultivate a plethora of different tastes, and while some of these happily coincide with the historical evidence that musicological enquiry has uncovered, many others remain in direct opposition to it. But while Taruskin notes “we have every right to love the result, as many of us do. Mozart’s disdain and Beethoven’s discomfort need not deter us. They are dead”,¹³ tension persists in the relationship between historical accuracy and modern acceptability, pressuring today’s HIP performer to walk a fine line between the two worlds. Of course, as the movement’s reactionary edge has dulled over time, so too has its practice become more mainstream. Over the past decades, HIP performers have been increasingly relaxed and unapologetic about integrating anachronistic twenty-first century techniques in their interpretations of ‘Early Music,’ and are generally less concerned with the ethical implications this may have than the movement’s pioneers were two generations ago. For perhaps obvious reasons, these ‘postmodernist’ practices have not been documented with the care devoted to unearthing authentic historical practices, and it is not my intention here to condone or criticise any of the former. But it will be useful to take note of their breadth and scope in the industry and the extent to which they are deeply embedded in current professional practice.

Drawing on observations from personal experience, some of these practices are purely matters of ahistorical *hardware*. The aforementioned panoply of woodwind instruments currently used to execute Romantic repertoire is at the forefront of this study, but other instances could include using holed trumpets to perform Purcell; the use of countertenors to fill castrati roles in Händel’s operas; or the use of female sopranos instead of boy trebles in performances of Bach cantatas.

and piano, 1783-1827: repertory and performance strategy,” (PhD thesis, University of Sheffield, 2004), 207.

¹⁰ This notion, coined by John Butt, will crop up frequently. Butt observes that, “in light of the very proper criticism of literalism and objectivist performance, many performers may well be developing a more critical attitude towards historical evidence, even deciding to use historical evidence selectively.” John Butt, *Playing with History* (Cambridge: Cambridge University Press, 2002), 41.

¹¹ Richard Taruskin, *Text and Act: Essays on Music and Performance* (Oxford: Oxford University Press, 1995), 300.

¹² Martin David Harlow, “Viennese chamber music with clarinet and piano, 1783-1827: repertory and performance strategy,” (PhD thesis, University of Sheffield, 2004), 204.

¹³ Richard Taruskin, *Text and Act: Essays on Music and Performance* (Oxford: Oxford University Press, 1995), 169.

Other incongruities are concerned with specific *performance styles and techniques*, such as continuous string vibrato in Schubert or bowings that ignore the tenets of Spohr's 1832 *Violinschule*; the lack of portamento when performing Offenbach; the disappearance of the 'reed-above position' in clarinet technique, which is absent in contemporary practice;¹⁴ or copious use of woodwind vibrato in solo passages from Bach cantatas.¹⁵ Still other examples can be found in ahistorical *tuning systems*, such as the aforementioned early Offenbach operettas performed at 442 Hz instead of *diapason normal*; or performances of Gluck's and Grétry's lyrical works at 430 Hz.¹⁶ And what of the historically doubled woodwind sections in orchestral performances of Berlioz and Beethoven, rarely seen today?

But if authenticity has been compromised, and inarguably many of the aforementioned practices are indeed historically 'inaccurate,' many are the authors who have emphasised the need for history to *serve* the present, not least among them Nietzsche:

To be sure, we need history. But we need it in a manner different from the way in which the spoiled idler in the garden of knowledge uses it, no matter how elegantly he may look down on our coarse and graceless needs and distresses. That is, we need it for life and action, not for a comfortable turning away from life and action or merely for glossing over the egotistical life and the cowardly bad act. We wish to use history only insofar as it serves living.¹⁷

Lawson contextualises this broader philosophy to the HP movement more specifically, stating:

Is the kind of performance expected by a composer in his own day valid for later generations of players? We can never really answer this question, if only because life has changed so much during the last couple of centuries [...] We do not really have the option to turn back the clock. Even if we could hear Anton Stadler's première of Mozart's Clarinet Concerto in 1791, we should not necessarily want to adopt all its features; in other words, like all period performers from our time, we would be bound to exercise elements of choice and taste as much characteristic of the twentieth century as of the eighteenth.¹⁸

¹⁴ Lawson notes that many French tutors (Lefebvre 1802, Vanderhagen c.1785), as well the majority of nineteenth-century Italian treatises, preferred this embouchure position to the 'reed below' set-up now used by all historical clarinet players. Colin Lawson, *The Early Clarinet* (Cambridge: Cambridge University Press, 2000), 44-47.

¹⁵ From personal experience, I have often been asked by conductors (in rehearsals and recording sessions) to use vibrato in solo passages in works by Bach, Händel, Mozart, Beethoven, Weber and others. This topic is discussed in depth in Chapter 5: *Performance Style & Technique*.

¹⁶ See Chapter 4: *Pitch* for a more detailed explanation of this practice.

¹⁷ Friedrich Nietzsche, *Unzeitgemäße Betrachtungen* (Leipzig: E. W. Fritsch, 1874), trans. R. J. Hollingdale as 'On the Uses and Disadvantages of History for Life' in *Untimely Meditations*, (Cambridge: Cambridge University Press, 1983), 57-123.

¹⁸ Colin Lawson, *The Early Clarinet* (Cambridge: Cambridge University Press, 2000), 10.

HIP musicians are therefore now more than ever free to unabashedly pick and choose bits and pieces from a vast corpus of primary sources, regardless of their historical accuracy. As a period oboist evolving in this *décomplexé* environment, I too have been faced with many contradictions when attempting to reconcile historical evidence with professional practice, and the elaboration of this thesis has sensitised me to exactly which compromises I have had to make in my own artistic practice. Like my colleagues, I have had to weigh the gains and trade-offs of numerous practical and stylistic choices, assimilating certain historical protocols while discarding others for being too radical to find acceptance in the professional arena, a saturated and highly competitive arena where the stakes and expectations are high. One needs to be as close to flawless as possible, and reliability is imperative. In doing so, I have openly adhered to Taruskin's 'postmodernising' philosophy:

we have our own tastes, our own ways and our own agenda. In case of conflict, they inevitably override the historical evidence. Which of course is how it should be – must be – if we have any sort of stake in our own culture. To take the opposite tack would be a profession of apathy.¹⁹

The following chapters focus on a specific model of oboe (here analysed as a case study) and the performance techniques I adopt when engaging with it. Although my intended readership is naturally woodwind instrumentalists interested in historical performance practice, I expect that a broader audience of instrumentalists (whether HP or not) will also benefit from the methods used during this study and the findings uncovered by it. Although certain oboe-centric details will have a small readership, the model and methodology laid out here offer detailed evidence of the complexities of the interactions between historical data, instrumental hardware and professional practice that has very broad relevance. From a personal standpoint, I have found the *process* of theorising, objectifying and reflecting on my own practice to be a wonderfully elucidating exercise that could benefit any practitioner.

¹⁹ Richard Taruskin, *Text and Act: Essays on Music and Performance* (Oxford: Oxford University Press, 1995), 169.

INTRODUCTION &
CASE STUDY PRESENTATION

AN OBOE BY GUILLAUME ADLER (PARIS, c.1835)
HISTORICAL AND PERSONAL CONTEXT

In the preface, I addressed a generic, overarching paradox faced by all HP practitioners today, a widening gap between authenticity and mainstream postmodern aesthetics. Here, I address an additional paradox that affects historical oboists in particular, and which is the impetus behind this study. Diversification strategies of period ensembles over the past twenty years have shown a marked tendency to explore later repertoire, with many of these orchestras now readily performing large-scale Romantic works by composers such as Mendelssohn, Schumann and Berlioz.²⁰ As Bruce Haynes observed, “‘Early music’ has come full circle, from a movement devoted to finding an alternative to Romantic performing style to one that revives that very style.”²¹ With the movement pushing its frontier inexorably forward into the nineteenth and early twentieth centuries, musicians trained in performance practice of the eighteenth-century are increasingly confronted with an opening gap between demand and supply: *demand* for later Romantic repertoire, for which we have not been specifically trained; and *supply* in our capacity, or lack thereof, to quickly acquire a new set of tools and skills, often requiring historical woodwind players to find patchwork solutions ‘on the job.’²²

²⁰ Ensembles include those in France (Les Siècles, L’Orchestre des Champs-Élysées, Les Musiciens du Louvre, Ensemble Matheus, and, formerly, La Chambre Philharmonique); the UK (Orchestra of the Age of Enlightenment, Orchestre révolutionnaire et romantique, The Hanover Band, The Gabrieli Consort, and formerly The London Classical Players); Belgium (Anima Eterna, B’rock); The Netherlands (Orchestra of the Eighteenth Century); and Germany (Concerto Köln, Balthasar-Neumann Ensemble, Die Kölner Akademie).

²¹ Bruce Haynes, *The End of Early Music: A Period Performer’s History of Music for the 21st Century*. (Oxford: Oxford University Press, 2007), 219.

²² Another growing yet problematic trend in current historical practice is that of programming several centuries of repertoire *on the same concert programme*, often bound together by a common theme (The Garden of Eden, for example). This was the case of a recent recording (2021) and ensuing world-tour (70+ concerts) in which I participated with a famous American mezzo-soprano soloist, where a hodgepodge of works by Cavalli, Handel, Gluck, Mysliveček, Wagner, Mahler, Copland and Rachel Portman were sandwiched together, but I have also witnessed the phenomenon in other instances, for example, in performances of *Orfeo* by both Monteverdi (1607) and Gluck (1762) on the same programme; or recent performances in which I have participated in Australia where works by C. P. E. Bach (c.1760), Boieldieu (c.1830) and Ravel (c.1920) were all performed in rapid succession. This phenomenon poses real problems for wind players who, unlike string players, cannot move fluidly from one pitch level to another and are required to take up altogether different instruments for nearly every piece.

While the issue of acquiring and assimilating specialist knowledge concerns all HIP musicians, period woodwind instrumentalists pose a unique challenge to the movement's unrelenting march forward into the realms of Mahler, Stavinsky and Wagner, for in addition to learning new historical performance techniques, woodwind players are faced with the obstacle of locating and securing access to the appropriate instruments on which they can perfect these newfound techniques. As a historical oboist for the past twenty years, I have observed an increasing imbalance between the instrumentarium at our disposal and the nineteenth-century repertoire we are increasingly solicited to perform.²³ Because no modern copies of nineteenth-century oboes are readily available on the market (at the time of writing, only six makers worldwide²⁴ have produced a handful of unmarketed prototypes), oboists are faced with the daunting task of either trying their luck with late eighteenth-century historically inaccurate replicas or purchasing original nineteenth-century models from antiquarians or at auctions. Neither option is ideal: despite the rising demand, historical makers are highly reluctant to design new models they may not be able to market, while original instruments, despite their exorbitant prices, come with no guarantee of being professionally viable.²⁵ Because of the dearth of readily available, historically accurate nineteenth-century woodwind instruments (and oboes in particular), HIP's encroachment into the soundscapes of Berlioz, Meyerbeer and Halévy is currently at an impasse, a stalemate that can only be resolved by procuring the appropriate instruments while acquiring the specialist knowledge to use them.

The historical oboist's dilemma is compounded by the fact that there is a dire shortage of practice-led research that investigates the specialised performance techniques required to make these models practicable in high-level professional settings. Because current studies have not addressed precisely how a twenty-first century period oboist can use Romantic instruments to achieve their artistic goals, my aim in this study will be just that: to explore the practical application of the early nineteenth-century oboe at a professional level through experimentation

²³ 2019 marked the 150th anniversary of Berlioz's death and the year saw a flurry of performances of his works by period orchestras. For example, Les Siècles produced *La Damnation de Faust* in September 2019 and Gardiner's *Orchestre révolutionnaire et romantique* gave a BBC Proms concert of *Benvenuto Cellini* the same month. 2019 also marked the 200th year of Offenbach's birth, with several ensembles performing his works (I personally participated in a number of recordings and live performances of his music over the course of the year). Concerto Köln has also recently embarked on an ambitious project to record Wagner's complete Ring cycle. During the six-year period of this study alone, I have taken part in concerts and recordings of works by Beethoven, Berlioz, van Bree, Brahms, Bruckner, Elgar, Hiller, Liszt, Mahler, Massenet, Mendelssohn, Offenbach, Schubert, Wagner, Weber, Wilms, Witt, and others.

²⁴ These include Ponchio, Frydrysiak, Cottet, Ecochard, Westermann and Earle. See *Appendix I*.

²⁵ For this reason, an annex to this thesis has studied the question of why there are virtually no historical oboe builders copying Romantic instruments. Do makers wittingly avoid replicating later oboes because the financial resources required to produce them outweigh the return on investment? Or is it simply a lack of expertise? See *Appendix I*.

documented in the form of a case study, a component that is hitherto missing from other studies. The timeliness for this is alluded to by Haynes, who notes that “during the 19th century the oboe changed more than in any other period. Most accounts have dwelt on the mechanism, with little consideration of other less obvious alterations [reeds, bore and tone hole dimensions] and how they influenced the instrument’s playing characteristics.”²⁶

The instrument I have chosen to examine in this case study is an original boxwood ten-keyed oboe constructed by Guillaume Adler in Paris around 1835, which I acquired in 2013 and have been using intermittently over the past nine years to fulfil various professional engagements.²⁷ This particular model can be classified as a ‘simple-system oboe’ and was used in France from roughly 1815 to 1850,²⁸ a period which in the musical history of France corresponds to the age of Berlioz. It was during this time, especially in the 1830s, that the composer, viewed by many as the only ‘great’ French Romantic composer, produced his most celebrated works (the *Symphonie fantastique* in 1830, *Harold en Italie* in 1834, *Benvenuto Cellini* in 1838, *Roméo et Juliette* in 1839, among others). And although during this time France would also discover the symphonic works of Beethoven, be swept away by ‘Rossinimania’ and Italian *opera seria* by Bellini and Donizetti, and be held in the thrall of Grand opera (as exemplified by the largely forgotten works of Meyerbeer, Auber and Halévy), it is the enduring symphonic works of Berlioz, with their progressive harmonies and gargantuan proportions, that are now seen as France’s crowning musical achievement of that age.

Despite the many rewarding solos that Berlioz left behind for the oboe, his era is a neglected chapter in the history of the instrument and my thesis’ title emerges from this observation. In terms of instrument design, it was precisely during this time (around 1840) that the oboe became mechanised in France by the Triebert firm, a revolutionary procedure that would see a complete overhaul of its bore and key system, permanently changing its tone to the one we are familiar with today. The Adler oboe studied here was crafted right before this transition, and its acoustic properties are therefore more akin to late eighteenth-century ‘classical’ models that would have been familiar to Mozart, Gluck and Grétry than to the modern instrument now seen and heard in symphony orchestras. As will be seen below, it is impossible to say precisely when this type of model fell into disuse, since it coexisted for decades with the *système* oboes introduced by the Triebert family in 1840 and was still being manufactured well into the 1860s. For the purpose of

²⁶ Bruce Haynes, “Oboe,” in *The New Grove Dictionary of Music and Musicians*, vol. 8. ed. Stanley Sadie. (London: Macmillan, 2002), 851.

²⁷ A photo of this instrument can be viewed [here](#), with additional photographs [here](#), and of the author performing [here](#).

²⁸ This period corresponds to the fall of Napoléon’s *Premier Empire* (1815) through the Bourbon Restoration (1815-1830), and up until the end of Louis-Philippe’s July Monarchy in 1848.

this case study, however, the period around 1850 will serve as an approximate cut-off date as it coincides with the proliferation of Triebert's mechanised models and the eventual wane of the simple system.

When I acquired the Adler oboe in 2013 from an antiquarian in London, my initial goal was to use it to bridge the professional 'gap' described above, as a tool for performing early romantic repertoire at a pitch of 430 Hz or higher (the HP movement's current tuning standards for this period). During my first encounter with the instrument, and even before purchasing it, I was immediately struck by its inherent qualities. First and foremost among these was its impeccable voicing, or in other words, its ability to be played in tune with minimal embouchure adjustment. In addition, I found the model had a warm, rich tone, and this coupled with its clear response made it, to my mind, a professionally viable instrument. Initial reed experiments quickly revealed a pitch level closer to 425 Hz, but I remained determined to use the Adler for live performances and recordings of Romantic repertoire. In any case, my other options were limited to say the least, as no nineteenth-century oboe copies were available on the market that would allow me to reach my professional goals. Simply put, I had to find a way to make the Adler 'work.' What follows is therefore an account of my nine-year journey with this instrument and the relationship I have developed with it. Interacting with this model has been a meaningful task for me, allowing me to theorise my own practice and sensitising me on how I have had to adapt it to conform to high-level performance settings. As I will explain throughout this thesis, the process of reviving a 185-year-old instrument has been long, arduous, and fraught with booby traps, requiring relentless testing of many different parameters: reeds, performing techniques, analysing physical dimensions and comparing them with those of similar models, playing through repertoire. Similar testing has of course already been applied to many eighteenth-century 'baroque' oboes with varying degrees of success and accuracy, yet up until recently the demand to resurrect a nineteenth-century model in the hopes of achieving a professionally viable performing tool was insufficient to warrant a thorough investigation.

The case study has been structured according to the following framework. Firstly, the instrument's historical context has been explored. Dating and maker information have allowed me to contextualise the Adler model within a historical framework, instigating questions such as what repertoire it was used to perform, which will later be addressed. This is then followed by an analysis of the specimen's physical properties: keywork, materials of construction, bore and all other salient features have been examined and the data compiled in a comparative analysis. This then segues into a chapter on specific performance techniques recovered from didactic primary sources and includes a personal narrative recounting my own empirical experience with each of these techniques, and how I have chosen (or not) to integrate them into my own practice.

Because pitch and reed-making are two factors that play pivotal roles in the practicability of any given oboe, these topics are also studied in detail. And since the aural results attained through employing different reeds and performance techniques (be it fingerings, articulation and/or phrasing) are more effectively ‘heard’ rather than verbally described, the case study is interspersed with a selection of demonstrative and exploratory recordings that include technical passages and orchestral excerpts, highlighting features unique to the Adler model.

Finally, I have recorded a fifty-minute creative portfolio of solo repertoire for oboe and pianoforte which is closely mapped to the Adler oboe and which implements the embodied knowledge acquired during the elaboration of the case study. Since one of the underlying motivations of my research has been to challenge the *idée reçue* that the Romantic era was a time of crisis for the oboe and that oboists today must begrudgingly wear a “badge of historical injustice”²⁹ because of this, I have closed this study with a historical snapshot, my own artistic statement of how the instrument being examined can be used, to quote Clive Brown, to “make discoveries about effectively performing music by less familiar composers of the [nineteenth century], [...] to rekindle the vitality it was once felt to possess”³⁰ in a format that is immediately accessible to fellow colleagues and music-lovers alike.

An annex to this study explores how other professional historical oboists cope, on a practical level, with the rise of nineteenth-century repertoire in the workplace and the contradictions they have faced. By seeking out my colleagues’ perceptions of the industry, my objective has been to gain a multi-faceted understanding of what they view as the limitations, compromises and stakes they face when performing the music of Berlioz and his contemporaries. What constitutes acceptable risk vs. unacceptable risk? What do they consider to be difficult, frustrating, unusable or unacceptable? How have their instruments responded to fulfilling their professional duties, and where do they even find them? And, what are their perceptions of the oboe’s role in the nineteenth-century? This last question is particularly significant, since an additional paradox faced by period oboists is our current perception of the Romantic period as being a time of crisis in the history of the oboe, transmitted across generations by the players themselves. When faced with the supposed lack of nineteenth-century solo repertoire for their instrument, have oboists inherited their ‘badge of injustice’ partly because they are unaware of extant Romantic works?

²⁹ Leon Goossens and Edwin Roxburgh, *Oboe* (London: MacDonald and Janes, 1977), 158.

Burgess & Haynes also reveal how Heinz Holliger has declared “that there was no tradition of oboe playing during the nineteenth century. There was very little solo playing and the instrument nearly disappeared.” Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 129.

³⁰ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (London: Oxford University Press, 1999), 632.

Has this rather bleak view been exacerbated by the fact that much of that repertoire has never been recorded? For that matter, has the extreme scarcity of historically accurate instruments, whether originals or modern replicas, played a part in this “destitute” perception?³¹ Articulating and capturing this sensitive feedback through written text has been challenging, for as suggested by Haynes: “one must “do it” so that others can “hear it””.³² As he cautions,

as long as musicology communicates by words and not by acts, it can only go so far in helping musicians. There are innumerable details of music too subtle to be described in words that are nevertheless of decisive importance for the character and style of a performance. These nuances can only be investigated and communicated in the context of musical performance; musicologists who are not musicians will never find them.³³

In summary, the following thesis along with its accompanying portfolio of audio and video files comprises the theoretical and practical research I have undertaken to gain embodied knowledge of the oboe in France between 1815 and 1850. Engaging with source material (original instruments, reeds, didactic and critical primary sources, repertoire) and exploring the two-way, reciprocal relationship between performer and instrument has revealed if and how the Adler responds to the needs of current-day HIP in a professional context. By attentively listening to what the instrument has been ‘telling’ me, my goal has been to explore its individual strengths and weaknesses, its capabilities and limitations, in turn leaving a record of my findings for peers to mine according to their needs.

Again, I would like to note that although this study is ‘oboe-centric,’ most of the methods I have employed could be adopted by any instrumentalist with the desire to theorise and explore their practice and document their own journey in acquiring embodied knowledge. Here, I have studied whether selected elements of my practice are in line or rather at odds with historical evidence, but one could just as easily choose to determine the *origin* of certain practices, many of which the performer is unexpectedly unaware. Are they acquired and part of an inherited tradition, handed down from teacher to student? Or are they innate, by-products of one’s own physiognomy?

It will be important to clarify at this point that only the French Romantic oboe will be analysed in this study. The nineteenth century saw the emergence of two distinct schools in oboe design and performance technique. The first, originating in France (and disseminated in England by Gustave

³¹ François Fleuret, *Le hautbois dans la musique française, 1650-1800* (Paris: Picard, 1984), 165.

³² Bruce Haynes, *The End of Early Music: a Period Performer’s History of Music for the 21st Century* (Oxford: Oxford University Press, 2007), 129.

³³ *Ibid.*

Vogt's students, Apollon Barret in particular), is represented by models such as the Adler which eventually gave rise to today's conservatoire model. A second Austro-German school, promulgated by models from Dresden and Vienna (and also largely adopted in parts of Italy such as Milan) followed a different evolutionary path, culminating in today's *Wiener-Oboe*. And while both French and German models coexisted and shared many physical traits, playing characteristics and performing techniques, only the former has here been studied. Likewise, while the cor anglais played a crucial role in the nineteenth-century orchestral sphere, and while I have inevitably had to intermittently refer to this larger tenor-voiced oboe, an in-depth study of its role and evolution far exceeds the breadth and scope of this study and will not be formally addressed in this thesis.

PREVIOUS RESEARCH

Many studies of the oboe in the Romantic era have been undertaken, as seen in the works of Badol-Bertrand, Bate, Bernardini, Burgess, Caldini, Ecochard, Gérard, Girard, Haynes, Hedrick, Howe, Lardrot, Soulier, Verdegem, and many others.³⁴ And while much influential research into the evolution of the oboe's repertoire, reception, design and manufacture during the nineteenth century has been conducted, Geoffrey Burgess's work stands out for its comprehensiveness and authority. His seminal book *The Oboe*, written in collaboration with the late Bruce Haynes for Yale University Press, provides the foundation for many arguments brought up in this dissertation.³⁵ Furthermore, his thorough biography of Gustave Vogt, who was *professeur titulaire* at the Conservatoire de Paris from 1816-1853, *hautbois solo* at the Opéra de Paris from 1812-1834, and the most influential oboist of the first half of the nineteenth century, is frequently consulted and cited in this thesis.³⁶ His article *The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature*³⁷ has likewise provided a wealth of information, especially on timbre. *The Oboe* (1956) by Philip Bate, though now somewhat dated, remains a relevant work for its chapters on acoustics and organological evolution, as well as its comprehensive overview of the innovations made by Triebert's *systèmes*.

The cor anglais specialist Stefaan Verdegem has thoroughly examined the Sellner-Koch oboe in Vienna and the Belgian firms of Jacques Albert and Mahillon, whereas Alfredo Bernardini's research has closely examined Italian models. Michel Gérard and Robert Howe have studied the instrument's development in France, and while in 1978 Peter Hedrick carried out several experiments using an original simple-system Triebert oboe much like the Adler studied here, his investigations were limited to the realm of amateur experimentation and organology, and did not address the issue of implementing the instrument in a high-level professional setting. In his doctoral thesis *Du hautbois à trois clefs au hautbois à treize clefs* (Université de Strasbourg), Gérard catalogued over twenty simple-system oboes and measured their physical dimensions (though unfortunately neglected to map their bores, and his measurements are often approximate).

³⁴ See bibliography for full references of these works.

³⁵ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004).

³⁶ Geoffrey Burgess, *"The Premier Oboist of Europe": A Portrait of Gustave Vogt* (Lanham: Scarecrow Press, 2003).

³⁷ Geoffrey Burgess, 'The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature' in *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. Utrecht 1994, ed. David Lasocki. (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994).

The instrument's repertoire from 1750 to 1900 has been meticulously indexed by Sandro Caldini, while the late Florence Badol-Bertrand's research has focused on the pre-revolutionary incarnation of the instrument in France, its design, repertoire and role in musical culture, demonstrating how, after the French Revolution, much like the harpsichord, the oboe was widely regarded as an 'aristocratic' instrument with strong ties to the Ancien Régime that would ultimately lead to its wane in the new Republic.

Lola Soulier has provided an in-depth study of Garnier's *Méthode raisonnée* of 1802 and the Delusse oboe it was written for, the direct precursor of the simple-system oboe investigated in this study. While her practice-led investigations shrewdly explore that instrument's design and playing characteristics and aim faithfully to recreate its soundscape by meticulously following source materials on reed-making and instrument design, they do not address the practical application of the early French nineteenth-century oboe at a professional level. Similarly, while a corpus of didactic primary sources was published during the period, the majority of these tutors, because they were aimed at amateurs, contain only rudimentary technical and interpretive instructions and do not adequately address the question of implementing the instrument in professional practice.

METHODOLOGY

This thesis is structured as a case study of an original early nineteenth-century oboe. An in-depth analysis of this specimen and years of hands-on practical experimentation with this instrument have therefore been at the core of my research methods, and have generated the bulk of the information laid out in this study. A model for this type of research does not currently exist, and I have had to develop my own approach where, in an effort to theorise my own practice, the majority of my findings have been empirical, self-reflexive, and practice-led. As my research and professional practice commonly overlap, I have come to view this formal investigation as a natural extension of the empirical methods I already adopt in my daily life as a performer, methods which I use to achieve practicable, professionally viable results and to keep abreast of new trends in an artistic field that is in constant flux. For example, when preparing for professional engagements, I relied on extensive trial-and-error testing with reeds and fingerings, comparing the results yielded by my own handmade models or configurations with those described in contemporary didactic sources such as Brod's 1830 *Méthode*. Nonetheless, during the course of this study I also adopted several qualitative and quantitative methods. Qualitative research methods have included data collection from archival primary sources which enclose didactic, organological and musicological components. Nineteenth-century French (and foreign) treatises, articles from the musical press (from France, Germany, Britain, etc.), critical literary works, and personal correspondence have all been consulted. In the chapters on physical characteristics of original oboes and reeds, a scientific, quantitative approach was used to harvest statistical data from numerous surviving nineteenth-century specimens and to contrast these findings in comparative analyses. All of these combined methods have given my research an interdisciplinary, holistic approach.

Two surveys with performers and instrument builders have also been included in the appendices to this study. The survey questions spanned a wide range of topics, but primarily focused on the participants' understanding of their role within the current framework of nineteenth-century HP. Information was collected from email correspondence, and live interviews were conducted in a natural, non-manipulated setting following approval by the Royal Academy's research ethics committee. I have used the information gathered from this correspondence throughout my research as a sounding board, to help shape certain ideas, to confirm certain suspicions, or simply to ensure my research was headed in the right direction, and the sharing of experiences with fellow colleagues allowed me to contextualise our current professional reality.

Finally, a full-length recital of works for oboe and piano composed in France between 1815 and 1850 has been recorded, using an original pianoforte by Erard (London, 1840). The recording

process was of central importance to this investigation, as it encapsulated my findings in a practical and tangible way. As this study emphasises the reciprocal relationship between research and practice, I have placed the aural documentation of this repertoire and the empirical methodology leading up to it at the core of my research.

THE TRIPARTITE UNIT

Before continuing any further, it will be important here to define the unit made up of three separate yet inseparable components which every oboist embodies. This oboe-reed-oboist tripartite unit is important to address at the outset of this study since it will be referred to throughout, most notably in the chapters on pitch and timbre. Much like a Möbius strip, each part of this unit simultaneously *influences* and *is influenced by* the remaining two components. Alluded to by various authors including Ledet³⁸, Bate³⁹ and Salter, it was the latter who noted that “tone is composed of three elements in balance [...:] the Oboe, the Reed, and the Contribution of our Resonating Cavities.”⁴⁰ This loop generates a sound unique to every individual oboist: timbre, projection, intonation, every aspect of the tone produced by the reed-oboe-oboist is directly influenced by each of these three codependent elements.

The first of these components, the oboist themselves, brings to their playing a unique set of anatomical features. The resonating cavities of the body, including the chest (lungs), throat (larynx) and head (oral and nasal cavities, sinuses); breathing muscles (abdominal and intercostal muscles, diaphragm); overall stamina and endurance; and lip configuration — all of these individual physiological factors will not only fashion the oboist’s embouchure, but also govern the speed and pressure of their individual airstream. Much as every person has their own unique voice, so too does every oboist have their own unique way of ‘blowing’ into the instrument, of supporting and controlling their flow of air, which explains why the same instrument and the same reed can sound noticeably different from one oboist to the next. As Salter observes, “breath support and the embouchure dominate pitch, tone and intonation.”⁴¹ As such, the ways in which wind players manage their airstream, as well as the manner in which their lips cushion the reed and dampen its vibrations, are unique to every individual. Because breathing occurs internally, and though numerous studies have been conducted to determine which muscles are at play in proper breathing technique, much of it, because it is unobservable to the naked eye, remains enigmatic even to professional oboists themselves. And while wind players, like singers, are generally taught to keep the throat open so as not to obstruct or encumber the wind column, internal resistance can be generated in different areas along the column that can create a dampening effect, which, in addition to variations in individual embouchures and playing

³⁸ David A Ledet, *Oboe Reed Styles: Theory and Practice* (Bloomington: Indiana University Press, 1981).

³⁹ Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 108-109. Bate calls the reed-oboe-oboist unit “generator (or exciter), resonator and player” respectively.

⁴⁰ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), 28.

⁴¹ *Ibid.*, 17

positions, explain why one oboist may have a “darker” sound with the exact same equipment compared to another. Salter notes that playing angle and embouchure can be dictated by “individual choice for physical comfort and desired tone,”⁴² once more demonstrating the chicken-and-egg causality of the oboe-reed-oboist unit. In any event, it seems axiomatic that the “oboist” component in the three-part unit, paradoxically the only component that the player *cannot* control, should be its most influential, for, as Salter has shown, “what is striking is how one quickly reverts to a personal tone despite the instrument and reed [...] Primarily we are governed by the physique of our body.”⁴³

The second component of the tripartite unit is the oboe (which Bate coins the “*resonator*”). As we will observe, by its very nature, the oboe’s raw construction material is organic and irregular, each piece of wood possessing its own unique grain, density, and other attributes that all contribute to its individual acoustic properties (pitch, projection, resonance, timbre). As Bate noted, “Even after two hundred years specimens twist and bend under changing atmospheric conditions.”⁴⁴ Once the wood is fashioned by a builder, a new set of variables is imposed upon an already mutable substance: bore dimensions and conicity, tone hole diameter and undercutting, acoustic length and hole placement, many are the features that a builder can control, customise and tweak. This means that no two instruments, even those manufactured by industrialised processes, are identical. This allows Salter to note that every oboist and every oboe require an individually designed reed.⁴⁵ Ledet for his part observes that “the oboe itself is an important link in the chain of tone production and therefore, exerts great influence on the type of reed [...] that the performer may find it necessary to use in order to achieve the results he desires in the technique of playing or in the production of a certain timbre”⁴⁶, implying that the physical characteristics of an oboe (its design, materials, and key system), a performer’s playing technique, and the reeds they employ are all interconnected, much like a ‘catch 22’ conundrum.

The third unit, the reed (which Bate coins the “*generator*” or “*exciter*”), “initiates and maintains the sound”⁴⁷ and is a highly customisable tool that the professional oboist builds themselves, fashioning it to meet their ideal sound concept or that which is required by the repertoire at hand. The reed is far too complex to be described in any sort of detail in this preliminary section, and a

⁴² *Ibid.*, 30

⁴³ *Ibid.*, 28

⁴⁴ Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 116.

⁴⁵ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), 11.

⁴⁶ David A Ledet, *Oboe Reed Styles: Theory and Practice* (Bloomington: Indiana University Press, 1981), 46.

⁴⁷ Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 108.

substantial part of this dissertation has been devoted precisely to their design and manufacture (Chapter 8).

In summary, it is Bate who defines the tripartite unit best, noting that:

during performance the oboe player and his instrument together form a coupled system of *three* elements, all of which he can in some degree control. He can vary the length of the resonator [the oboe] with his fingers; he can ‘humour’ the reed with his lips, pinching it or relaxing it as required; and he can modify the shape and volume of his air cavities by the use of chest and especially throat muscles.⁴⁸

The tripartite unit was also familiar to musicians of the nineteenth century. The celebrated baritone Enrico Delle Sedie (1822-1907) noted that the human voice functions in much the same way as a reed instrument, and in his 1874 singing method *L'Art lyrique, traité complet de chant et de déclamation lyrique* the bel canto singer observed that:

Physical and physiological research has shown that the human voice [“vocal instrument”] functions much like wind instruments fitted with reeds. To draw the conclusions that interest us, it is important to examine the role that each part plays in this type of instrument. There are three, namely:
(a) The blower or bellows, which creates [“agitates”] the airflow and is the driving element;
(b) The reed, whose vibrations create the sound;
*(c) The resonating body or sound pipe, which reinforces the fundamental sound with harmonics.*⁴⁹

From this, we can gather that Delle Sedie drew a parallel between the reed and vocal cords (the *reed*); the oboe and the resonating cavities of the human body (the *resonating body*); and the airstream formed by both oboist and singer (the *bellows*).

⁴⁸ *Ibid.*, 109.

⁴⁹ Enrico Delle Sedie, *L'Art lyrique, traité complet de chant et de déclamation lyrique* (Paris, 1874), 5.
Les recherches physiques et physiologiques ont démontré que l'instrument vocal fonctionne à la manière des instruments à vent, pourvus de tuyaux à anche. Pour en tirer les conséquences qui nous intéressent, il importe d'examiner le rôle que joue dans ce genre d'instruments chaque partie. On distingue trois, à savoir:
(a) La soufflerie et le porte-vent, par lesquels arrive le courant d'air qui est l'élément moteur et qui agite.
(b) L'anche, dont les vibrations donnent naissance au son.
(c) Le corps de résonance ou tuyau sonore, qui renforce le son fondamental par les harmoniques.

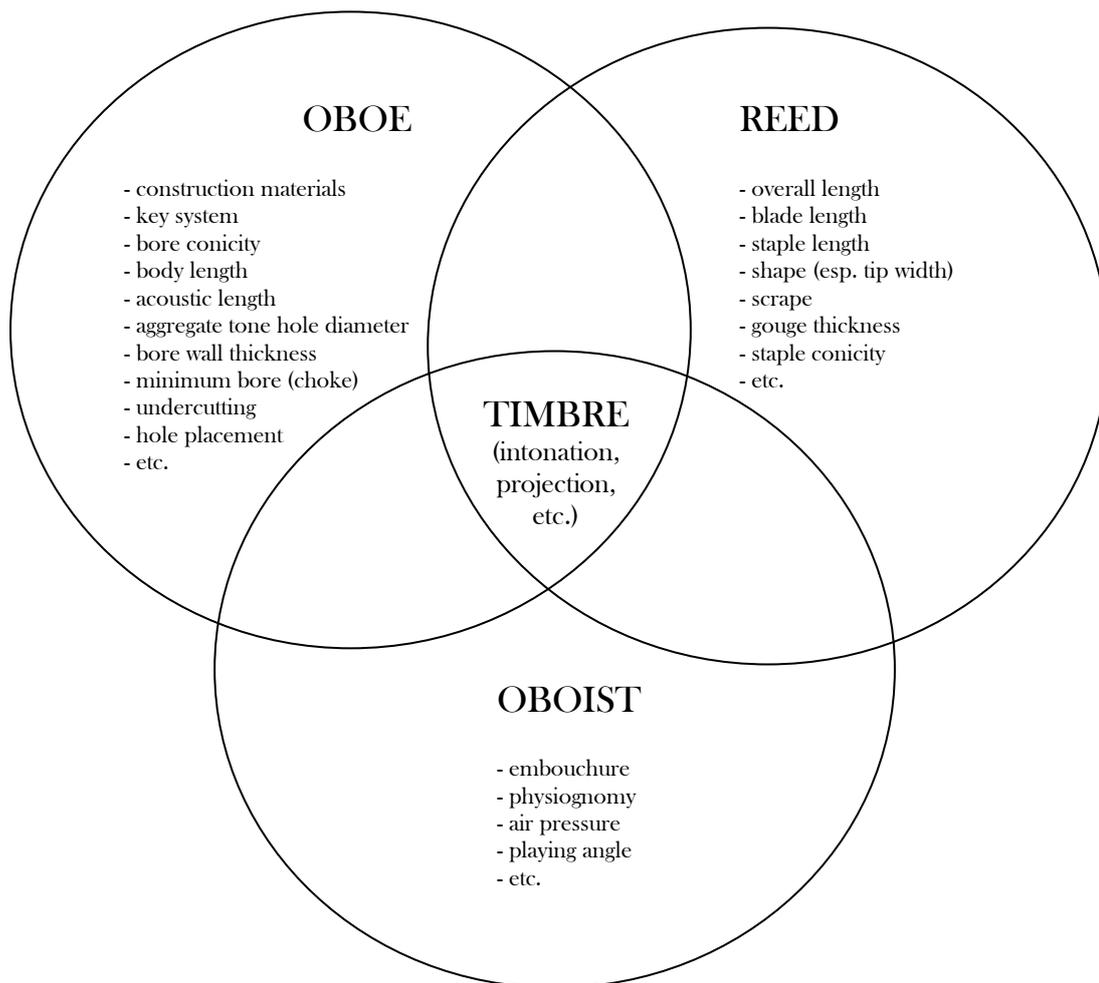


Figure i: The Tripartite Unit

1. THE SIMPLE-SYSTEM OBOE: DEFINITION AND COEXISTENCE WITH MECHANISED MODELS

Early nineteenth-century French oboes with three to thirteen keys, such as the Adler model, can be seen as the final phase of the two-keyed *hautboy*. While for the purposes of this investigation it will suffice to refer to this model as the ‘simple-system’ oboe (as opposed to the mechanised ‘*systèmes*’ introduced by the Triebert firm in the 1840s), contemporary nomenclature for this prototype was varied, and includes ‘*hautbois ordinaire*,’ ‘*hautbois ancien système*,’ and ‘*systèmes 1* and *2*.’ Simple-system oboes are characterised not only by their acoustic properties (which, as detailed in Chapter 3, differ substantially from mechanised models), but also by their exterior physical appearance. As the direct heir and successor of the two-keyed eighteenth-century *hautboy*, the simple-system retained the latter’s hallmark onion-bulb baluster and turnings at the tenons,⁵⁰ and its ornamental mounts in ivory or silver were also preserved. Though exotic hardwoods began to gain popularity among makers, boxwood continued to be the primary material of construction.⁵¹ Another defining feature of this model was its keywork, and most of the simple-system oboes produced in France between 1825 and 1850 are fitted with between 8 and 12 keys (brass, silver, and nickel silver or *maillechort* were all widely used). On this prototype, keywork did not replace pre-existing fingerings: as noted by Howe, on the simple system, “any individual key could be dispensed with and the oboe would still play.”⁵² Instead, keys provided the player with options to alter a note’s intonation, timbre, and/or projection, and could also facilitate technique by making certain slurs and intervals easier to execute in rapid passagework.⁵³ As such, one of the defining features of simple-system oboes is their lack of interactive keywork such as the *brille*.⁵⁴ Gérard has defined the rudimentary mechanism of these oboes as “a system in which each key has just one function: to cover or uncover a tone hole, and where keys can be seen as extensions for fingers.”⁵⁵

⁵⁰ These bulges are sometimes thought to be purely ornamental but are in fact functional as they reinforce the wood where cracks are most likely to occur. Note that the baluster has been retained on the modern *Wiener-Oboe* as well.

⁵¹ Heavier, denser exotic hardwoods such as ebony, grenadilla, palisander or rosewood, cocuswood, and violetwood were required on later models to support an ever more elaborate key system. These woods naturally produced a brighter tone.

⁵² Robert Howe, ‘Historical Oboes 2: Development of the French Simple System Oboe 1800-1840’, *The Double Reed*, Vol. 24, No. 1 (2001).

⁵³ An example is the left Eb-Db linkage that allows slurring and trilling between these notes.

⁵⁴ Patented in 1808 by Frederick Nolan, this coupler, called “*lunettes*” in French, facilitates F#-G# and was first applied to the flute before being integrated to oboe and clarinet mechanisms.

⁵⁵ Michel Gérard, <https://www.hautbois-afh.ovh/index.php/le-hautbois/evolution-historique-du-hautbois-au-xixeme-siecle-mecanisation/mecanisation-introduction>, accessed 8 February 2022: “*systèmes dans lesquels chaque clef n’a qu’une action, celle de boucher ou déboucher un trou, et n’est alors que la prolongation d’un doigt.*”

Acoustically, it will suffice to note for the time being that the simple-system oboe retained the acoustic profile of the two-keyed eighteenth-century hautboy. Compared to mechanised models, the distinctive features of the ‘*ancien*’ system include “small tone holes which lead to a radiation of the sound into the lower part of the instrument and the bell,”⁵⁶ thinner bore walls, a conical reed well drilled directly into the bore,⁵⁷ a non-linear bore profile with chambering and ‘steps’ at strategic locations, and a distinctive ‘lip’ on the inner rim of the bell which may have contributed to a rounder tone.⁵⁸ Because the technique of the simple system still heavily relied on the use of cross fingerings (supplanted by keys on *système* oboes), oboists continued using wider, freer reeds to produce these notes which by nature are more veiled and unfocused. By contrast, narrower, heavier reeds could be used with mechanised oboes, profoundly affecting their technique, timbre, pitch and projection.



Fig. 1.1. Simple-system vs. mechanised oboes

Two oboes by Guillaume Triebert: simple-system on the left (c.1835) and *système 4* on the right (c.1845). It is remarkable that only ten years separate these two instruments, so different in outward appearance and in acoustic properties.

⁵⁶ Marc Ecohard, *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde*, trans. Jem Berry as *Tuning the hautboy. A perspective on original tuning and modern adaptations* (unpublished, 1996), 4.

⁵⁷ As opposed to a cylindrical metal sleeve found on *système* models, which created a point of resistance in the airstream.

⁵⁸ See Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 115-116.

The leading French exponents of the simple-system model were the oboe virtuosi who flourished in Paris during the first half of the century. Many were accomplished composers, instrument builders, and professors at the Conservatoire, and all held influential positions in the city's rich and eclectic musical landscape. The founding father of the French oboe school, François Alexandre Antoine Sallantin (1755 - c.1830), was the first *professeur titulaire* of oboe at the Paris Conservatoire at its foundation in 1795 and held the position of principal oboe at the *Opéra de Paris* for 40 years, from 1773-1813. After studies with the eminent Gaetano Besozzi, it is with some fascination to read that in 1790/91 Sallantin was granted a leave of absence from his duties to study with the great Johann Christian Fischer (c.1733-1800) in London, where the German virtuoso apparently "changed his style and tone greatly."⁵⁹ During his tenure at the *Opéra*, Sallantin would have premiered numerous solos in staged lyrical works by Gluck (*Orphée et Eurydice* and *Iphigénie en Aulide*, both in 1774), Salieri (*Les Danaïdes*, 1784) and the Parisian premières of Mozart's *Les noces de Figaro* (1793) and *Les Mystères d'Isis* (1801), a French adaptation of *Die Zauberflöte*. The instrument played by Sallantin, by Parisian maker Christophe Delusse, is housed at Paris' *Musée de la Musique* (serial number E367).⁶⁰ Though now fitted with twelve silver keys, only four would have been original, the other eight being added posthumously.⁶¹ Pitched near 415 Hz,⁶² it is this four-keyed instrument in cedarwood that Sallantin would have used to première important chamber works written for him by François Devienne (*Six sonates*, 1783) and Charles Bochsa (*Trois quatuors concertans*, c.1800).

Sallantin's student, Gustave Vogt (1781-1870), who obtained his *premier prix* in 1799, would in turn inherit the post of *professeur titulaire* at the Conservatoire in 1816. During his extensive thirty-seven-year tenure (1816-1853), Vogt produced a veritable battalion of star pupils, all of whom would have been trained on simple-system oboes. These included Apollon Marie-Rose Barret, Henri Brod, Antoine-Joseph Lavigne, the brothers Charles and Frédéric Triebert (both sons of the instrument builder Guillaume Triebert), Louis-Auguste Vény, and Stanislas Verroust.⁶³ In keeping with the innovative spirit of the Industrial Revolution, Brod, Barret, Triebert and Lavigne would each contribute novel designs to the oboe's construction, whether their goals were to improve its intonation, enhance its projection, or to facilitate its technique. In

⁵⁹ James Brown, *Our Oboist Ancestors: A Guide to Who Was Who in the Nineteenth Century Oboe World* (Malmesbury: Abbey Printing, 2006), 90.

⁶⁰ <https://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0161634>, accessed 4 July 2019.

⁶¹ Michel Gérard, "Du hautbois à trois clefs au hautbois à treize clefs," (doctoral thesis, Université des Sciences Humaines de Strasbourg, 1984).

⁶² As indicated by Haynes, an original tuning fork owned by Sallantin and dated 1783 is at 409 Hz, and later was in the possession of harpsichord builder Pascal-Joseph Taskin (1723-1793). Bruce Haynes, *A History of Performing Pitch: The Story of "A"* (Lanham, MD: Scarecrow Press, 2002), 301-312.

⁶³ Lesser-known pupils of Vogt, who nonetheless made significant contributions to the oboe's French repertoire in the nineteenth century, include Felix-Charles Barthélémy, Auguste Bruyant, Hippolyte Garimond, Edouard Sabon, Pedro Soler, and Emile Corret (who published a tutor in 1853, see below).

addition to these performer-builders, the foremost makers of the simple-system model in France included Jean-Louis Tulou, Guillaume Adler, and the woodwind-building dynasties of Gautrot, Buffet and Triebert, all of whom flourished in Paris during the second quarter of the nineteenth century.⁶⁴ Using the pre-existing two-keyed model as a template (the oboes of Delusse were particularly esteemed),⁶⁵ these makers added keywork and narrowed its bore. When Guillaume Triebert released a series of mechanised *systèmes* with interactive keywork in the 1840s,⁶⁶ the ‘*hautbois ordinaire*’ was not immediately eclipsed by them, but rather coexisted alongside them for several decades. Evidence of both models coinciding up until at least the mid-1860s can be gathered from various historical sources that include manufacturer catalogues and advertisements (some with drawings and/or photographs), didactic treatises, oboists associated with particular instruments, the repertoire these musicians composed, and the actual instruments themselves. As such, we can conclude that it is not anachronistic to perform French works from the 1840s, 1850s, and even 1860s on simple-system models.

The coexistence of several different models and systems was nothing unique to oboes. Flutes, horns, clarinets – all of the orchestral winds underwent similar evolutionary paths during this period, where cylindrical Boehm flutes coexisted with simple-system models with conical *traverso*-like bores; valved horns stood alongside their natural horn counterparts (a common feature in the works of Wagner was to have two of each in a section of four horns, and it was in fact only in 1903 that the natural horn ceased to be taught at the Paris Conservatoire); and Müller-system clarinets rubbed shoulders with models fitted with innovative Boehm mechanisms. In the preceding century, a case-in-point of this sort of peaceful cohabitation is the double concerto for harpsichord and pianoforte in E-flat major, Wq. 47 by Carl Philipp Emmanuel Bach (1788), where both ‘old’ and ‘new’ keyboard sonorities combine to create an innovative and sonically rewarding whole.

⁶⁴ Other builders of simple-system oboes in France included Leroux, Breton, Dupré, Godefroy, Martin frères, Lot, Cuvillier (based in Saint-Omer), Noblet, Bourgeois, Thibouville frères, Winnen, and the Lyon school including makers such as Tabard, Simiot, Brelet, Piatet, Benoit, Rivet, Mangeant, Rust and Dubois.

⁶⁵ Due to their extreme rarity, Vény likened Delusse’s oboes to Stradivarius violins in 1828. Louis-Auguste Vény, *Méthode abrégée pour le hautbois* (Paris: Pleyel et Cie, 1828), 15: “*Ses hautbois étaient forts chers et, comme il y avait moins d’amateurs de cet instrument qu’on en compte maintenant, ceux de ce facteur fabriqués en petit nombre sont très estimés et encore plus rares que ne le sont aujourd’hui les fameux violons de Stradivarius, des Amati, des Guarnerius et autres.*”

⁶⁶ The first to appear was the *système* 3 in 1840, which featured a *brille* mechanism on the lower joint. In 1843, the *système* 4 was released, which added a trill key from B to C# on the upper joint. *Système* 5 arrived in 1849 which featured a thumb plate to overcome the difficult join between B-flat and C.

It is known that Vogt, who obtained a seven-keyed instrument in 1825 much like the oboe depicted in Brod's *Méthode* of 1826 (and now housed at Paris' *Musée de la musique*⁶⁷), used the simple system for the balance of his career.⁶⁸



Fig. 1.2. The seven-keyed oboe Vogt used from 1825 onwards, by Christophe Delusse

While Vogt's last documented performance was in 1843, at the age of 62, he did not retire from his teaching position at the Paris Conservatoire until 1853, aged 72. A staunch defender of the '*ancien système*,' Vogt was not enamoured of his students using instruments with certain 'improvements' like the *brille*.⁶⁹ Although Vogt's student Auguste Bruyant (1827-1900) is shown holding what appears to be a *système 3* model (with doubled left E-flat and low B keys) in a [lithograph](#) commemorating his *premier prix* in 1849 (possibly indicative that mechanised models were quickly adopted at the Conservatoire), other students of his ostensibly preferred the simple system prototype.

One of these students was the somewhat roguish figure of Stanislas Verroust (1814-1863), appointed principal oboe at the *Opéra de Paris* upon Henri Brod's demise in 1839 amid much

⁶⁷ <https://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0161554>, accessed 20 April 2020.

⁶⁸ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 112. The seven keys on Vogt's oboe were: C¹, C^{#1}, C-corrector, E-flat, F^{#1}, B-flat¹ and C². Note the absence of an octave key.

⁶⁹ Personal commentary, Geoffrey Burgess. The flute professor Tulou likewise opposed the adoption of the Boehm system on the flute.

controversy. According to Bulliot (1879), Verroust, at the time a young soloist in Musard's *quadrille* orchestra,⁷⁰ was elected for the position by an *ad hoc* jury that included Habeneck, whereas Louis-Auguste Vény (1801-1878), having played second oboe in the *Opéra* under both Vogt and Brod since 1820, was the heir apparent to the vacant post. One can imagine the 38-year-old Vény's stupefaction at being supplanted by a brazen 25-year-old Verroust "who possessed a strident tone and who, he himself admitted, never achieved the finesse, expression nor polish of [Vény's playing]."⁷¹ Another more flattering account of Verroust's playing, given by Berlioz in 1849, describes his "superiority of style, tone, and nuance that are exceedingly rare."⁷² Verroust was named *professeur-titulaire* at the Paris Conservatoire upon Vogt's retirement in 1853, but a year later was suspended for alcohol abuse. He held the position until 1863, at which point, owing to health issues associated with alcoholism, he resigned, left Paris for his native Hazebrouck, and died ten days later. Verroust is known to have performed on a simple-system oboe with ten golden keys made by Tulou in 1849 (incidentally with the exact same key configuration as on the Adler) until his demise in 1863.⁷³

Further evidence of models coexisting can be gleaned from catalogues, such as those issued by the Couesnon firm around 1910, the "*Mahillon & co., Catalogue Général*" (Brussels, 1908), which both simultaneously depict Triebert *systèmes* 3 through 6,⁷⁴ and the 1885 "*Hawkes and Son Price List of Oboes*,"⁷⁵ which portrays Triebert *systèmes* 3 through 5 on sale concurrently.

⁷⁰ Musard's 'promenade' concerts thrived in Paris and London in the 1830s and 1840s. Musard organised, promoted and conducted these events, composing lightweight *galops*, *can-cans* and *quadrilles* for them, often borrowing themes from other composers such as Auber and Rossini. More akin to spectacles than formal concerts, the events were held in Montmartre's *Théâtre des Variétés* and, with their cheaper entrance fare, targeted a broader audience that included the working and lower middle classes. The orchestras were exceptionally large, sometimes with up to 48 violins.

⁷¹ Jacques-Gabriel Bulliot, *Notice biographique : Louis-Auguste Vény, de l'Académie nationale de musique et du Conservatoire de Paris, membre fondateur de la Société des concerts, membre de la Société éduenne* (Paris: Autun, Imprimerie Dejussieu Père et Fils, 1879), 9. Apparently Habeneck "tried to remedy his mistake by being overly courteous to Vény, whose merit he knew better than anyone, and by securing equal treatment for both oboists by the [Opera's] administration, but the harm had already been done."

Original Fr: "*La mort de Brod, en 1839, avait laissé vacant à l'Opéra le pupitre de premier hautbois, pour la succession duquel le talent et les droits acquis désignaient M. Vény, qui depuis un an en faisait le service. Le nom du remplaçant n'était mis en doute par personne à l'orchestre, lorsqu'on apprit avec le plus grand étonnement qu'Habeneck, malgré les observations de son ami Vogt, le père des hautbois d'alors, patronnait avec une partialité mal dissimulée un jeune soliste des quadrilles Musard, qui lui était recommandé : Verroust fut élu en effet par un jury composé ad hoc. Il tirait de son instrument des sons éclatants, mais jamais il n'atteignit ni la délicatesse, ni l'expression, ni le fini d'exécution de celui à qui il fut préféré; il en convenait lui-même. Le célèbre chef d'orchestre, à qui cette injustice attira une satire mordante, crut réparer son tort en redoublant de courtoisie envers M. Vény dont il connaissait le mérite mieux que personne, et en obtenant de l'administration l'égalité de traitement pour les deux hautbois, mais le remède n'était pas en rapport avec le mal.*"

⁷² Hector Berlioz, *Feuilleton du journal des débats*, 6 February 1849.

http://www.hberlioz.com/feuilletons/debats490206.htm?zoom_highlight=hautbois, accessed 10 April 2020.

⁷³ This instrument, housed at the *Musée de la musique* in Paris, can be viewed here: <https://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0130253#>, accessed 10 April 2020.

⁷⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 172.

⁷⁵ Included in Otto Langey's *Tutor for the Oboe* (London: Riviere & Hawkes, 1885).

Indeed, while each of Triebert's successive prototypes added new features to pre-existing models, none were designed to replace the others. Even when the *ystème 6* (released in 1872) was adopted as the official model of the Paris Conservatoire in 1881,⁷⁶ the *ystème 3* continued to remain popular with many players who favoured its simpler design. A case-in-point was the greatest Italian oboe virtuoso of the nineteenth century, Antonino Pasculli (1842-1924, and known as the 'Paganini of the oboe,') who acquired a Triebert *ystème 3* around 1855. Indeed, "even by then, this model had been twice superseded, but Pasculli used this instrument for the balance of his career"⁷⁷ (which was to last well into the twentieth century). It is critical, then, to observe that Vogt, Verroust, and Pasculli, three of the nineteenth-century's most outstanding oboe virtuosos, all favoured models that were outdated.

Perhaps the most significant catalogue for the purpose of this study is Triebert's *Nouveau Prix Courant*, issued for the London Exhibition of 1862. Despite the appearance of five more recent models,⁷⁸ the advertisement also displays both *ystème 1* and *2* oboes, indicating that the simple system continued to be produced well into the 1860s. In the *Nouveau Prix Courant*, these two specimens are referred to as '*hautbois ordinaires*':

Old-system oboe with 11 keys. These are low B natural, C natural and C# ; E-flat, F natural, brille F#, G#, B-flat, medium C natural, half-hole and the octave key. One could not remove anything from this keywork without creating technical hindrances. The octave key, half-hole and brille F# are the most recently added keys. The first is used to slur or gently articulate the following notes with less lip pressure: [musical example, e2-g#2 and e3-g3]. The half-hole is used to cover exactly half of the hole it is placed over, an operation formerly carried out by rolling the finger and which required a great deal of practice. The position of the old F# key was very inconvenient and made many passages extremely difficult, if not impossible, which our brille F# key has now simplified [footnote: This model is very similar to that which had been adopted by our celebrated master, Mr. Vogt].⁷⁹

⁷⁶ A few minor adjustments were made to this design before becoming the now-familiar conservatoire model.

⁷⁷ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 154-155.

⁷⁸ These include the *ystème 3* (1840); *ystème 4* (1843); *ystème 5* (1849); the Boehm model (1860); and the Barret model (1862).

⁷⁹ Robert Howe, 'Nineteenth-Century French Oboe Making Revealed: a Translation and Analysis of the Triebert et Cie '1855' Nouveau Prix-Courant,' *The Galpin Society Journal* LXIV (2011), 84. English translation by Howe and modified by the author.

"Hautbois ancien système, garni de 11 clefs. Savoir : celles de si (bécart), ut (bécart) et ut #, graves ; mi b, fa (bécart), fa # à anneaux, so #, si b, ut (bécart), du médium, de demi-trou et d'octaves. On ne saurait rien retrancher de ce mécanisme sans se créer des difficultés d'exécution. Les clefs d'octave, de demi-trou et de fa # à anneaux, sont celles dont l'application est la moins ancienne ; la première sert à lier ou à attaquer avec douceur et une moindre pression des lèvres les notes suivantes [...] Celle de demi-trou sert à boucher exactement la moitié du trou qu'elle recouvre, opération qui autrefois se faisait avec l'unique secours du doigt et exigeait un grand travail. La position de l'ancienne clef de fa # était d'un toucher très incommode et rendait fort difficile, sinon impossible, un grand nombre de passages que l'adoption de notre clef à anneaux a rendus d'une exécution facile. [...] Ce modèle est, à peu de chose près, celui qu'avait adopté le plus célèbre de nos maîtres, M. Vogt."

The footnote, which claims that the model is similar to that which Vogt used, is not entirely accurate. Vogt used an instrument by Delusse with seven keys, but his oboe did not have a *brille* mechanism, nor did it have an octave key.⁸⁰ As Burgess notes, a recently-discovered original photograph taken c. 1862 of Triebert's inventory displays a *système 1* oboe very similar to the Adler. This instrument, second-to-last from the right, “incorporates the keywork of système 1 [described above] but with the addition of the RH [right-hand] alternate Eb of model 2.”⁸¹

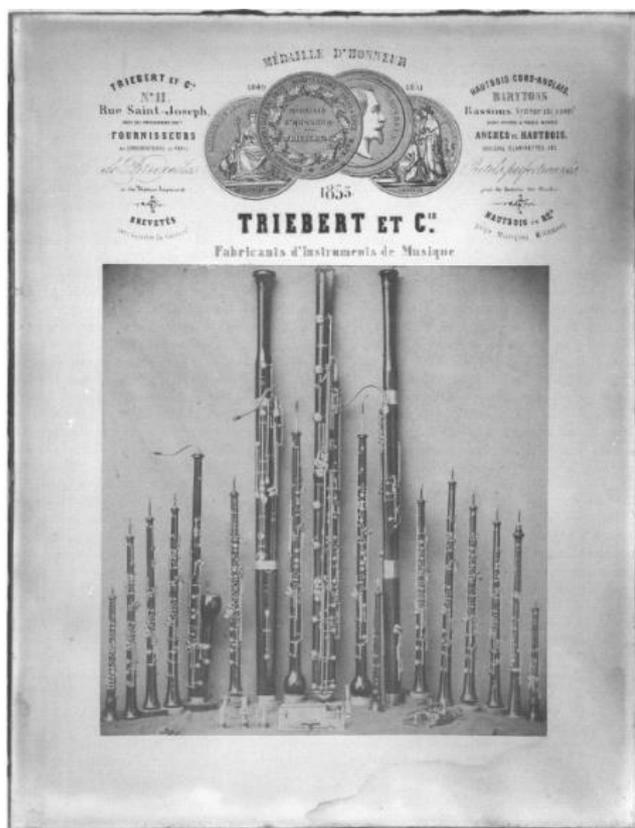


Fig. 1.3. Triebert's photographed inventory, c.1862

Another significant catalogue for this investigation is the “*Catalogue Gautrot aîné & Cie*” published in 1858, depicting four simple-system models (with 8, 10, 12 and 13 keys respectively).

⁸⁰ This instrument can be viewed here:

<https://collectionsdumusee.philharmoniedeparis.fr/image.ashx?q=https://mimo-international.com/media/CM/IMAGE/CMIM000034782.jpg>, accessed 7 February 2022.

Keys included are: C-corrector, low C#, low F#, E-flat, low C, B-flat trill, and C-trill.

⁸¹ Geoffrey Burgess, ‘New Triebert Discoveries: Observations and Comments on Re-reading the Surviving Documents Relating to Woodwind Instrument Production in Nineteenth-Century Paris,’ *The Galpin Society Journal*, Vol. 65 (March 2012), 100: “The sole surviving copy of this document, now on display at the offices of P.G.M. Couesnon may have been the only one produced.” Note that the absence of Triebert’s log books prevents us from knowing with any certainty which instruments were sold when, and whether some were just being held for future sales.

The ten-keyed model is identical to the Adler. A similar inventory, published in 1867 by Gautrot, the “*Catalogue des instruments de musique*” (BNF: Vmb 3259), continues to market “*hautbois ordinaire, buis brun, garni ivoire et 13 clefs maillechort*”⁸² (simple-system oboe, stained boxwood, with ivory tips and 13 nickel-silver keys).

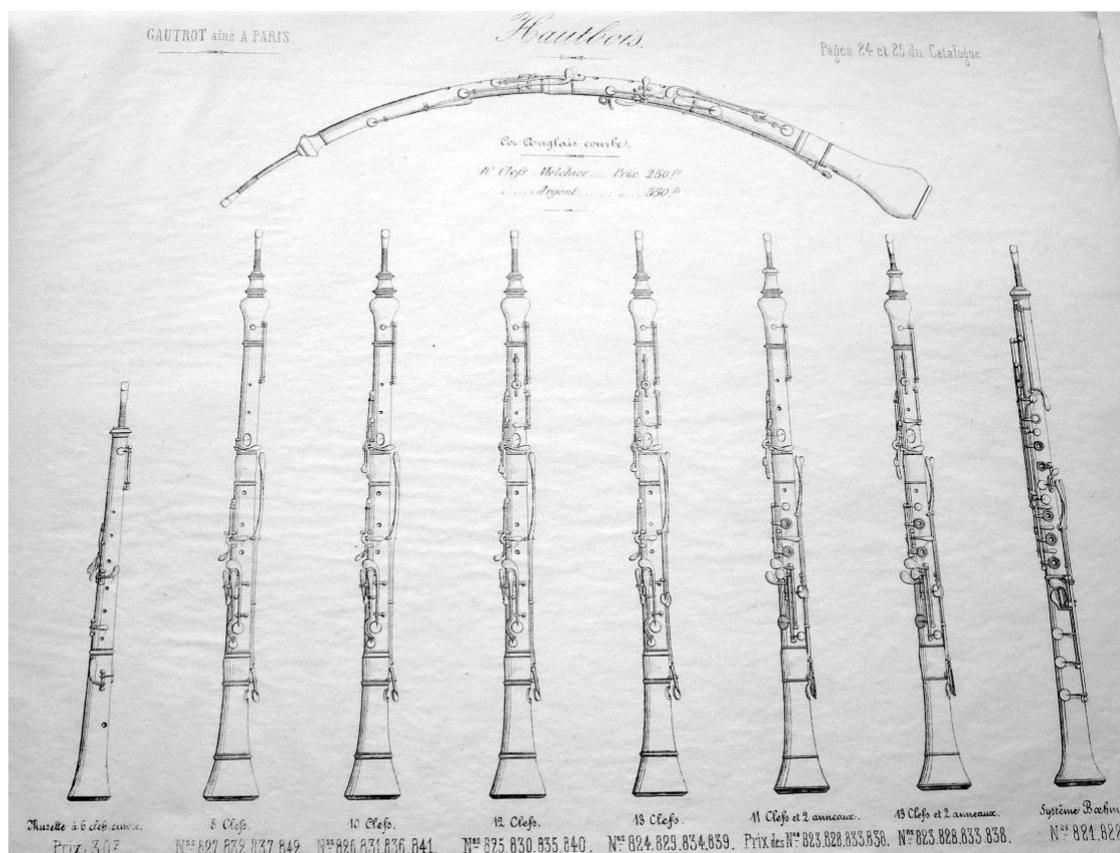


Fig. 1.4. *Catalogue Gautrot ainé & Cie, 1858*

Given the scale and speed at which new prototypes were being produced, the fact that several different models of oboes coexisted in the Romantic era is axiomatic, and as Bruce Haynes observed at the turn of the twenty-first century, if in the eighteenth century “models of oboe were changing at something like the same speed as models of personal computer today”,⁸³ the nineteenth century would bear witness to an even greater diversification in design. Evidence of the simple-system’s lasting popularity can also be found in various tutors that were published significantly later than the models they depict. One example is Victor Chalon’s *Méthode de*

⁸² Gautrot ainé & Cie., *Catalogue des instruments de musique* (Paris/Rennes: C. Oberthur et fils, 1867), 133.

⁸³ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 3.

hautbois ordinaire et à système Boehm (Paris, 1877)⁸⁴, which includes fingering charts for five different systems, two of which are clearly nine- and ten-keyed “*hautbois ordinaires*,”⁸⁵ indicating that even in the late 1870s, these instruments were still in circulation.⁸⁶ Another example is Emile-Anastase Corret’s *Tablature générale du hautbois à 12 clefs* (1853), which in addition to depicting a 12-keyed mechanised model by Nonon, also depicts what is essentially a ten-keyed *système 1* “*hautbois ordinaire*,” identical to the Adler except for the presence of an F# brille instead of an F# corrector key. The fingering chart indicates that it may be “perfectly adapted to the “*ancien hautbois*,” provided it has an “F# ring” (i.e. *brille*).⁸⁷ Corret (1817-c.1867) was oboist at the *Opéra de Paris* from 1840-1867 and would have played second to Verroust from 1840-1863.

Many clues that point to the coexistence of both models can also be gleaned from the repertoire itself. As Burgess notes, “most orchestration manuals were cautious, advising composers to base their expectations on the capabilities of instruments with the least rather than the most keywork.”⁸⁸ Berlioz, while he “took a keen interest in developments in instrument design and would certainly have been familiar with the later Triébert models” did not appear to be “au courant with the improvements of even the Triébert système 3 [and perhaps] intentionally avoided describing the most technically advanced oboes because they were still not widely used.”⁸⁹ From the solo repertoire, it could be assumed at first glance that the virtuosic *morceaux de concerts* of Brod, Vény, Verroust and Vogt require a later key system, but in fact all of their passagework is manageable on the simple system, and when confronted with several flats or sharps, these composers wrote in such a way that one can navigate technical passages without interactive keywork (see Brod excerpt below in D-flat major). In the end, there is often no better judge than the music itself to dictate what is possible to play and what is simply out of the question, demonstrating better than any didactic source the impact keywork can have on performance technique.

⁸⁴ Victor Chalon, *Méthode de hautbois ordinaire et à système Boehm illustrée de vignettes représentant les différentes parties de l’instrument et la pose de l’exécutant* (Paris: J. Kelmer, 1877).

⁸⁵ As Burgess observes, the two models “differ only in the presence of a key for C4.”

⁸⁶ Another case-in-point is Hippolyte Garimond’s *Méthode élémentaire pour hautbois ancien et nouveau système* (Paris: Leduc, 1880). Whether the term ‘*hautbois ancien*’ referred to the simple system or to *système 4* is unknown, but the latter is represented in the tutor’s fingering chart. ‘*Nouveau système*’ may have referred to *système 6*, which was released in 1872.

⁸⁷ Emile Corret, *Tablature générale du hautbois à 12 clefs* (Paris: Chabal, 1854). “*Cette Tablature, indiquant différents doigtés pour la même note, peut être parfaitement adaptée à l’ancien Hautbois, pourvu qu’il soit à anneaux de FA#*”

⁸⁸ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 131.

⁸⁹ *Ibid.*, 145.

Ex. 1.1. Henri Brod: *Fantaisie sur l'air de M^{lle} Persiani, dans Lucia di Lamermoor*,
pour hautbois et pianoforte (published posthumously, Paris, 1841)

Oboe, bb 47-78

Outside of France, the simple-system oboe enjoyed a much longer existence. In Italy, Austria, Germany and Britain, the model was still common until the 1880s, as illustrated by the *Studienwerk für Oboe unter Zugrundelegung der Oboeschule von Garnier*, op. 7 by Paul Wieprecht (1839-1894). Published by Offenbach in c.1877, the tutor depicts a Golde-like model with ten keys. In England, progress in instrument design was far slower than on the Continent, as witnessed by a five-keyed oboe by Wood & Ivy housed in the Bate Collection, dated c.1840.⁹⁰ Furthermore, an early photograph in the *Metodo Popolare per Oboe* (c.1870) by Giuseppe Angelo Mariani (1840-1904) shows an oboist clearly playing an instrument with the traditional ‘onion-bulb’ turning characteristic of the simple-system. While timbrally quite different from the French ‘*hautbois ordinaire*,’⁹¹ Austrian and German simple-system oboes shared many performance techniques with the former (use of cross fingerings, etc.). As the predominant form of oboe used outside of France for most of the nineteenth century, the simple system would have been used to première the orchestral works of Mendelssohn, Schumann, and even Brahms,

⁹⁰ <http://minim.ac.uk/index.php/explore/?instrument=3826>, accessed 10 April 2020.

This specimen lacks an octave key and at 563 mm, its body length is exactly the same as the Adler.

⁹¹ The reasons for this are developed in Chapter 6: *Timbre*, but in general, the more robust sound produced by Austrian and German simple-system oboes by makers such as Koch (Vienna) and Golde (Dresden) was due to the instrument’s thicker bore walls and the use of shorter, wider reeds.

Mariani was professor of oboe at Rome’s *Accademia Santa Cecilia*. Constant Pierre, in *La facture instrumentale à l'exposition universelle de 1889*, makes a special note of the fourteen-keyed model being used there even in 1890. See Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 77.

Wagner, Bruckner and Mahler.⁹² Nonetheless, as Haynes & Burgess observe, “around the middle of the century the supremacy of Austrian and German oboes in Italy began to be challenged by the arrival of French [mechanised] instruments.” Since Paris was the hub for woodwind development in the early nineteenth century, it is likely that the further one got away from the French capital, the less likely one was to encounter the most recent ‘cutting edge’ developments. A far-reaching example of this is an 11-keyed simple-system oboe built in New York City dated 1856 by William Rönnerberg (1803-c.1889), now housed in London’s Horniman Museum.⁹³



Fig. 1.5. Photograph from Mariani’s *Metodo Popolare*, c.1870

As we have seen, while both Triebert’s *systèmes* and the ‘*ancien*’ simple-system coexisted for several decades after the 1840s, it is impossible to know exactly when the latter faded into disuse. Nonetheless, it would be safe to assume that composers regularly encountered the simple-system prototype well into the 1860s. An example of this is Verroust, whose *solos de concert* from the 1850s and early 1860s would ostensibly have been written for the simple-system Tulou he performed on until his demise in 1863. Indeed, Tulou was a renowned maker whose simple-system oboes remain among the finest surviving models.⁹⁴

⁹² Indeed, Burgess notes that it was not until the 1920s that “practically all German oboists [...] were playing French-style [*système*] oboes.” See Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 176.

⁹³ <https://www.horniman.ac.uk/collections/browse-our-collections/object/12426/type/term/identifier/term-1017681/page/54>, accessed 10 April 2020.

<https://www.horniman.ac.uk/object/14.5.47/19/>, accessed 15 December 2020.

⁹⁴ One such example is the specimen housed at the MIM in Brussels, seen here: <http://brusselsmimoboeollection.kcb.be/instrument-checklist/tulou/>, accessed 12 April 2020.

2. DATING & MAKER INFORMATION

Little is known of the life of Frédéric Guillaume Adler. Like Guillaume Triebert *père*, Adler was born in Germany and emigrated to Paris, opening a workshop on Rue Mandar in Paris' 2nd *arrondissement* in 1808.⁹⁵ As Howe observes, "During the Napoleonic wars (1792-1815), much of Europe was subjugated or impoverished. Musical instrument makers came to the relative stability of Paris to learn and practice their trades, profiting from sales to professional musicians, students and the French army. Paris thus abounded with woodwind makers."⁹⁶ Known primarily as a bassoon maker, Adler was cited in Jancourt's bassoon method of 1847, alongside Savary and Triebert, as one of "several skilful makers [who] have recently contributed to [the bassoon's] improvement."⁹⁷ Fétis, in his *Revue Musicale* of 1828, also states that Adler improved the bassoon by adding keys: "Mr. Adler, a very commendable instrument builder in Paris, has recognised the advantages of [a new bassoon with "innovations" by Almenraeder] and built his own model, which has been tested and approved by some of our foremost artists. Mr. Adler's instruments are distinguishable by a refined finish on all their parts. The fifteen-keyed bassoon he recently put on display at a trade fair may be considered a masterpiece in this respect."⁹⁸ Adler died in Paris in 1854.

While it is impossible to know precisely when the ten-keyed Adler oboe was constructed, given that, as we have seen, "newer models did not automatically render previous design redundant,"⁹⁹ because didactic sources such as method books and treatises are dateable, they can provide a useful starting point for dating nineteenth-century woodwind instruments. Pedagogical material tended to feature the most recent models available at the time of publication, but also presented earlier models, since it could not "be taken for granted that all oboists owned instruments with all the latest keywork."¹⁰⁰ Many French tutors from 1816 until 1877 provide clear depictions of

⁹⁵ William Waterhouse, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993).

⁹⁶ Robert Howe, 'Historical Oboes 2: Development of the French Simple System Oboe 1800-1840,' *The Double Reed*, Vol. 24, No. 1 (2001), 59.

⁹⁷ Eugène Jancourt, *Méthode théorique et pratique pour le basson*, op.15 (Paris: S. Richault, 1847), 1. "Plusieurs facteurs habiles ont contribué de nos jours à son perfectionnement ; citons en 1^{re} ligne MM SAVARY, ADLHER et TRIEBERT (Frédéric) ; ce dernier jeune encore, est appelé à pousser plus loin ces perfectionnements [sic] ; le soin qu'il apporte à la facture des clefs rend l'exécution plus facile."

⁹⁸ François-Joseph Fétis, *Revue musicale. Première année, tome II* (Paris: Fétis, 1828). 221: "M. Adler, luthier très recommandable de Paris, a reconnu les avantages de celui-ci et en a fabriqué, d'après son modèle, qui ont été essayés par quelques-uns de nos artistes les plus habiles, et approuvés par eux. Les instrumens de M. Adler se distinguent ordinairement par un fini précieux dans toutes leurs parties. Le basson à quinze clefs, qu'il a mis à l'exposition des produits de l'industrie, peut être considéré comme un chef-d'oeuvre sous ce rapport." Translation by the author.

⁹⁹ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 141.

¹⁰⁰ *Ibid.*, 131.

simple-system oboes with between 4 and 13 keys,¹⁰¹ usually found in the fingering charts they contain. While dating an instrument based solely on its keywork can be misleading (the presence of additional keys does not necessarily mean a later construction),¹⁰² the presence of the Adler's *octavier* is significant, since all of the methods published in the 1820s and 30s lack this key. Indeed, Miller's tutor of 1843, which depicts a model identical to the Adler, is "the first Fr[ench] method showing a register key."¹⁰³ Once again, however, it must be taken into consideration that this evidence is not entirely reliable, since several oboes built by Brod in the 1830s are fitted with speaker keys.¹⁰⁴

As Burgess observes, "on earlier oboes wooden mounts supported the keywork; makers then turned to metal saddles screwed onto the body of the instrument [...] and then from the 1840s in France and later in other countries, keys were usually attached to rotating rods supported by posts (the design familiar to the modern oboe)."¹⁰⁵ The fact that saddles are screwed into the Adler point to a date of construction in the late 1830s. Another indicator as to when the instrument may have been manufactured is its counterbore (or 'well,' which is where the reed is inserted into the oboe). The Adler's counterbore is a conical cavity drilled into the bore, as opposed to an inserted cylindrical metal sleeve found on later models. Since some of Adler's oboes do feature conceivably original cylindrical reed wells, these models most likely postdate the instrument studied here. The specimen under study therefore dates from Adler's earlier production period (he presumably produced oboes until his demise in 1854). Another feature that points to the Adler's earlier date of construction is the fact that its fourth tone hole is twinned, to allow fingering F#¹ without the use of a key. This feature is seen on earlier French simple-system models, but was replaced by a single hole on later oboes.

¹⁰¹ These include publications by Vogt (1816), Brod (1825), Sellner (1827), Vény (1828) - all highly distinguished oboists themselves who held teaching positions - Le Dhuy (1839), de Raoulx (1841), Miller (1843), and Kastner (1844). While Vény's treatise of 1828 depicts an 8-keyed model similar to the Adler, it, too, lacks an *octavier*, as do all oboes depicted in methods dating from the 1820s.

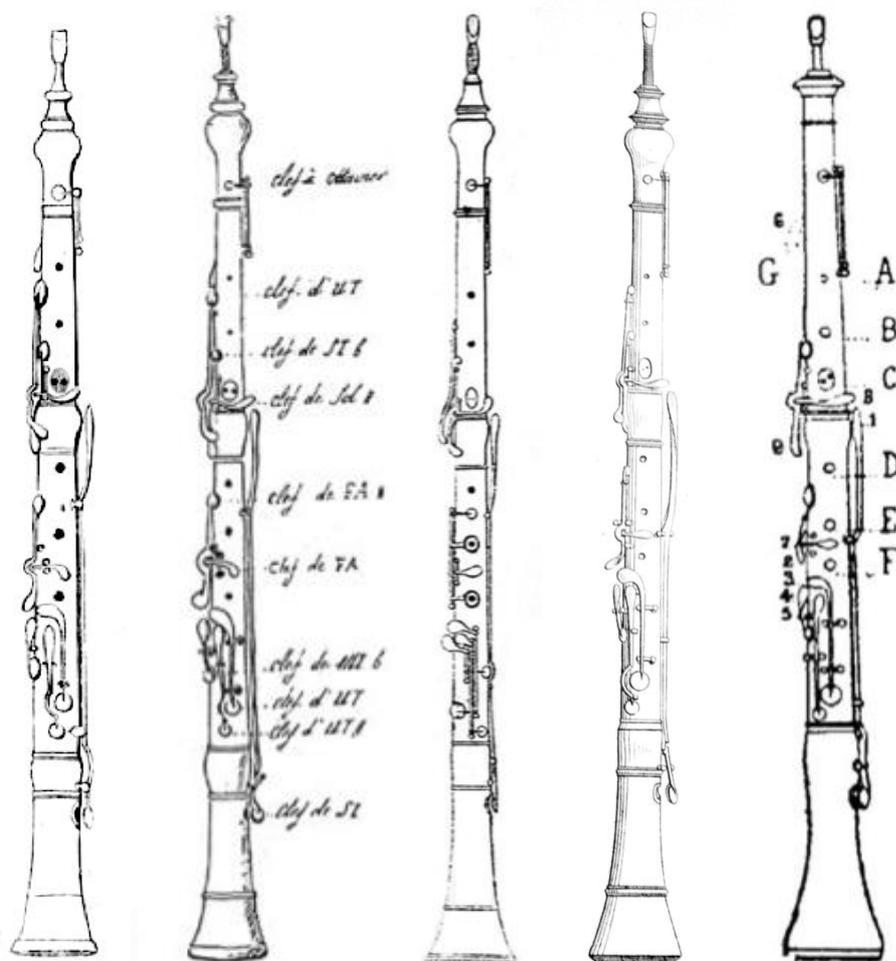
¹⁰² While Sellner's method of 1827 depicts a 10-keyed model, Brod's 1830 *Méthode* is written for an 8-keyed specimen. Furthermore, keys on original instruments may have been added *post factum*, as is the case with Sallantin's Delusse oboe, which, as mentioned previously, contains 12 keys, only 4 of which are original.

¹⁰³ Geoffrey Burgess, *Pedagogic Material for the Oboe from the Nineteenth Century: A Bibliography*, in *Celebrating Double Reeds: A Festschrift for William Waterhouse and Philip Bate*, ed. T. B. Ewell (Baltimore, MD: IDRS, 2009).

¹⁰⁴ At least 6 of the 22 extant specimens by Brod are fitted with octave keys. Note, however, that De Raoulx's 1839 method depicts an oboe without one.

¹⁰⁵ Geoffrey Burgess, *Pedagogic Material for the Oboe from the Nineteenth Century: A Bibliography*, in *Celebrating Double Reeds: A Festschrift for William Waterhouse and Philip Bate*, ed. T. B. Ewell (Baltimore, MD: IDRS, 2009), 4.

In the light of this evidence, it is safe to place the date of the Adler's manufacture between the late 1830s and early 1840s. Indeed, an Italian tutor from 1846 by Vito Hinterland¹⁰⁶ depicts the exact same model as the Adler: a simple-system oboe with ten keys.¹⁰⁷



Miller 1843 Hinterland 1846 Corret 1853 Gautrot 1858 Chalons 1877

Fig. 2.1. Comparison of five simple-system models
(all with 9 or 10 keys)

¹⁰⁶ Vito Hinterland, *Nuovo Trattato Generale Scientifico, artistico, teorico, pratico, musicale, corredato di tavole d'esempi e tavole, di figure di tutti gli strumenti attualmente in uso con dichiarazioni delle parti esposte* (Naples: MS, 15.ix.1846).

¹⁰⁷ Geoffrey Burgess, *Pedagogic Material for the Oboe from the Nineteenth Century: A Bibliography*, in *Celebrating Double Reeds: A Festschrift for William Waterhouse and Philip Bate*, ed. T. B. Ewell (Baltimore, MD: IDRS, 2009), 45. As Burgess observes, it is “exceptional for an Italian method to document French oboes, at a time when most Italian oboists played Austrian oboes.”

3. PHYSICAL CHARACTERISTICS

Because an instrument's pitch level and acoustic properties are intrinsically linked to its physical dimensions, in this chapter we will examine the Adler oboe's material form. By analysing its keywork, bore profile, tone holes and all other tangible features, we will be able to compare this data with other contemporaneous models and to contextualise the instrument, perhaps finding answers to questions such as: is the Adler model unique in the way it plays? And if so, is this due to any one feature of its construction, or to a combination of several distinct features? As mentioned in the introduction, one of the most perplexing aspects of the Adler oboe is its low pitch level, which seems to conflict with its relatively late date of construction (425-428 Hz were exceedingly rare in Paris by 1840). One of the primary goals in evaluating the Adler's physical form has therefore been to shed light on this conundrum.

As opposed to string instruments which can gain value and mature tonally with time, woodwind instruments deteriorate and decay as time advances. Part of this is because the instrument's construction material is, by nature, organic. Kirkpatrick has observed that "boxwood is a remarkable material, continuing to show movement long after seasoning has removed excess moisture."¹⁰⁸ Indeed, even intermittent playing and exposure to moisture can cause the wood to expand both outward and inward simultaneously, leading to a modification of internal bore dimensions and wall thickness. This 'wear and tear' causes the physical characteristics of original oboes to become modified over time, meaning that surviving antiques rarely play as they did when they were first built. As can be seen from modern facsimiles, after a number of wet/dry cycles from being 'played in', the wood of the bore walls expands, creating a narrower bore diameter that results in a drop in pitch.¹⁰⁹ After about a year of being played on, repeated exposure to condensed moisture causes the minimum bore to shrink to a considerably narrower diameter. This is a common occurrence for new woodwind replicas, and when the bore has shrunk, the instrument is traditionally brought in to the maker's workshop to be rereamed, raising the pitch accordingly.

In addition to discrepancies in pitch, a difference in tone quality is noticeable between a new oboe and one that has been played in. Garnier remarks that "*the tone of a new oboe is inevitably tart.*"¹¹⁰ Kirkpatrick further notes that "a new oboe tends to be bright, clear, a bit high [in pitch] in

¹⁰⁸ Mary Kirkpatrick, 'Expanding Boxwood and Playing In,' *Fellowship of Makers and Researchers of Historical Instruments Quarterly* no. 74 (Oxford, January 1994), 55.

¹⁰⁹ *Ibid.*

¹¹⁰ Francois-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, 1802), 5: "*le son d'un nouvel instrument est forcément aigre.*"

the high notes, more pitch-definite and generally “nervous” in response. [...] Through being played with good intonation, an oboe develops the ability to lock on to a note, thus increasing its stability; the tone becomes mellow and richer, and the dynamic range increases as well (in both directions).”¹¹¹

A more significant explanation for the variance in playing characteristics between an original oboe and its modern replica, however, has to do with the way in which modern facsimiles are made. One of the key learnings that emerged from the survey of historical oboe builders (see Appendix I) is that makers often consciously alter dimensions when copying antiques. We can therefore unequivocally establish that modern copies play differently from original specimens. In concrete terms, some builders feel that originals offer too little resistance and ‘blow too freely,’ and are therefore reluctant to ream out bores to original dimensions. An example of this is the Stanesby Sr. oboe (London, c.1700), whose original minimum bore of 6.4 mm is now traditionally copied at 5.7 mm. (This model is incidentally by far the most common copy used by hautboists today.) In addition to reaming the bore narrower, exterior diameters (bore walls) are made slightly thicker, and tone holes are less undercut. And because the nominal pitch of the original Stanesby is closer to 405 Hz, makers nowadays shorten the top joint to raise the pitch to 415 Hz. The reverse is also true: some modern copies play markedly *lower* than their original and likewise have wider bores and/or have been lengthened to bring their pitch down to 415 Hz.¹¹² (This is the case, for example, with the classical Prudent bassoon, c.1770, copied by Peter de Koningh and now used by many historical bassoonists as a baroque instrument at 415 Hz.) These modifications contribute to a lower pitch level, and are sometimes required to compensate for the tighter embouchure and greater air pressure used by modern hautboists, practices inherited from modern woodwind technique which tend to raise pitch. Marc Ecochard¹¹³ has observed that:

¹¹¹ Mary Kirkpatrick, ‘Expanding Boxwood and Playing In,’ *Fellowship of Makers and Researchers of Historical Instruments Quarterly* no. 74 (Oxford, January 1994), 57.

In the same article, Kirkpatrick reveals a noteworthy anecdote of copying an original French hautboy by Pierre Naust for Bruce Haynes: “I somehow guessed that it would not be easy to reproduce the tone quality of the Naust, as it had evidently been played a lot, and had a very warm and mellow sound, with a strong, ringing quality as well. As it turned out, Bruce was disappointed with the copy — “The principal problem...” as he wrote, “is to get the copy resonating, playing freely, ringing like a bell, as the original does. In terms of ease of playing, notes are more specific on the copy and do not blend easily, or blend into other notes and allow themselves to be adjusted in pitch (again, in contrast to the flexibility of the Naust).” This pretty well describes the difference between any copy and its original, given it has been played a lot [...] — a new oboe tends to be bright, clear, a bit high in the high notes, more pitch-definite and generally “nervous” in response. Often I notice some mellowing just in the two weeks or so that I am playing and tuning it before I feel it’s ready to send.” (57)

¹¹² In a personal commentary, Mary Kirkpatrick (2020) noted that when copying an antique English hautboy by Jonathan Bradbury (York, c.1710), she lengthens the top joint and bell by 2 mm and the middle joint by 1 mm. Furthermore, she enlarges the space between tone holes on the middle joint to bring the forked low F into focus. Adjustments are also made to the bell to lower the pitch of low C, which makers intentionally left high on originals, as discussed below in the heading on bells.

¹¹³ Based in Angoulême (FR), Marc Ecochard has been building replicas of historical oboes since 1983. <https://www.grandhautbois.com/>

An original hautboy in playing condition rarely sounds like its modern counterpart; this difference is caused not only by the physical alterations that occur in the wood and the bore of an old instrument with age, but also by noticeable differences in the value of various intervals of the natural scale. Apart from some copies which attempt to reproduce original tuning, most modern hautboys have gradually moved away from the tuning of original instruments in order to come nearer to equal temperament; this adaptation is a result of the requirements of musicians and customers and is a consequence of their use of different fingerings and reed setups from those prevailing at the time the original instrument was made. More or less consciously, the modern maker adapts his copy to modern ears. A modern hautboy is almost never a true copy of an original instrument.¹¹⁴

It is for these reasons that, in the framework of this research project, I have felt it essential to perform on the Adler oboe as often as possible. Though delicate from a conservation point of view, playing on original instruments is an elucidating activity, as it provides firsthand, visceral access to original tuning and voicing methods that are often tinkered with on modern copies. As discussed in Chapter 5, engaging with the Adler has also given me invaluable insight into the practical techniques required to make original models operational (most notably reed configurations and fingering systems), which, as we will see later on in the chapter on performance style, often diverge substantially from those used on modern ‘facsimiles.’ Performing on a 185-year-old instrument such as the Adler is not without its share of constraints. The oboe is in a highly fragile state, and has a large (8 cm) crack on the outer walls of its top joint which I have had pinned with metal rods to prevent from expanding lengthwise and depthwise (currently the crack does not penetrate all the way through to the bore).¹¹⁵

Nonetheless, I was able to carry out a thorough analysis of the Adler’s physical characteristics in June 2019 with the assistance of Henri Gohin.¹¹⁶ Harvested data includes:

¹¹⁴ Marc Ecochard, *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde*, trans. Jem Berry as *Tuning the hautboy. A perspective on original tuning and modern adaptations* (unpublished, 1996).

¹¹⁵ In addition, the oboe was badly damaged in an oil fire that broke out in a Japanese workshop where the instrument was being held in 2016, and clear burn marks are apparent on the surface where flames charred the wood. The craftsman responsible for the fire attempted to conceal the blister marks by sanding the exterior walls of the instrument, and in doing so sanded right over the maker’s stamp, exponentially diminishing the instrument’s value.

¹¹⁶ Henri Gohin is a Parisian-based early woodwind specialist who has been building replicas of baroque oboes and recorders since 1978. <https://gohinflutes.fr/>

1. Key system
2. Construction materials
3. Aggregate tone hole diameter
4. Total body length
5. Top joint length
6. Middle joint length
7. Bell length
8. Acoustic length
9. Minimum bore diameter
10. Reed well depth and diameter
11. Bore conicity or scaling
12. Bore diameter at end of top joint
13. Bore diameter at top of middle joint
14. Bore diameter at end of middle joint
15. Bore diameter at top of bell
16. Middle joint socket length and diameter
17. Bell socket length and diameter

The above data was then collated in a comparative analysis (Appendix III). In order to juxtapose the Adler's physical dimensions with those of other contemporaneous models, the same data was harvested from roughly thirty three- to thirteen-keyed simple-system oboes.¹¹⁷ In addition to specimens from my own private collection, instruments sampled are housed in various institutions including the Bate Collection (Oxford); the Musée de la Musique (Paris); the Horniman Museum (London); the Musical Instrument Museum (Brussels); the Rijksmuseum (Amsterdam); and the Royal Academy of Music's collection (London). A handful of these instruments also belong to the private collection of colleagues. During the course of this study, I have additionally had close access to five contemporaneous French simple-system oboes (the first four from my private collection) and a modern copy of a German Romantic oboe, and in the following section I repeatedly refer to their physical dimensions for comparative purposes. These instruments include:

1. An oboe by Buffet-Crampon, c.1850, in boxwood with 12 silver keys. This instrument postdates the Adler and its keywork introduces several innovations including keys for low B⁰, left-hand F and left-hand Eb. This oboe is by Jean-Louis Buffet (1813-1865), and

¹¹⁷ Time and access constraints did not allow for complete surveys of all specimens.

while there is no visible maker's mark on either of its joints or bell, each of its keys is stamped with a tiny diamond-shaped lozenge. Buffet patented the diamond lozenge at the *Bureau de garantie de Paris* in July 1844 and because the patent was lifted on 15 February 1856, this otherwise anonymous instrument can in fact be identified as being built by Buffet between 1844 and 1856.¹¹⁸

2. An anonymous simple-system French oboe, c.1850, in cocuswood with 12 keys in *maillechort* (nickel silver).¹¹⁹ In addition to the keywork found on the Adler, it features a key for low B⁰, a half-hole plate, and left-hand Eb, and is therefore a presumably more recent specimen.
3. An oboe by Henri Brod, c.1838, in cedarwood with 13 silver keys (including a *brille* mechanism on the lower joint). I acquired this oboe only several months before completing this study, which is why it was not used as the principal subject of this case study.
4. An oboe ('Triebert PAL') by Guillaume Triebert père, c.1840 (ex. Verdegem), in palissander with 12 silver keys. Innovative keys include a half-hole plate, a 'true' low B key (instead of a C-corrector), and a *brille* mechanism for the right hand which was added subsequently. Evidence of this can be seen in the fact that the original F# hole on the lower joint has been filled in and a new hole, fitted with the *brille*, has been drilled over the maker's stamp (of which some letters remain). Triebert's instruments were highly prized, and in his 1830 *Méthode*, Brod states "*The best oboes are made in Paris by Triebert, Rue Guenegaud No. 1.*"¹²⁰ This oboe was presumably initially made to play above 440 Hz, but shows signs of having its pitch lowered c.1860 (after the 1859 adoption of *diapason normal*, which set A¹ at 435 Hz), since both the top and middle joints have 3 mm long extensions made from a different wood (visible [here](#)).
5. An oboe ('Triebert RAM') by Guillaume Triebert père, c.1830, donated by Paul Goodwin to the Royal Academy of Music. Boxwood with 10 brass keys, all with the same function as those on the Adler.
6. An oboe by Olivier Cottet (c.1990). Made of boxwood and fitted with twelve silver keys, this specimen is copied after an original by Carl Theodor Golde (c.1840)¹²¹ and was formerly owned by Paul Goodwin, who donated it to the Royal Academy of Music in

¹¹⁸ Jean-Louis Buffet became 'Buffet-Crampon' sometime between 1839 and 1844 (after marrying Zoë Crampon in 1836), in order to distinguish his firm from that of his uncle and competitor Louis-Auguste Buffet 'jeune' (Jean-Louis is sometimes referred to as Buffet *neveu* for the same reason).

¹¹⁹ Robert Howe, 'Nineteenth-Century French Oboe Making Revealed: a Translation and Analysis of the Triebert et Cie '1855' Nouveau Prix-Courant,' *The Galpin Society Journal* LXIV (2011), 89: "Invented in 1823, nickel silver is more stable than brass, easily worked, and cheap, containing no precious metal. It looks striking on dark woods, particularly if chromed or silvered. Nickel silver essentially replaced brass as the primary woodwind key material by 1860, except in saxophones."

¹²⁰ Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1825), 2.

¹²¹ The original, housed at Paris' *Musée de la musique*, can be viewed [here](#).

London.¹²² Golde was based in Dresden, a centre of woodwind manufacture in the late eighteenth and early nineteenth centuries. I found the Cottet copy to play remarkably well at 430 Hz, and have used it on a number of commercial recordings and live performances. As such, it has proven itself a valuable high-level professional tool.

¹²² It is my understanding that this instrument was commissioned and used by Goodwin for a 1991 recording of Brahms' Symphony no. 1 and Haydn Variations with the London Classical Players under Sir Roger Norrington at 435 Hz, though at the time of writing this has not been verified.



Fig. 3.1. The seven oboes analysed in this study

From left to right: Adler; Buffet-Crampon; Anon.; Brod; Triebert 'PAL'; Triebert 'RAM'; Golde by Cottet

3.1. MATERIALS AND KEY SYSTEM

The Adler can be described as a multi-keyed simple-system oboe. Made of boxwood (*buxum semperivens*), it is fitted with four ornamental tips in ivory and ten brass keys. Tone holes 3 and 4 are twinned to give the player the option of using half-holed fingerings for G# and F# respectively instead of keys. Keys on the upper joint include a speaker key (*octavier*),¹²³ right hand keys for Bb¹ and C², and left-hand G#. On the lower joint, it possesses keys for F#, F⁴, Eb, low C#¹ and C¹, and a C¹ corrector key. Keys are soldered onto metallic plates drilled directly into the oboe, sometimes perforating the instrument's walls and protruding slightly into the bore. In German models such as those by Carl Theodor Golde (Dresden, c.1840), keys were screwed onto mounts turned directly into the body. The latter technique made for thicker bore walls, which had a dampening effect on timbre.

¹²³ Nomenclature for this key is varied. Synonymous terms include speaker key, octave key or slur key (EN); *octavier* or *clef d'octave* (FR); and *Schleifklappe* or *Hohe-F-klappe* (DE).

3.2. THE BORE

The bore is the interior chamber of the oboe through which the player's airstream travels. The air column is set into vibration by the double reed to produce a tone. As with any wind instrument, the shape or 'profile' of an oboe's conical bore has a strong influence on its unique timbre, and as Haynes noted,

Much of the playing quality of an hautboy depended on its bore profile and size, which was a result first of its original design and second of the tuning and adjustments. [...] These adjustments affected basic pitch, tone quality, resistance, and 'play', both in volume and pitch. The subtle interplay between these variables was the personal signature of each maker.¹²⁴

A relatively uncomplicated bore analysis of original specimens was carried out using digital callipers, in which the top and bottom diameters of each joint were measured without having to introduce any foreign objects into the bore that could potentially mar its interior walls. Similarly, exterior measurements (socket depths, joint and tenon lengths, tone hole diameters, etc.) were also measured with digital callipers. For a complete analysis of the bore's interior profile however, a 'bore graph' must be plotted. This involves incrementally inserting small telescoping gauges *into* the bore until they come in contact with its sloping walls and progressively mapping each data point on a graph (for example, at 0.10 mm increments). Because many museums and their curators are naturally reluctant to allow researchers to insert anything into the bores of original wind instruments, these graphs are difficult to assemble.

Graphing an oboe's bore profile has the advantage of revealing the bore's *conicity* or scaling, or the rate at which it flares, which is the ratio between bore diameter and body length. Because reaming the bore of woodwind instruments prior to the Industrial Revolution was an artisanal and manual procedure, in 1823 Braun could recommend oboists to "acquire a good instrument, and then use only the one without exception, since no two instruments are ever identical."¹²⁵ In the same vein, Karp notes that "The bore measurements of two externally and musically identical instruments from the same maker can often be astonishingly different."¹²⁶ Data collected from the bore analysis of original specimens must, however, be used with caution, since bore shrinkage, "due to the anisotropic properties of wood, causes an elliptical instead of circular bore cross

¹²⁴ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 91.

¹²⁵ Wilhelm Braun, 'Bemerkungen über die richtige Behandlung und Blasart der Oboe,' *Allgemeine Musikalische Zeitung* (12 March 1823), 167: "ein gutes Instrument anzuschaffen, und dann ohne Ausnahme nur diess Eine zu benutzen; denn, da keines, selbst von eben demselben Meister, dem andern vollkommen gleich ist, so lässt es sich auch erwarten."

¹²⁶ Cary Karp, 'Woodwind Instrument Bore Measurement,' *The Galpin Society Journal* (May 1978), 10.

section.”¹²⁷ Likewise, as cautioned by Bate, “At thus remove of time, fine measurements of 19th-century oboes are not altogether to be trusted. Actual corrosion during years of playing, as well as changes in the wood when out of use, must have affected the bore of many specimens.”¹²⁸ The Adler’s bore was meticulously mapped by Henri Gohin and can be viewed [here](#). Likewise, bore graphs were produced for the oboes by [Buffet Crampon](#), [Triebert père](#), and the [anonymous French](#) model.

National styles were not only visible in exterior turning methods, but also in bore profiles. For example, it has been noted that “a principal contributing factor to the *joli son* [delicate tone] of Triebert [i.e. French] oboes was their narrow borer and slender bodies.”¹²⁹ Likewise, Carl Theodor Golde attributed the unique timbre of the Dresden-style oboe to its ‘sword’ profile. While the original manuscript is now lost, a remarkable text from c.1850 on tuning the oboe has survived by Golde in a transcription by Drechsel entitled *Über den Bau der oboe*.¹³⁰ In his review of this text, Marc Ecochard notes that

Golde asserts the relationship with his Dresden predecessors when he states: *Instruments which do not have a sword profile have a thin nasal tone, as that of the French and Viennese oboes*. This typical profile of the bore, which is likened by Golde to the shape of a sword, is formed by a concavity of the bore in both joints of the oboe; each shows a significant expansion of the conicity in its upper part, the lower part at the level of the tenons having a rather more cylindrical shape.¹³¹

Bore profile was therefore an influential factor in creating the hallmark timbres of German and French oboes of the Romantic period, and from Golde’s text we can deduce that makers used multiple overlapping reamers on each joint to create the bore. This is also evidenced in the bore graph of the Adler, where several sharp steps in the bore imply that several reamers were used in tandem.

And while national idiosyncrasies did exist, one of the defining characteristics that all simple-system oboes share are marked ‘steps’ in the bore, where there is a noticeable and sudden widening in bore diameter between the end of one joint and the beginning of the next. This feature was directly inherited from the eighteenth-century hautboy, and can be observed on

¹²⁷ *Ibid.*

¹²⁸ Philip Bate, *The Oboe: An Outline of its History and Construction* (New York: Philosophical Library, 1956), 81.

¹²⁹ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 137.

¹³⁰ *Zeitschrift für instrumentenbau* no. 52 (Leipzig, 1932), 258-259.

¹³¹ Marc Ecochard, *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde*, trans. Jem Berry as *Tuning the hautboy. A perspective on original tuning and modern adaptations* (unpublished, 1996).

virtually every instrument analysed in this study. As Bate noted, sudden expansions in bore diameter were characteristic of these models: “The pronounced ‘step’ so formed is a feature which seems to have become marked with French oboes of c.1835. [...] This break in the continuity of the bore seems to have persisted in France at least until 1865.”¹³² Bore graphing has revealed steps in the bore of the Adler oboe. Instead of a streamlined conicity as seen on later models such as the Buffet-Crampon and the anonymous cocuswood instrument, the Adler bore features a small step where the top joint meets the middle joint and where the middle joint meets the bell (i.e. the bore at the beginning of the bell is substantially wider than that of the bottom of its middle joint). This feature is also present on the Brod and Triebert *père* instruments. As Haynes & Burgess note, “It was in the 1840s that Triébert dispensed with the inside rim of the bell and the sudden steps in the bore from the end of one joint to the beginning of the next. This resulted in a bore with a gradual and uninterrupted expansion, and with no points of resistance in the airstream.”¹³³ Steps in the bore are characteristic of eighteenth-century instruments by Delusse, Prudent, Lot and Bizey, and therefore link the Adler to an older school of manufacture. As the comparative study indicates, steps in the bore are also present in many German models – both the Jehring oboe (Leipzig, c.1880) and Sellner-style models (such as those by Bormann and Schott, c.1850, from the Brussels MIM) boast this feature, and demonstrate that the simple system continued to be produced east of the Rhine well into the late nineteenth century.

Bore diameters of the seven sampled oboes are provided below for comparative purposes.

	Adler	Buffet	Brod	Anon.	Triebert PAL	Triebert RAM	Cottet Golde
Bottom of top joint	9.5	9.7	9.95	9.7	9.8	9.9	10.0
Top of middle joint	10.4	10.3	10.95	10.5	10.8	10.9	11.1
Bottom of middle joint	14.6	14.5	15.0	14.5	14.2	14.4	14.3
Top of bell	17.7	14.5	15.45	15.0	15.4	19.9	15.1

Table 3.1. Bore diameters (in mm)

¹³² Philip Bate, *The Oboe: An Outline of its History and Construction* (New York: Philosophical Library, 1956), 81.

¹³³ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 138.



Fig. 3.2. Cross-section of a hautboy clearly showing steps in the bore
(modern copy of Stanesby Sr. by Olivier Cottet)

3.2.1. MINIMUM BORE

Also known as the *choke*, the minimum bore of an oboe is “a short cylindrical segment at the top of the hautboy’s bore, roughly at the height of the baluster”¹³⁴ and is one of the physical attributes that gives an oboe its characteristic ‘feel.’ The Adler’s minimum bore has a diameter of 4.55 mm, which is only slightly narrower than that of classical models by Prudent (4.6) or Delusse (5.0).¹³⁵ These earlier instruments would have been used to perform lyrical staged works by Gluck and Grétry at the *Opéra de Paris* in the 1770s, and were pitched closer to 410 Hz.¹³⁶ In France, minimum bore size decreased as time advanced. The comparative analysis reveals that the minimum bore of a mechanised Buffet *système 4* oboe (c.1850) measures 4.2 mm,¹³⁷ whereas that of a modern conservatoire oboe is 4.0 mm.¹³⁸ It may therefore be tempting to view the Adler’s relatively wide minimum bore as a first indication of a lower pitch level. Caution must be used, however, since in Germany, for example, minimum bores continued to be comparatively large, as indicated by the choke of an oboe by Jehring (Leipzig c.1880, author’s private collection) measuring 5.05 mm and pitched at 438 Hz. This indicates that two instruments built over a century apart (namely, Delusse 1770 and Jehring 1880) with a pitch variance of nearly 30 Hz do indeed share the same minimum bore diameter.

Adler	4.55
Buffet-Crampon	4.75
Henri Brod	4.85
Anonymous	4.45
Triebert PAL	4.7
Triebert RAM	4.55
Cottet Golde	4.7

Table 3.2. Minimum bore diameters (in mm)

¹³⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 47.

¹³⁵ The minimum bore of two Delusse oboes at the *Musée de la musique* in Paris measure 5.0 mm, while the MIM Prudent oboe (c.1780) is 4.6 mm. <http://brusselsmimoboecollection.kcb.be/instrument-checklist/prudent/>, accessed 4 July 2019.

¹³⁶ As indicated by Haynes, a tuning fork dated 1783 and owned by Sallantin reveals a pitch of 409 Hz. The fork then passed into the possession of harpsichord builder Pascal Taskin. See: Bruce Haynes, *A History of Performing Pitch: The Story of “A”* (Lanham, MD: Scarecrow Press, 2002), 301-312.

¹³⁷ The comparative analysis further indicates that the chokes of the three contemporaneous simple-system Triebert oboes housed at the Brussels MIM all measure 4.2 mm.

¹³⁸ Personal commentary from Matthieu Scohy, February 2022. Scohy is a lead technician at Marigaux, one of France’s foremost oboe manufacturers, and a reputed maker of historical oboes.

3.2.2. ACOUSTIC LENGTH

The *acoustic length* of an oboe is the distance from the top of the instrument to the middle of its sixth tone hole. Instruments with a longer acoustic length tend to have lower pitch levels, and this parameter has been shown to be substantially more influential on the instrument's acoustic properties than its *total length*. Indeed, the distance from the bell's resonance holes to the end of its rim has been shown to have very little impact on overall pitch, and the same can be said of the length of the reed well.¹³⁹ Consequently, a difference in total length of 5 or even 10 mm, which could easily be hidden at either or both ends, does little to affect an instrument's pitch level.

Analysis reveals that the Adler's acoustic length of 325.5 mm is longer than the other six models, and is virtually identical to that of the Delusse oboe housed in the Bate Collection at Oxford (324.6 mm). Further examination reveals the Adler's acoustic length to be a full 3 mm *longer* than that of the Delusse oboe owned and played by François-Alexandre Sallantin, housed at Paris' *Musée de la musique* (serial number E367).¹⁴⁰ This is another indication that the instrument was designed to be played below 430 Hz (as mentioned above, an original tuning fork owned by Sallantin and dated 1783 is at 409 Hz). Nonetheless, caution must again be used when jumping to any conclusions since the oboe by Buffet-Crampon, pitched near 438 Hz, has an acoustic length nearly identical to that of the Adler.¹⁴¹

Adler	325.5
Buffet-Crampon	324.2
Henri Brod	324.0
Anonymous	322.6
Triebert PAL	327.5
Triebert RAM	322.5
Cottet Golde	311.3

Table 3.3. Acoustic lengths (in mm)

¹³⁹ Personal commentary, Paul Hailperin, March 2019, and subsequently confirmed by several other makers including Randall Cook and Henri Gohin.

¹⁴⁰ <https://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0161634>, accessed 4 July 2019.

This instrument's acoustic length is 322.5 mm.

¹⁴¹ Likewise, the 1880 Jehring oboe also pitched near 438 Hz has a similar acoustic length of 324 mm.

3.2.3. THE COUNTERBORE

The oboe's *counterbore* (or 'reed well') is the cavity into which the reed is inserted. On eighteenth-century hautboys this was a 'reverse cone' drilled into the bore and was a feature carried over to the Romantic simple-system oboe that worked well with thread-wound staples. Around 1850, however, oboe reed wells in France began being fitted with cylindrical metal sleeves, which could be used in conjunction with newly-introduced corked staples to create an airtight seal. The counterbores on several original French oboes have been rereamed to accommodate the cylindrical sleeve, as is the case with Sallantin's oboe at Paris' *Musée de la Musique*.

The Adler's counterbore is a reverse cone and points to its ties with the eighteenth-century hautboy's acoustic profile. A feature of this set-up is that, because it creates a hollow space between the end of the staple and the top of the minimum bore, it produces a point of resistance in the airstream.¹⁴² The volume of this gap affects how the reed-oboe coupling works and is a crucial part of the bore because of the key role it plays in overblowing, a fundamental part of the hautboy's technique. In practical terms, this disturbance in the air column can be 'pushed against' by the oboist to create a more reliable attack in the upper register. Because the hautboy lacked an octave key, it relied on overblowing to change registers, allowing the player to use the same fingering for two different octaves. As Haynes noted, "switching from middle notes to the high notes was one of the arts of playing the instrument, distinguishing it from the recorder with its octave-hole."¹⁴³

The position of the staple inside the reed well of hautboys has been studied by Marc Ecochard, who demonstrated that the bottom diameter of a staple fully inserted into the cylindrical well of a *système 3* oboe by Jacques Albert corresponds exactly to its minimum bore (4.1 mm). Ecochard observes that "because the [hautboy] staple's bottom diameter is always inferior to that of the counterbore when the reed is inserted, the gap ('*chambre*') creates a significant expansion in bore volume before tapering to its narrowest point and therefore plays an important acoustic role."¹⁴⁴ If the 'Albert' set-up is reproduced on the hautboy (where the bottom diameter of the staple is flush with the oboe's minimum bore), it becomes almost impossible to sound the octaves, requiring a much greater exertion from the player to overblow. The gap also influences the response of both

¹⁴² The cylindrical reed well on mechanised models ends at right-angle to the axis of the bore, creating a horizontal shelf for water to collect on, often creating problems of clogged octave keys during performance.

¹⁴³ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 187.

¹⁴⁴ Marc Ecochard, *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde*, (unpublished, 1996), 15.

cross fingerings and the third octave: forked fingerings such as **B-flat**¹ and **F**¹ are greatly improved when there is sufficient space in the hollow, as are notes above **D**³.

3.3. THE BELL

Being an extension of the bore, Bate notes that the bell of the simple-system oboe plays an important role in its acoustic profile and playing characteristics, stating:

we notice at once that the narrowest diameter of the [bell] is considerably greater than the widest part of the main bore. The two meet in fact in an abrupt ‘step’. It is therefore probably better to regard the older type of bell, not as an extension of the main tube, but as a sort of supplementary resonance chamber whose characteristic responses will colour the tone of the instrument. Some of these responses will, no doubt, fall within the formant range, and so influence all notes.¹⁴⁵

One of the characteristic features of these bells is a heavy rim or ‘lip’ at their bottom end (another vestige of eighteenth-century hautboys) which was removed from later mechanised models. The bell of the Adler oboe features one such rim. Haynes & Burgess note that it was Triebert in the 1840s who eliminated the bell’s internal lip, which “resulted in a bore with a gradual and uninterrupted expansion, and with no points of resistance in the airstream.”¹⁴⁶ While variably thought to strengthen the wood and relieve stress so as to prevent cracks, to soften the tone of the lower register, or to hold a mute, the rim’s function is still misunderstood.

The plethora of bells encountered on French models from the first half of the nineteenth century illustrate to what extent the lowest notes of the oboe were problematic for oboists at the time, and show a remarkable series of attempts to correct their pitch and to extend the range of the instrument downwards. C¹ was a complicated note on the hautboy, and the problem persisted on nineteenth-century models. As Francoeur remarked in 1813,

*The C at letter A [low C] is always out of tune; it is too high to be considered a C natural and too low to be a C#, even when it is lipped upward.*¹⁴⁷

If on eighteenth-century hautboys the note was intentionally pitched high so that the same fingering could be used for both C¹ and C^{#2}, its tuning could be corrected somewhat by adjusting the size of the resonance holes on the bell to lower the pitch (the smaller the resonance holes, the lower the pitch of C¹.) Of course, there was a limit as to how far the holes could be shrunk, as the pitch of C^{#2} also depended on their size. It was therefore necessary to strike a compromise between C¹ and C^{#2}, resulting in a high C¹ and a low C^{#2}. Brod was one of the first makers to

¹⁴⁵ *Ibid.*, 114.

¹⁴⁶ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 138.

¹⁴⁷ Bruce Haynes, *The Eloquent Oboe* (Oxford: Oxford University Press, 2001), 204. Translation by Haynes. Original Fr: “L’Ut marqué A est toujours faux : c’est à dire trop haut pour être considéré comme naturel, et trop bas pour être dièze, même en forçant” in Louis Joseph Francoeur, *Diapason général de tous les instruments à vent* (Paris: Le Marchand, 1813).

experiment with extending the length of the bell to correct the pitch of low C¹, and was the first maker to add a key for low B^b⁰, which he called for in a number of his chamber works for oboe.¹⁴⁸ The fingering chart he includes in the Part II of his *Méthode* (published 1830) is the first French tutor to provide a fingering for low B⁰, whereas the lowest note given in Part I (1825) is low C¹.

The *Concert-Ouverture in B minor* “voor groot orchest” (1831) by Johannes Bernardus van Bree (1801-1857) is to my knowledge one of the earliest exposed solos that truly requires the low B key.¹⁴⁹ As a conductor, van Bree gave the Dutch première of Berlioz’s *Symphonie fantastique* in 1855.

Ex. 3.1. van Bree: *Concert-Ouverture in B minor* (1831) - oboe solo, bb 1 - 32

In the 1820s, makers like Brod began experimenting with reducing the number of resonance holes on the bell from two to one, which could then be fitted with a key. This new ‘C-corrector key,’ called a *grande clef d’ut en bas* in Vény’s 1828 *méthode* and in the 1827 French translation of Sellner’s tutor, effectively cancelled all venting in the bell to flatten the pitch of the lowest note, and as observed by Burgess, “was common on French oboes used between 1800 and 1830”¹⁵⁰,

¹⁴⁸ His *Trio in B-flat for oboe, bassoon and pianoforte* from *Lucia di Lammermoor* and his *Duo for oboe and pianoforte* from *Mercadante* are prime examples.

¹⁴⁹ I had the opportunity to record this solo with Die Kölner Akademie (dir. Michael Willens) in 2023. CD forthcoming (2024) for the CPO label.

¹⁵⁰ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Oxford: Lanham, 2003), 34.

appearing in seven method books published between 1826 and 1890. Often falsely assumed to be a low B key, the corrector key's function of tuning low C is clearly depicted in Brod's and Sellner's *méthodes*.¹⁵¹ The Adler oboe features one such key, and in the following [video](#), I have demonstrated its practical application. First, a descending C major arpeggio is played with the key; then, without. In the excerpt, I intentionally refrained from using my embouchure to 'lip up' or 'down' to correct intonation in either passage, so as to highlight the discrepancies in intonation. Playing at a pitch of 425 Hz, low C¹ is 10 cents flat with the key down, whereas without the key, low C¹ is 40 cents sharp (nearly a quarter tone).

Bells and the C-corrector key also have a direct impact on how an oboe responds in the third octave. As demonstrated in the following [video](#) of a solo passage from the overture to Berlioz's *Le roi Lear* (1831), only the original bell by Adler produces a satisfactory result when ascending conjunctly to high E³. The other two bells (the first belonging to the RAM Triebert model, the second to a modern copy by Sand Dalton of a German oboe by Grundmann, c.1780) are less successful, and while after an initially unresponsive attack the Triebert bell is in tune on the high E³, the Dalton/Grundmann model is 30 cents flat.

Poco ritenuto
solo

ppp dolce assai

p

Ex. 3.2. Berlioz: *Le roi Lear* (1831) - oboe solo, bb 43 - 45

The demonstration continues with a descending chromatic scale from G¹ to C¹. In the first example, the Dalton/Grundmann bell is used, which produces a low C that at 425 Hz is over 50 cents sharp (more than a quarter tone). The following two examples, using the RAM Triebert and Adler bells respectively, are much better in tune (only 20 cents sharp). In several live performances by the author, the Adler was found to play exceptionally well with the wider-diameter RAM Triebert bell.

¹⁵¹ As shown [here](#).

As noted earlier, because the bell is situated beyond the acoustic length, its size has almost no influence on the overall pitch of an instrument. For example, although the bell of the Brod oboe is exceedingly long (169.5 mm, compared to the Adler's which measures 139 mm - that is to say, nearly 3 cm longer) it has very little consequence on pitch, since this model is pitched roughly 10 Hz *higher* than the Adler.

3.4. TONE HOLES

The size, placement and undercutting of an oboe's tone holes have a significant effect on its tuning (or *voicing*), tone quality, pitch level, and response (readiness or ease of attack). Haynes devised a system to measure their size, which he termed *aggregate tone-hole diameter*, or ATHD, which is the total diameters of holes 1, 2, 5, and 6 (twinned holes 3 and 4 are omitted). As a general rule, larger tone holes will produce a higher pitch, and the same author notes that "for a given AL [acoustic length], hautboys with larger tone-holes will be higher by about a quarter-step."¹⁵² Nonetheless, tone hole size should not be viewed as the sole indication of pitch level, since the holes of lower-pitched eighteenth-century hautboys tended to be significantly *larger* than nineteenth-century specimens (Haynes notes the average from a sample of 50 original eighteenth-century instruments is 16.6 mm).¹⁵³ Compared to other woodwind instruments, the oboe has remarkably small tone holes, and this was even more the case on hautboys and simple-system models such as the Adler. As Howe observes,

The important difference is that the old system oboes had small tone holes, which were usually stopped by the fingers directly. The new systems, whether using Boehm's fingering system or not, had narrower bores, larger holes and an increased ratio of tone hole to bore diameters. Importantly, the larger tone holes of the new oboes produced a stronger sound.¹⁵⁴

It should also be noted that the influence tone holes exert on pitch, timbre and response is not solely determined by their size (or diameter), but also by the extent to which they are *undercut*,¹⁵⁵ a parameter which, because it occurs inside the bore, is axiomatically problematic to measure with any degree of accuracy.

The comparative analysis revealed that the Adler's ATHD is 14.16 mm. This value is by far the smallest of all the oboes sampled, which could be seen as another contributing factor to its lower pitch centre.

¹⁵² Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 91.

¹⁵³ *Ibid.*, 92.

¹⁵⁴ Robert Howe, 'Nineteenth-Century French Oboe Making Revealed: A Translation and Analysis of the Triebert et Cie '1855' Nouveau Prix-Courant,' *The Galpin Society Journal* LXIV (2011), 86.

¹⁵⁵ Haynes notes that two distinct manual techniques were historically used to make tuning adjustments on the hautboy: "by undercutting the tone-holes (that is, enlarging the end of the tone-hole that enters the bore), and chambering (widening the bore by reaming at specific points)." Because instrument building before the Industrial Revolution remained very much an artisanal process, "there was little reason for anyone to have written anything down about tuning adjustments to woodwind instruments in this period. These were the domains of craftsmen low on the social and artistic scale, and in any case the important information was regarded as secret." Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 90.

Adler	14.16
Buffet Crampon	14.93
Henri Brod	15.33
Anonymous	16.1
Triebert PAL	n/a
Triebert RAM	15.0
Buffet système 3	17.2
Cottet Golde copy	15.55

Table 3.4. Aggregate tone-hole diameter (in mm)

Haynes notes that “a small-holed instrument will have a more defined basic pitch level, crisper intonation, and sharper differentiation of notes. Larger tone holes produce a more fluid intonation.”¹⁵⁶ He also warns that it is “difficult to know if the tone-holes of original instruments have been altered, an operation that might have been performed to raise pitch.”¹⁵⁷ Compared to later *système* models, average tone hole diameter is much smaller on the Adler (compare with Buffet *système 3* in the table above).

As on the hautboy, tone holes on the simple-system oboe always ran the risk of being clogged by water, especially those fitted with keys. Around 1840, several makers (particularly those in Italy, like Gennaro Bosa) began producing models with metal-lined inserts fitted to the tone holes. In his *Metodo* (c.1843), Giovanni Battista Belpasso takes credit for devising this model:

*I wanted to eliminate many of the drawbacks on this instrument caused by evaporation that easily accumulates in its tone holes, often hindering the performer; so I decided to have an instrument made with lead[lined] tone holes, which prevents water from building up.*¹⁵⁸

¹⁵⁶ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 91.

¹⁵⁷ *Ibid.*, 92.

¹⁵⁸ Giovanni Battista Belpasso, *Metodo per Oboe composite espressamente per Real Collegio di Musica*. (Naples: Cottrau, c.1843). *Volli togliere a questo strumento molti inconvenienti sulla evaporazione che facilmente avveniva nei rispettivi buchi delle chiavi, compromettendo spasse volte l'artista sonatore; così mi decisi di fare costruire detto strumento, rinunciando all'uso delle pelli, e sostituendo invece il piombo, affinché l'evaporazione non si potesse formare nei buchi di dette chiavi, ostacolando la esecuzione.*

3.5. CONCLUSIONS

Scrutinising the Adler's physical dimensions has provided valuable insights into its acoustic properties and pitch level. In comparison with coeval models, the oboe has been shown to have remarkably small tone holes, a rather substantial acoustic length, and a minimum bore comparable to earlier eighteenth-century two-keyed hautboys. All of these factors point to a lower pitch level, explaining why the Adler oboe feels most comfortable when played slightly below 430 Hz, at a level closer to 426 Hz. Furthermore, its narrow bore, slender body, small tone holes, rimmed bell, and boxwood construction (as opposed to ebony or grenadilla) are all factors which contribute to the Adler's softer, more muted timbre. Compared to later, mechanised French oboes in exotic hardwoods with larger tone holes, or modern-day facsimiles of classical German models with wider bores and thicker walls, the Adler's tone is more delicate and intimate. At the same time, these idiosyncrasies in design also robbed the French Romantic oboe of the "dynamic strength associated with the eighteenth-century" hautboy.¹⁵⁹ All of these factors combine to create a very palpable classical *hautboy* 'feel,' whereas the sensorial experience of performing on a Triebert *système 3* model (designed perhaps only five years later) is much more akin to that of a modern conservatoire oboe.

¹⁵⁹ Geoffrey Burgess, 'The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature,' *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. Utrecht 1994, ed. David Lasocki. (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994), 93.

4. PITCH

Current practice has established several pitch standards depending on the repertoire being performed, with 392, 415 and 430 Hz all being widely used for baroque and classical repertoire ranging from roughly 1650-1800. Many authors have drawn attention to the fact that these conventions are twentieth-century constructs.¹⁶⁰ The flautist Barthold Kuijken is one of several musicians who take credit for establishing 430 Hz for classical repertoire in the early 1980s:

Today much of the classical repertoire is played at $a^1 = 430$ Hz. I must confess that I am responsible for this. In 1981, La Petite Bande, led by my brother Sigiswald, recorded a series of Haydn symphonies as a first incursion into the classical style. [...] I chose, quite arbitrarily, $a=430$ Hz, in between 422 and 440. At the time I had a beautiful original flute on loan, made in the 1780s in Dresden by one of the greatest German flute makers, August Grenser. It had four middle joints, at $a=427$, 433, 437, and 442 Hz. A fifth middle joint at 430 Hz had to be made, and original oboes, clarinets, and bassoons had to be found and copied. [...] We all had to learn to play these new instruments in a very short amount of time.¹⁶¹

A closer inspection reveals that the standardisation of 430 Hz is in fact a relatively recent event, with many recordings of classical repertoire from the 1980s and 1990s performed at lower pitch levels.¹⁶² And while the HP movement may now have established pitch conventions for performing ‘baroque’ and ‘classical’ eighteenth-century repertoire,¹⁶³ it is still in search of a pitch standard for nineteenth-century works. Personal experience and interviews with colleagues (see Appendix II) have revealed that symphonic and lyrical works by Berlioz, Schumann,

¹⁶⁰ Richard Maunder, ‘Viennese Wind-Instrument Makers, 1700-1800,’ *The Galpin Society Journal* (Jul. 1998, Vol. 51), 171. Indeed, Maunder notes: “The notion that in the late eighteenth century there was a uniform standard of $A=430$ Hz is a modern myth”.

¹⁶¹ Barthold Kuijken, *The Notation Is Not The Music* (Bloomington: Indiana University Press, 2013), 23-24.

¹⁶² Orchestral examples of this abound, but two include the English Concert’s recording of the Haydn oboe concerto at 421 Hz (1990, with Trevor Pinnock leading from the harpsichord and Paul Goodwin as the soloist); and the Amsterdam Baroque Orchestra’s recording of Mozart’s Haffner Serenade (1990, at 415 Hz).

¹⁶³ The practice of performing French lyrical works of the late eighteenth century at 430 Hz, now exceedingly common, is especially aberrant. This is proven by the presence of several extant pitch pipes and tuning forks at lower pitch levels used at the Opéra, including a tuning fork owned by Pascal Taskin, the official *facteur des clavessins du Roi* to Louis XVI, which is set at 409 Hz and dated 1783. The fork is documented by de la Fage in 1859 as being tuned to Sallantin’s oboe, who was principal oboe at the Paris Opera until 1812. Furthermore, two pitch pipes used at the Opéra during this period are set near 415 Hz: one dating from 1802 is at 416 Hz; another owned by the woodwind instrument builder Christophe Delusse is at 418 Hz. In fact, it was not until the 1810s that pitch at the Opéra rose above 420 Hz, making today’s convention of performing the staged works of Grétry, Gluck, Cherubini, Dalayrac, Gossec and Méhul at 430 Hz in contradiction with historical evidence. In a personal commentary, the violinist Anton Steck has informed me that he participated in several recordings of Gluck’s operas with a renowned Parisian ensemble at 403 Hz in the late 1990s. Since Rameau’s operas, premiered at low French opera pitch (ranging anywhere from 392-405 Hz), were revived at the Opéra de Paris well into the 1780s (e.g. the 1784 revival of *Castor et Pollux*), it is highly probable that operas by Gluck and Grétry, premiered in the same decade, would also have been performed at lower pitch.

Mendelssohn and their contemporaries are all being performed at a variety of pitches today, with 430, 435, 438¹⁶⁴ and 440 Hz all represented. The need for today's historical woodwind performer to have access to an instrument, or rather to several instruments, which are practicable at all of these pitch levels is therefore crucial. As we observed in the introduction, because no modern copies of nineteenth-century oboes are currently commercially available, historical oboists today must turn to original instruments to meet their artistic and professional objectives. Even so, we will see in the following chapter that when interacting with original nineteenth-century woodwinds which commonly do not comply with modern-day pitch conventions, the historical oboist is faced with a set of contradictions that make the use of antiques fraught with obstacles and incompatibilities.

¹⁶⁴ 438 Hz, which is now commonly adopted for performances of the orchestral works of Brahms, Bruckner, Mahler, and Hiller, is an arbitrary compromise and especially problematic for antique woodwind instruments built during their time. The first international conference on pitch, held in Vienna in 1880, established 435 Hz (France's *diapason normal*) as the pitch standard. It was not until the second international conference, held in London in 1900, that 440 Hz was adopted. This means that most, if not all, German and Viennese woodwind instruments manufactured between 1880 and 1900 were designed to be played at 435 Hz. Performing symphonies by Mahler and Bruckner 3 Hz higher than what the instrument was designed for is possible by tinkering with reeds, but the double-reed musician quickly feels that, physically at least, it is far from ideal.

4.1. HISTORICAL PITCH

In Chapter 3, based on its physical characteristics, we were able to situate the Adler oboe's date of construction between 1835 and 1840. By this time, pitch levels in all of the Parisian theatres were at 437 Hz or above, which would imply that the instrument should be able to play at this pitch, if not higher. Evidence of this is provided by the piano tuner and builder Claude Montal (1800-1865), who revealed that the pitch levels of Paris' four major theatres in 1836 (*Opéra de Paris*, *Opéra Comique*, *Théâtre-Italien* and *Théâtre Feydeau*) were all situated between 437 and 441 Hz.¹⁶⁵ As for the *Société des concerts du conservatoire*, where in the 1830s Brod, Vogt and Vény participated in the Parisian premières of symphonic works by Berlioz, Beethoven and Mendelssohn, Greif notes that the pitch level was fixed at 435 Hz from 1833 onwards,¹⁶⁶ whereas de la Fage gives a reading of 441 Hz in 1834. Haynes provides further testimony, stating:

The Opéra maintained 434 [Hz] at least through 1834. This pitch would presumably have been used for works performed after 1829, such as those by Rossini, Auber, Meyerbeer, and Bellini.¹⁶⁷

The chronological chart below provides a panorama of pitch readings for the decade 1830-1840, gathered from several primary sources.¹⁶⁸ We can quickly observe that all values after 1835 are above 437 Hz.

¹⁶⁵ Claude Montal, *L'Art d'accorder soi-même son piano* (Paris: Meissonnier, 1836). "Trois diapasons étaient en usage autrefois : celui de l'Opéra, celui des Italiens, et celui de Feydeau ; celui de l'opéra, le plus bas des trois, donnait vers 1829, 434 vibrations (...). Celui des Italiens (...) 435 (...) et celui de Feydeau (...) 438. Maintenant [in 1836], il n'y a réellement que deux diapasons en usage ; celui des Italiens (...) qui donne 437 vibrations (...) ; celui de l'Opéra et de l'Opéra-Comique (...) en donne 441 (..) Le nombre de vibrations produits par chacun de ces diapasons a été déterminé par une température de 23 degrés centigrades."

¹⁶⁶ Francisque Greif, *Études sur la musique antique* in *Revue des Études Grecques*, tome 24, fascicule 108-109 (Paris: Ernest Leroux, 1911), 234: "A Paris même, il [le diapason] avait varié suivant les théâtres et les époques. A l'Opéra, le la3 était de 818 [409 Hz] vibrations en 1788, de 862 [431 Hz] en 1821, de 868 [434 Hz] en 1833, de 898 [449 Hz] en 1835, de 896 [448 Hz] en 1857; au Théâtre-Italien, il était de 848 [424 Hz] en 1821, de 882 [441 Hz] en 1833; à l'Opéra-Comique de 856 [428 Hz] en 1821. Le Conservatoire avait, dès 1833, le diapason actuel de 870 [435 Hz] vibrations."

¹⁶⁷ Bruce Haynes, *A History of Performing Pitch: The Story of "A"* (Lanham, MD: Scarecrow Press, 2002), 333.

¹⁶⁸ Many of these readings were gleaned from Nicolas Meeùs, "Le diapason," *Organologie, Cours de DEUG, CNED, Institut de Vanves, 2003-2004; 2e édition, 2004-2005. Organologie générale, cours fait en Sorbonne, 2003-2011* (unpublished), 55.

Year	Pitch	Source
1829	434 Hz	<i>Opéra de Paris</i> (Montal/Cagnard de la Tour)
1829	435 Hz	<i>Théâtre-Italien</i> (Montal/Cagnard de la Tour)
1829	438 Hz	<i>Théâtre-Feydeau</i> (Montal/Cagnard de la Tour)
1830	431 Hz	<i>Opéra de Paris</i> (Drouet, in <i>Rapport de la Commission gouvernementale</i>)
1830	436 Hz	<i>Opéra de Paris</i> (Drouet)
1833	434 Hz	<i>Opéra de Paris</i> (Greif)
1833	435 Hz	<i>Conservatoire</i> (Greif)
1833	444 Hz	<i>Conservatoire</i> (Fétis) ¹⁶⁹
1834	434 Hz	<i>Opéra de Paris</i> (Petitbout/Scheibler)
1834	433 Hz	<i>Opéra de Paris</i> (De La Fage/Scheibler)
1834	441 Hz	<i>Orchestre du Conservatoire</i> (De La Fage/Scheibler)
1834	440 Hz	<i>Théâtre-Italien</i> (De La Fage/Scheibler)
1834	440 Hz	<i>Opéra de Paris</i> (De La Fage/Pleyel)
1835	449 Hz [sic]	<i>Opéra de Paris</i> (Greif)
1836	441 Hz	<i>Opéra-Comique</i> (De La Fage/Cagnard de la Tour)
1836	437 Hz	<i>Théâtre-Italien</i> (De La Fage/Cagnard de la Tour)
1836	437 Hz	<i>Théâtre-Italien</i> (Montal)
1836	441 Hz	<i>Opéra de Paris</i> and <i>Opéra-Comique</i> (Montal)
1839	441 Hz	<i>Opéra de Paris</i> (Meyerbeer/Delezenne)

Table 4.1. Historical Pitch in Paris, 1829-1839

A variance of thirteen Hz (431-444) in ten years may appear significant, but in relation to earlier periods, the 1830s in Paris were in fact comparatively stable. Indeed, during the first quarter of the nineteenth century, pitch in Paris was far from static and fluctuated between neighbouring theatres; even within the same opera house there was instability from one year to the next. Nonetheless, by 1830 Fétis could observe that:

*each of the theatres at Paris had formerly its own [diapason]; that of the Opera was the lowest, and that of the Italian theatre the highest. There is now very little difference between them.*¹⁷⁰

Oboists such as Brod, Vogt and Vény, who were employed at several different theatres, still had to cope with these minor pitch variances as they moved from one establishment to the next, and as we will see below, several ‘hacks’ were at their disposal to overcome these discrepancies. Oboists were not alone in this predicament, and the flexibility with which woodwind players

¹⁶⁹ François-Joseph Fétis, ‘De la nécessité d’un diapason fixe,’ *Revue musicale* (21 déc. 1833), 387.

¹⁷⁰ Bruce Haynes, *A History of Performing Pitch: The Story of “A”* (Lanham, MD: Scarecrow Press, 2002), 333.

adapted to fluctuations in pitch, even after *diapason normal* had been fixed at 435 Hz by royal decree in 1859, is alluded to by de la Fage:

*Musicians are only slightly affected when pitch is fixed higher or lower in a purely orchestral setting [...] While certain wind instruments, such as the oboe, clarinet and bassoon [...] may be disturbed by the intonation problems this creates on their high or low notes, they can remedy the situation by adjusting the thickness and width of their reeds.*¹⁷¹

Even so, small discrepancies in Parisian pitch persisted well into the 1860s (even after the 1859 adoption of *diapason normal* at 435 Hz), causing Berlioz to comment in 1862:

*Nowadays, the pitch variance that exists between different orchestras in the same city (and between orchestras in foreign countries separated by considerable distance) is relatively minor, and does not preclude these orchestras from joining forces on occasion to form a large instrumental body with no notable tuning impediments. If there was (as is often claimed in Paris) a great discrepancy in pitch levels between the Opéra, the Opéra-Comique, the Théâtre-Italien and the military bands, how could an orchestra of seven or eight hundred musicians be formed, the likes of which I have often conducted in the large venues of the Champs-Élysées (after the exhibitions of 1844 and 1855), and at the church of Saint-Eustache? The musicians that participated in these events included nearly all the instrumentalists from Paris' many musical institutions.*¹⁷²

Oboists were able to leverage three different mechanisms to overcome pitch variance, and they conceivably used them in tandem. These were:

1. Reeds
2. Exposed staple lengths
3. Multiple top joints

¹⁷¹ Adrien de la Fage, *De l'unité tonique et de la fixation d'un diapason universel* (Paris: Dentu, 1859), 70: "Au fond, il importe fort peu aux exécutants que dans un orchestre purement instrumental le ton régulateur soit fixé plus haut ou plus bas; ils n'en éprouvent ni plus ni moins de fatigue. Si quelques instruments à vent, tels que les hautbois, clarinettes et bassons [...] se trouvent gênés pour les notes d'en haut ou d'en bas, les instrumentistes y remédient, pour les premiers en réglant en conséquence l'épaisseur et la largeur des anches."

¹⁷² Hector Berlioz, *À travers chants* (Paris: Lévy Frères, 1862), 279: "La différence qui existe aujourd'hui entre le ton des divers orchestres d'une même ville et entre celui des orchestres de pays séparés par des distances considérables ne constitue en général que des nuances qui n'empêchent point de réunir quelquefois ces orchestres et d'en former, au moyen de certaines précautions, une grande masse instrumentale dont l'accord est satisfaisant. S'il y avait, ainsi qu'on le répète souvent à Paris, une grande dissemblance entre les diapasons de l'Opéra, de l'Opéra-Comique, du Théâtre-Italien et des musiques militaires, comment eussent été possibles les orchestres de sept à huit cents musiciens qu'il m'est arrivé si souvent de diriger dans les vastes locaux des Champs-Élysées, après les expositions de 1844 et de 1855, et dans l'église de Saint-Eustache, puisque les éléments de ces congrès musicaux se composaient nécessairement de presque tous les instrumentistes disséminés dans les nombreux corps de musique de Paris ?"

The first and most obvious of these was the reed, which, as we will see, is a miniature musical instrument in itself and exerts a strong influence on the overall intonation of any oboe. While reeds will be discussed in detail later in this study, the parameters that can influence a reed's pitch are manifold, and by minutely adjusting any or all of its dimensions, the pitch of an oboe can easily be bent upwards or downwards by a semitone or more – a phenomenon that makes ascertaining the pitch centre of original specimens exceedingly problematic. One of the most effective ways for an oboist to adjust the pitch of a reed is by incrementally modifying its staple length. In his 1830 *Méthode*, Brod provides a drawing of a staple and mandrel with two separate marks on its upper section and writes:

*The second mark indicates the measure of a longer staple, which one sometimes uses to lower the pitch of the instrument.*¹⁷³

Furthermore, in his 1802 *Musikalisches Lexikon*, Koch states that oboists have an advantage over other woodwind instrumentalists since, “*if intonation deviates slightly from the given pitch, this can be remedied by using a somewhat shorter or longer staple [Stiefel].*”¹⁷⁴

Another variable that oboists conceivably used to their advantage was the *exposed staple length* (or ESL, i.e. how far the staple is inserted into the well). Pushing the reed further into the well shortens the bore and raises pitch, whereas pulling the reed out will lower intonation. While no primary sources make any mention of this practice, iconography can shed light on ‘best’ practices at the time. By consulting several French treatises and catalogues from 1816-1853 that depict oboes, I measured their *exposed staple length* (ESL) in relation to the length of cane.

¹⁷³ Henri Brod, *Méthode pour le Hautbois* (Paris: Schonenberger, 1830), 113: “*La seconde marque qu’on y voit donne la mesure d’un cuivret plus long dont on fait quelquefois usage pour baisser le ton de l’instrument.*”

¹⁷⁴ Heinrich Christoph Koch, *Musikalisches Lexikon* (Frankfurt am Main: August Hermann der Jüngere, 1802), 1082. “*Jedoch hat man bei diesem Instrumente noch den Vortheil, dass man der Stimmung, wenn sie nur wenig von dem angenommenen Stimmtöne abweicht, durch einem etwas kürzern oder längern Stiefel des Rohres nachhelfen kann.*”



Fig. 4.1. French oboe fingering charts & catalogues, 1816-1856, showing ‘exposed reed length’
 From left to right: Vogt 1816, Sellner 1824, Vény 1828, Brod 1830, Corret 1853, Gautrot 1856

Assuming that the reeds in these drawings have relatively short blade lengths of 20 mm, the *exposed staple length* on the Vogt oboe is 25 mm, Sellner 50 mm [!], Vény 25 mm, Brod 24 mm, Corret 23 mm, and Gautrot 25 mm. It is interesting to note that the ESL shortens progressively in relation to the advancing years, reflecting the rise in Parisian pitch. Two further drawings from Brod (1830) and Raoulx’s *Méthode* of 1841¹⁷⁵ also depict relatively long ESLs:



Fig. 4.2. Brod *Méthode* (1830) and Raoulx *Méthode* (1841)

After eliminating the highest and lowest of these readings (50 and 23 mm), we obtain a mean ESL of 24.75 mm.

¹⁷⁵ Maurice de Raoulx, *Méthode de hautbois* (Paris: Naudot, 1841).

A final contrivance that oboists used to cope with pitch variance was the use of multiple top joints, or *corps de rechange*. This practice was nothing novel in the 1830s – for example, Quantz is survived by several traversos made for Frederick the Great in the 1760s; some of these flutes have up to six head joints, and cover a range of 392 - 415 Hz.¹⁷⁶ Garnier’s 1802 *Méthode* depicts an oboe drawn to scale by Christophe Delusse with two *corps de rechange*, one playing around 415 Hz, the other, 4.5 mm shorter, around 430 Hz. On this, Garnier states:

[The hautboy] *has two similar top joints, which are numbered. Number 2 gives the standard pitch [ton usité]; with number 1, the instrument is made longer and thus lower [in pitch].*¹⁷⁷

A handful of oboes by Delusse in Paris’ *Musée de la musique* have multiple top joints, including the four-keyed instrument used by Vogt up until 1824, which has three separate *corps de rechange* of varying lengths.¹⁷⁸ There is a difference of 9 mm between the shortest and longest of these.¹⁷⁹ Using alternate top joints to adapt to variations in pitch was known outside of France, and in his *Musikalisches Lexikon* of 1802, Heinrich Christoph Koch observes that “it was common for hautboys to have three.”¹⁸⁰ In addition, in the first quarter of the nineteenth century, Austrian builders began equipping oboes with a tuning slide (*Zug*). These were particularly appreciated by Viennese oboists, who, like their Parisian colleagues, were faced with a similar predicament of pitch variance. Verdegem notes that:

From an early stage, [Viennese builder Stephan] Koch had fitted his oboes and other wind-instruments with tuning slides to cope with varying tuning-pitches, a solution which increasingly came to replace the provision of different head-joints. [...] We can assume from this that the two tuning systems (different head joints and tuning slide) existed side by side. The tuning slide was introduced largely as a practical necessity: the addition of more and more keys on the head joint made it too expensive and labour-intensive to supply the different sections, then normal practice for classical flutes and oboes.¹⁸¹

¹⁷⁶ Bruce Haynes, *A History of Performing Pitch: The Story of “A”* (Lanham, MD: Scarecrow Press, 2002), 288.

¹⁷⁷ François-Joseph Garnier, *Méthode Raisonnée pour le Haut-bois* (Paris: Pleyel, c.1802). “Il a deux corps semblables qui sont numérotés ; c’est celui du no. 2 qui donne le ton usité ; avec celui du no. 1er, on rend l’instrument plus long et par conséquent plus bas.” Translation by Haynes in *Story of A*, 312.

¹⁷⁸ This oboe is visible [here](#). Originally four-keyed (F#, E-flat, low C and C ‘corrector’), the instrument was at some point retrograded to two keys, with the F# hole being sealed up. Haynes remarks that “Both Sallantin and Vogt, for instance, who were prominent hautboists in Paris at the end of the 18th and beginning of the 19th centuries (where pitch varied by small amounts), owned instruments with multiple top joints.” (Haynes, *Story of A*, 304.)

¹⁷⁹ 226 mm vs. 235 mm, see Appendix III for further details.

¹⁸⁰ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 96. Maunder (1998:183) observes that in 1789, the Viennese builder Friedrich Lempp announced that he made oboes with up to three *Mutationen*, the German term for alternate top joints. Several oboes by the Italian maker Carlo Palanca also have three alternate top joints.

¹⁸¹ Stefaan Verdegem, ‘Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,’ *The Galpin Society Journal* (Volume 61, 2008), 208.

It would appear that the tuning slide was not applied to French oboes until 1877, and no simple-system models have been found with this mechanism.¹⁸²

Compounding the three factors described above was the player's own *embouchure*. In this context, I use the 'embouchure' not only to describe the way in which an oboist applies the reed to their lips, but I also include highly individual parameters such as the use of air pressure, playing angle, and even physiognomy. Indeed, since physical factors (including a person's lung capacity, thoracic and oral cavities, and body resonance) vary significantly from one player to the next, Haynes could observe that:

on hautboys and bassoons, there are basic obstacles to determining original pitch. First, the reed is missing (no original reeds from before about 1780 are known) [...] Second, on the same hautboy and reed set-up, scales can be easily influenced by embouchure to accommodate pitch levels as much as 40 cents apart. [...] Some hautboys that are normally played at A-1 [415 Hz] can be convincingly played by the same player $\frac{1}{4}$ -step higher and $\frac{1}{2}$ -step lower. [...] Surviving original hautboys are made in various lengths, and while there is some correspondence between length and pitch, other factors (the size of tone holes, for instance, and the type of reed being used) make a direct connection between dimensions and pitch difficult to establish. [...] Hautboys did not begin to use alternate joints regularly until after the mid-18th century. This is probably because so much more could be done to change pitch with the reed setup.¹⁸³

¹⁸² In 1877, Etienne Raymond patented a '*tube à coulisse mobile*' made of two overlapping metallic sheaths. See Michel Gérard, *Le hautbois : Histoire et évolution* (Paris: Delatour, 2015), 92-93.

¹⁸³ Bruce Haynes, *A History of Performing Pitch: The Story of "A"* (Lanham, MD: Scarecrow Press, 2002), 27.

4.2. MY OPTIMAL PITCH ON THE ADLER OBOE

Within a certain radius, oboes such as the Adler model can move fluidly between a range of different pitch levels. To demonstrate this, I have filmed an excerpt from Berlioz's *Benvenuto Cellini* (1838) at four different pitches ([1](#), [2](#), [3](#), [4](#)). The same reed was used throughout, and a pitch variance of 15 Hz was achieved only by adjusting the *exposed staple length*.¹⁸⁴ A much greater variance could have been achieved using a selection of different reeds with incrementally modified dimensions.

Ex. 4.1. Berlioz: Overture to *Benvenuto Cellini* (1838) - oboe solo, bb 23 - 41

Likewise, in the following [video](#) of the third movement from Berlioz's *Symphonie Fantastique*,¹⁸⁵ the famous oboe solo from the *Scène aux champs*¹⁸⁶ is first performed at 430 Hz, then at 420 Hz. Again, both excerpts were performed using the exact same set-up (the reed was only pulled out in the second passage, ERL 19 mm vs. 25 mm).

Ex. 4.2. Berlioz: *Symphonie Fantastique* (1830) - iii. *Scène aux champs* - oboe solo, bb 1 - 20

¹⁸⁴ Each video demonstrates an incremental increase of 5 Hz and covers 415, 420, 425 and 430 Hz respectively.

¹⁸⁵ Premiered in 1830 by the *Société des concerts du conservatoire* under Habeneck.

¹⁸⁶ As Burgess notes, in this celebrated solo, “the artist-narrator finds himself in the fields, the witness of a dialogue between two shepherds, one playing English horn, the other oboe. The English horn positioned in the orchestra represents the artist, and the off-stage oboe, his beloved.”

Geoffrey Burgess, ‘The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature,’ *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. Utrecht 1994, ed. David Lasocki. (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994), 105.

While both interpretations are plausible, the first at 430 Hz is more convincing: interval leaps of a fifth between C² and G² are better in tune at the higher pitch, as pulling the reed too far out can compromise voicing between large intervals (as observed by de la Fage earlier on). On this, Verdegem notes that “No [woodwind] instrument can be lengthened or shortened within a given tuning margin and remain as perfectly in-tune in all lengths. Adjustment [...] inevitably results in different proportions within the instrument’s bore, changing the intonation of the intervals.”¹⁸⁷ Experimenting with an original model by Christophe Delusse (c.1780), Geoffrey Burgess has drawn similar conclusions:

My own experience of playing a Delusse oboe similar to Vogt’s four-keyed instrument over a period of years has shown that such an instrument is playable over a range of pitches from A=420-430Hz within which intonation remains acceptable. Michel Piguet [former baroque oboe instructor at Basel’s Schola Cantorum], who had much experience playing the same instrument, reported that it functioned well 5Hz higher than the upper limit of my range.¹⁸⁸

The excerpts above demonstrate that the Adler oboe can convincingly be played at a variety of early nineteenth-century Parisian pitches. While this may be the case, from personal interaction with the instrument over the past nine years, I have found it to play optimally between 425 and 428 Hz, and it is within this bracket that I have chosen to record the adjacent creative portfolio. While the term ‘optimal’ is by definition subjective, I use it here to describe a solution that provides (a) maximum physical comfort while playing; (b) voicing that requires minimal embouchure adjustment (related to the preceding); and (c) tone quality that I consider aesthetically pleasing. 425-428 Hz is only slightly below the modern-day standard of 430 Hz, but does sit well below the pitch at which one would expect the Adler to play optimally (437-441 Hz, the Parisian pitches in use when the oboe was built). Pitches ranging from 423 to 428 Hz were recorded in Paris in the 1820s, as evidenced by several surviving tuning forks.¹⁸⁹ How, then, does one explain that an instrument presumably made c.1840 plays best at a pitch standard used twenty years earlier?

Several hypotheses are plausible. In Chapter III, we concluded that the Adler is remarkably long compared to contemporary models, and that its acoustic length (325.5 mm) is virtually identical

¹⁸⁷ Stefaan Verdegem, ‘Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,’ *The Galpin Society Journal* (Volume 61, 2008), 208.

¹⁸⁸ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 172.

¹⁸⁹ Nicolas Meeùs, “Le diapason,” *Organologie, Cours de DEUG, CNED, Institut de Vanves, 2003-2004; 2e édition, 2004-2005. Organologie générale, cours fait en Sorbonne, 2003-2011* (unpublished), 55. For example, 428 Hz was Fischer’s measurement in 1823 at the *Opéra Comique*; 426 Hz was recorded at the *Opéra de Paris* in 1824; 424 Hz was documented in 1823 at the *Théâtre-Italien*, a year before Rossini’s arrival. As for the *Théâtre Feydeau*, Montal (1865, quoting Lissajous 1855) records 427.5 Hz, as sampled by Scheibler in 1823.

to that of seven late-classical French models (326.35 mm) by Delusse and Prudent (all of which predate 1789, the year Delusse died). We also noted that the pitch level of these earlier French originals is around 420 Hz,¹⁹⁰ which suggests that the Adler may also be able to play that low. Furthermore, we concluded that the Adler's top joint is longer than all three *corps de rechange* of the Delusse oboe played by Vogt up until 1824. Vogt used this instrument to perform at different Parisian theatres during the first quarter of the nineteenth century, when pitch was unstable, and he used its multiple joints to circumvent these discrepancies. When Vogt was appointed *hautbois-solo* at the *Opéra* in 1812, the company's pitch standard was between 425 and 427 Hz,¹⁹¹ and to perform at this level he ostensibly used the longest of the three *corps*.¹⁹² By 1795, the Conservatoire (where Vogt was appointed adjunct professor in 1809) had adopted a higher pitch of around 434 Hz, known as *ton d'orchestre*, and to perform at this level Vogt likely used the shortest of the three *corps*.¹⁹³ Burgess notes that "Delusse made his *corps de rechange* approximately 5 Hz apart in pitch,"¹⁹⁴ allowing Vogt to easily navigate a gap of 10-15 Hz.¹⁹⁵ In 1825, he acquired a new seven-keyed Delusse oboe,¹⁹⁶ which Burgess notes must have played around 425 Hz, "to match the pitch level used by the Philharmonic Society in London where he played [as an invited guest] in 1825."¹⁹⁷ As seen in Appendix III, the physical proportions of this seven-keyed model are very similar to the Adler (both top joints are nearly the same length). Therefore, the Adler's acoustic length may be accountable for its comparatively low pitch. From de la Fage, we know that certain makers intentionally pitched their instruments slightly lower for acoustic reasons:

*on occasion, instrument builders make certain adjustments to their instruments so that they sound optimal. As such, pianos by Erard are always tuned a bit lower than those by Pleyel.*¹⁹⁸

¹⁹⁰ Only one instrument, which is much longer (the Prudent ex. Ecochard), has a lower pitch of 415/418 Hz.

¹⁹¹ Burgess (2003:50) estimates the former, whereas de la Fage (1859) gives the latter.

¹⁹² This top joint is still 6 mm shorter than the Adler's: Vogt's head joint measures 235 mm, the Adler's 241 mm.

¹⁹³ Burgess (2003:50) notes that by 1823, according to Delezenne, pitch at the *Opéra* had risen to 432 Hz, that is, nearly the same as *ton d'orchestre*.

¹⁹⁴ Geoffrey Burgess, *"The Premier Oboist of Europe": A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 50.

¹⁹⁵ Even so, when pitch at the *Opéra* suddenly dropped to c.413 Hz in 1824, following protests by the company's vocal soloists led by its prima donna Alexandrine-Caroline Branchu, Vogt likely switched to a new oboe by Triebert, purchased by the *Opéra*'s administration.

¹⁹⁶ Housed in Paris' *Musée de la musique*, see page 45 for a photograph of this instrument.

¹⁹⁷ Geoffrey Burgess, *"The Premier Oboist of Europe": A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 51. It is safe to surmise that Vogt would have used his seven-keyed Delusse to perform at the *Opéra* until his retirement in 1834. Because 436 Hz was the pitch level recorded at the *Opéra* in 1830 by Drouet, Vogt would therefore have been able to use the instrument for a range of 11 Hz, between 425 and 436 Hz.

¹⁹⁸ Adrien de la Fage, *De l'unité tonique et de la fixation d'un diapason universel* (Paris: Dentu, 1859), 56: "Quelquefois [les facteurs d'instruments] modifient par la suite de considérations particulières dont le but

Some of Delusse's oboes were played substantially lower, since a "tuning fork owned by Pascal Taskin dated 1783 and documented as being tuned to Sallantin's [Delusse] oboe gives the pitch of $A=409\text{Hz}$."¹⁹⁹ That oboes by the same maker could convincingly play between 409 and 436 Hz speaks volumes of the instrument's inherent pitch flexibility.²⁰⁰

Another more plausible explanation for me producing a lower pitch on the Adler oboe is that my own embouchure, which has grown accustomed to playing on looser, 'baroque' style reeds, may be freer than the type of embouchure used by French oboists in the early nineteenth century. As Haynes observed in the earlier citation, the same oboe, reed and ESL can be played 40 cents higher or lower (over a half-step) *by the same player* using the exact same set-up. In addition, my 'optimal Adler reed', which is slightly wider and scraped further back than those recommended by Brod, may also be accountable for my lower pitch (I have provided a detailed description of this reed style in Chapter VII).²⁰¹ Over the past nine years, I have carried out dozens of experiments with different reed styles, and have reached the conclusion that 425-428 Hz is the Adler's optimal pitch *for me*. Because of the symbiotic 'oboist/reed/oboe' unit described earlier on, it has been challenging to dissociate one component from the other. Even so, in order to ascertain whether my reeds were solely responsible for the Adler's low pitch, I carried out an experiment using my 'optimal Adler reed' on the oboe by Jean-Louis Buffet and obtained a pitch level of 438 Hz, a full 10 Hz higher than on the Adler. This has proven to me that the Adler's physical and acoustic properties are at least partially responsible for its lower pitch.²⁰²

Another parameter that has led me to conclude 425-428 Hz as the Adler's optimal pitch is the *exposed staple length* (ESL). We concluded above that historically, a mean ESL of 24.75 mm was used by oboists between roughly 1815 and 1855. I have found that an ESL of 24 mm works best on the Adler oboe to provide optimal tone, voicing, and comfort in playing, and incidentally corresponds to Brod's ESL as shown in the diagrams above. Haynes observes that the ESL (which he calls TEL, or 'total exposed length'):

est de mettre leurs instruments dans de meilleures conditions de sonorité. Ainsi les piano Erard sont toujours un peu plus bas que les pianos Pleyel."

¹⁹⁹ Geoffrey Burgess, *"The Premier Oboist of Europe": A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 50.

²⁰⁰ 436 Hz was the pitch level recorded at the *Opéra* in 1830 by Drouet, four years before Vogt retired from the company.

²⁰¹ More perplexing still is that I obtain a pitch of 428 Hz on the Adler using 42 mm staples, whereas Brod recommended using longer 47 mm staples. Using Brod's staples lowers the pitch on the Adler even further, and yields a pitch closer to 420 Hz, a full 20 Hz lower than the 441 Hz recorded at the Paris Opera in 1839, the year of Brod's demise.

²⁰² The Adler's top joint is 11 mm longer than the Buffet, and its acoustic length 1.3 mm longer.

affects the pitch relation between the high and low registers. As it gets longer, the high notes become lower in relation to the low notes. As Quantz observed [...], the octaves expand as the reed is shortened and contract as it is lengthened. [...] the TEL [also] determines the general pitch. But it is also controlled by cane length. The length of the cane has a much greater effect on pitch than the length of the staple.²⁰³

Adjusting the ESL (i.e. pulling the reed out or pushing it further into the well) was similar to adjusting the tuning slide on an oboe, and Verdegem notes that early nineteenth-century oboists were well aware of the limitations of this practice. In 1821, the *Allgemeine Musikalische Zeitung* advertised Koch's tuning slide:

[Koch] has fitted a tuning slide ['Zug'] to the oboe, whereby the instrument can be tuned a semitone higher or lower, yet without harming the relation between the notes. Despite many attempts by outstanding instrument makers, none has yet achieved this result, apart from Mr Koch. Although the instrument has long been fitted with a tuning slide, until the present this has always been of a nature that, even with the slightest adjustment, the instrument became so out of tune as to be rendered unusable.²⁰⁴

While in 1859 de la Fage could claim that it was effortless for oboists to simply 'pull out' or 'push in' to cope with fluctuations in pitch (as we have seen earlier), in 1833 Fétis noted that there was a real limit as to how far they could go:

When oboes and clarinets warm up and rise in pitch, the artists who play them have no other means of adjusting than by slightly pulling out the various joints; but this process is fatal for the voicing of intervals, since the proportions which must exist between the tone holes to obtain accurate intonation are thereby distorted.²⁰⁵

Indeed, I have found that forcing the reed into the well of the Adler beyond an ESL of 20 mm noticeably distorts the relationship between intervals, octaves in particular.

Before closing this chapter, let us consider two final possibilities which, although highly suspect, could hypothetically explain why the Adler oboe plays lower than one would anticipate. The first is the unlikely possibility that the Adler oboe in fact dates from an earlier period and that its keywork was added *post factum*. We know that Guillaume Adler opened his Parisian workshop in 1808. It is therefore plausible that the oboe was built in the 1820s, at a period when several

²⁰³ Bruce Haynes, 'A Reconstruction of Talbot's Hautboy Reed,' *The Galpin Society Journal* (April 2000), 81-82.

²⁰⁴ Stefaan Verdegem, 'Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,' *The Galpin Society Journal* (Volume 61, 2008), 208-209, quoting *Allgemeine Musikalische Zeitung mit besonderer Rücksicht auf den Oesterreichischen Kaiserstaat* V/69 (1821), 551-2.

²⁰⁵ François-Joseph Fétis, 'De la nécessité d'un diapason fixe,' *Revue musicale* (21 Dec. 1833), 386: "Lorsque les hautbois et les clarinettes s'échauffent et montent, les artistes qui les jouent n'ont d'autre moyen de se maintenir au diapason donné que de tirer un peu les pièces de leur emboîtement ; mais ce procédé est funeste à la justesse relative des intervalles, car les proportions qui doivent exister entre les trous pour obtenir cette justesse se trouvent rompues."

Parisian orchestras tuned to c.425 Hz. While there is no way to verify an earlier construction date, because all of the Adler's keywork is homogenous, it seems unlikely that keys were subsequently added to modernise its mechanism. Another possible though improbable explanation is that the Adler may originally have been equipped with alternate *corps de rechange*. I have dismissed this option since, as seen [here](#), the original case with which the instrument was supplied does not provide space for multiple top joints.

In conclusion, my decision to play the Adler oboe at 425/428 Hz may not be historically 'accurate,' and may therefore be regarded as another example of Butt's 'selective use of historical evidence.' Nonetheless, the instrument *can* be made to play at 430 Hz or even higher²⁰⁶ to function in contemporary HP orchestral settings, and I have previously used it at this pitch in several commercial recordings. Even so, the resulting physical discomfort has led me to view the instrument as cumbersome in professional orchestral settings, and since 2017 I have chosen to use the Adler primarily for chamber music, which allows for more freedom and flexibility with pitch. An example of this can be seen in the following [video](#) of Georg Druschetzky's oboe quartet in G minor (c.1810), performed at 428 Hz.

²⁰⁶ This can be achieved by using shorter, and incidentally ahistorical, staples; a shorter, ahistorical ESL, such as 19 mm instead of 24 mm; narrower reeds with a 7 mm tip as recommended by Brod; or a combination of these. I have, nonetheless, found 435 Hz to be the upper limit for this instrument.

5. PERFORMANCE STYLE & TECHNIQUE

This chapter will examine a selection of nineteenth-century performance techniques applicable to the Adler oboe. After a brief synopsis of each of these, I will relate my personal experience with the technique and explain how and why I have chosen – or not – to incorporate it into my own practice. These techniques, gathered from nineteenth-century didactic sources, are both interpretive (such as phrasing, vibrato and portamento) and technical (intonation, fingerings), but because the field of performance protocol is so complex and vast, certain practices that have been extensively surveyed by other authors will not be addressed here. These include broader, less oboe-centric issues such as articulation, tempo modification and rubato, and extempore embellishments. Likewise, orchestration practices – for example, the once-common but now extinct tradition of doubling wind sections in performances of symphonic works by Beethoven and Berlioz – will not be taken into account in this section.²⁰⁷

Earlier on, we observed that current HP culture, whether qualified as ‘insouciant’ and ‘opportunistic’ or simply timely and adaptable, has come to regard historical evidence as a set of guidelines from which the performer can selectively pick and choose. Deciding which practices we reappropriate from primary sources and which we choose not to is of course a highly personal and constantly evolving process, and one that repeatedly brings the HP musician face-to-face with the conundrum of historical fidelity versus modern acceptability. When making these decisions, let us not forget that the insouciant stance of today’s HP performer to ‘do what we like’ is nothing novel – already a century ago, an unapologetic Wanda Landowska stated that she never “tried to reproduce exactly what the old masters did. Instead, I study, I scrutinise, I love, and I recreate [...] I am sure that what I am doing in regard to sonority, registration etc., is very far from the historical truth.”²⁰⁸

As mentioned in the introduction, as a period oboist evolving in today’s ‘postmodern’ HP environment, I have been faced with many contradictions when attempting to reconcile historical evidence with professional practice, and the elaboration of this thesis has sensitised me to exactly which compromises I have been willing to make in my own artistic practice. Like my colleagues, I have had to weigh the gains and trade-offs of numerous practical and stylistic choices, integrating certain historical protocols into my own practice while scrupulously avoiding others for being too

²⁰⁷ For a comprehensive study of these practices, see Clive Brown’s *Classical & Romantic Performance Practice 1750-1900* (London: Oxford University Press, 1999).

²⁰⁸ Wanda Landowska, *La musique ancienne* (Paris: Mercure de France, 1909), translated as *Music of the Past* by Denise Restout & Robert Hawkins as *Landowska On Music* (London: Secker & Warburg, 1964), 355-356.

radical to find acceptance in a saturated and highly competitive professional arena. Working and maturing in this environment, my aim as a performer has not been to ‘mummify’ and rehabilitate every performance technique of days gone by, many of which are irreconcilable with twenty-first century expectations. Neither has my goal been to change the way we listen to ‘old’ music (which, in any case, would be unachievable). Rather, my objective as a performer has been rather pragmatic: to achieve professionally viable results.

Landowska’s *awareness* that what she was doing was “very far from the historical truth” is significant, since as seen in our survey of historical oboists, a key learning that emerged from the interviews is that many participants are precisely *unaware* of the historical practices detailed in this chapter, especially with regards to portamento, vibrato, ‘expressive’ intonation, and (a)historical fingerings. By extension, they are also unaware that they, too, are “very far from the historical truth.” Let me clear I was just as unsuspecting of many of these techniques before undertaking this study. That this is so would suggest that numerous stylistic nineteenth-century protocols are far from becoming reintegrated into current practice – hardly surprising seeing as how the HP movement’s foray into the nineteenth century, while no longer in its infancy, has somewhat of a thirty-year lag behind eighteenth-century HP. Indeed, as Lawson observes, many of these “issues [have been] long since relegated to the periphery of performance practice.”²⁰⁹ But before continuing any further, let us not forget that an orchestral musician from the mid-twentieth century would no doubt be astonished to learn that not far in the future, it would become second nature for musicians trained in eighteenth-century performance practice to begin trills on the upper note, play leading tones lower in meantone temperament, and perform the French dances of Lully with *notes inégales*.

²⁰⁹ Colin Lawson, *The Early Clarinet: A Practical Guide* (Cambridge: Cambridge University Press, 2000), 55.

5.1. SOURCES

The influx of woodwind tutors in early nineteenth-century France mirrors the rise of the Paris Conservatoire in 1795. Soulier has shown how the earliest Conservatoire students were the first in history “not to be the nephew, son or disciple of their master.”²¹⁰ In the wake of the Revolution, musical tuition, formerly handed down from one generation to the next to those born into a community of artisan-musicians, became democratised and accessible to aspiring students with non-musical backgrounds, who, far from their provincial homelands, could receive uniform training based on official methods in Paris.²¹¹ And whereas the aim of earlier, eighteenth-century tutors was to advise well-to-do amateurs (sometimes in surprisingly vague terms), many published at the dawn of the following century aimed to produce a highly-skilled regiment of functional musicians required to fill the ranks of the burgeoning opera houses in the French capital. Burgess observes that these tutors were required to keep abreast of novel playing techniques that resulted from rapid changes in woodwind manufacture, and that because “Much instructional material was written with an eye to training players how to adapt to the new technology, [...] they thus played a role in the promulgation of instrument design.”²¹²

While the bulk of historical evidence in this section has been excavated from French oboe treatises from the first half of the nineteenth century, focusing exclusively on performance issues specific to a single instrument runs the risk of creating a one-sided view with no consideration of the context in which they evolved, and I have readily consulted violin, flute, clarinet, horn and bassoon tutors to gain insight into how some of these techniques were executed on other instruments. Indeed, it has been necessary to consult treatises for other instruments due to the fact that many nineteenth-century French oboe tutors continued to be published for the private training of amateurs and do not adequately address specialised performance techniques required by high-level professionals²¹³ (reed-making chief among them). An exception to this rule is the highly explicit *Méthode* of Henri Brod (part I published in 1826, part II in 1830), and because the Adler oboe corresponds nearly exactly to the instrument depicted in this work,²¹⁴ Brod’s tutor makes an ideal starting point for experimentation in performance techniques on the Adler.

A chronological list of the treatises consulted to elaborate this chapter are provided below:

²¹⁰ Lola Soulier, “Le hautbois en France à la fin du XVIIIe siècle. Étude et mise en pratique de la Méthode Raisonnée pour le Haut-bois de Joseph-François Garnier” (Master’s thesis, Sorbonne Université, 2019), 6.

²¹¹ A prime example of this new type of student was Hector Berlioz.

²¹² Geoffrey Burgess, *Pedagogic Material for the Oboe from the Nineteenth Century: A Bibliography*, in *Celebrating Double Reeds: A Festschrift for William Waterhouse and Philip Bate*, ed. T. B. Ewell (Baltimore, MD: IDRS, 2009), 3.

²¹³ For example, those by Kastner, Miller and Raoulx.

²¹⁴ The two instruments are identical apart from the presence of an octave key on the Adler model.

Author	Year	Title	Publisher
Quantz, Johann Joachim	1752	<i>Versuch einer Anweisung die Flöte traversiere zu spielen</i>	Berlin: Voss
Fischer, Johann Christian	c.1772	<i>New and Complete Instructions for the Oboe or Hoboy</i>	London: Cahusac
Minguet y Irol, Pablo	1774	<i>Escala...del Obue in Reglas y Advertencias Generales, 2nd ed.</i>	Madrid
Gunn, John	c.1793	<i>The Art of Playing the German Flute</i>	London: Birchall
Vanderhagen, Armand	c.1798	<i>Méthode nouvelle et raisonnée pour le hautbois</i>	Paris: Boyer
Tromlitz, Johann	1800	<i>Über die Flöten mit mehrern Klappen</i>	Leipzig: Adam Friedrich Böhme
Garnier, Joseph-François	c.1802	<i>Méthode raisonnée pour le hautbois</i>	Paris: Pleyel
Lefèvre, Jean-Xavier	1802	<i>Méthode de clarinette</i>	Paris: Imprimerie du Conservatoire
Ozi, Etienne	1802/3	<i>Nouvelle méthode de basson</i>	Paris: Imprimerie du Conservatoire
Baillot, Pierre	1802/3	<i>Méthode de violon par MM. Baillot, Rode et Kreutzer, rédigée par Baillot</i>	Paris: Imprimerie du Conservatoire
Hugot, Antoine & Wunderlich, Johann Georg	1804	<i>Méthode de flûte du Conservatoire</i>	Paris: Imprimerie du Conservatoire
Corri, Domenico	1810	<i>The Singer's Preceptor</i>	London: Chappell
Fröhlich, Joseph	1810	<i>Vollständige Theoretische-Praktische Musikschule</i>	Bonn: Simrock
Chalon, Frédéric	c.1815	<i>Méthode pour le cor anglais ou hautbois.</i>	Paris: Imbault
Vogt, Gustave	c.1816	<i>Méthode de hautbois</i>	Unpublished (Ms: F-Pn Ci.50)
Müller, Iwan	1821	<i>Méthode pour la nouvelle clarinette & clarinette-alto suivie de quelques observations à l'usage des facteurs de clarinettes.</i>	Paris: Gambaro
Brod, Henri	1826/30	<i>Grande méthode de hautbois</i>	Paris: Veuve Dufaut et Dubois
Sellner, Joseph	1827	<i>Méthode pour le hautbois</i>	Paris: Richault
Drouët, Louis	1827	<i>Méthode pour la Flute</i>	Paris: Pleyel
Vény, Louis-Auguste	1828	<i>Méthode abrégée pour le hautbois</i>	Paris: Pleyel
Walckiers, Eugène	1829	<i>Méthode de Flûte, op. 30.</i>	Paris: the author

Spohr, Louis	1832	<i>Violinschule</i>	Vienna: Haslinger
Baillot, Pierre	1834	<i>L'Art du violon.</i>	Paris: Imprimerie du Conservatoire
Tulou, Jean-Louis	1835	<i>Méthode de flûte, op. 100</i>	Paris: Schonenberger
Berr, Frédéric	1836	<i>Traité complet de la clarinette à quatorze clefs</i>	Paris: Meissonnier
Nathan, Isaac	1836	<i>Musurgia Vocalis</i>	London, Fentum
Coche, Victor	1838	<i>Méthode pour servir à l'enseignement de la nouvelle Flûte Inventée par Gordon</i>	Paris: Schonenberger
Habeneck, François	c.1840	<i>Méthode théorique et pratique de violon</i>	Paris: Canaux
de Raoulx, Maurice	1841	<i>Méthode de hautbois</i>	Paris: Naudot
Miller	1843	<i>Méthode de hautbois</i>	Paris: Meissonnier
Berlioz, Hector	1844	<i>Grand traité d'instrumentation et d'orchestration modernes</i>	Paris: Schonenberg
Kastner, Jean-Georges	1844	<i>Méthode élémentaire pour le hautbois</i>	Paris: Troupenas
Klosé, Hyacinth	1847	<i>Méthode pour servir à l'enseignement de la clarinette</i>	Paris: Gerard
Jancourt, Eugène	1847	<i>Méthode théorique et pratique pour le basson</i>	Paris: Richault
Barret, Apollon Marie-Rose	1850	<i>A Complete Method for the Oboe</i>	London: Jullien
Clinton, John	1846	<i>A School or Practical Instruction Book for the Boehm Flute</i>	London: Cramer, Beale & Co.
Corret, Emile	1854	<i>Tablature générale du hautbois à 12 clefs</i>	Paris: Chabal
De Bériot, Charles- Auguste	1857	<i>Méthode de violon divisée en 3 parties</i>	Paris: the author
Koehlin, Charles	1954	<i>Traité de l'orchestration</i>	Paris: Eschig

Table 5.1. Primary Didactic Sources

Other treatises that have been examined include the flute tutors of Hugot & Wunderlich (1804), Walckiers (1829), and Tulou (1835), and although he was not French, the two flute methods of Tromlitz (1796 and 1800) have also been consulted as they describe the origin of several techniques later developed in French sources. The clarinet tutors Berr (1836) and Klosé (1843) are especially valuable as they explicitly address many of the period's techniques that may appear in contradiction to modern-day practice, namely, the use of high leading tones in 'expressive' intonation. Nearly an exact contemporary of Brod (1799-1839), Frédéric Berr (1794-1838) was

appointed *clarinette-solo* in the *Théâtre-Italien* in 1823, where the two musicians worked together under Rossini. An earlier clarinet treatise, that by Lefèvre (1802), belongs to the previous generation of tutors commissioned specifically for the fledgling Conservatoire and, much like the *Méthode raisonnée pour le Haut-bois* by Garnier (c.1802) and Ozi's bassoon tutor (c.1802), is significantly less eloquent on performance style. These three manuals have, nonetheless, elucidated several performance issues and provided additional testimony. Close readings of the violin tutors of Baillot, Rode and Kreutzer (1802), Spohr (1832), Habeneck (c.1840), and Charles de Bériot (1857) have been useful in understanding matters of style. Of great interest to this study is Eugène Jancourt's *Méthode théorique et pratique pour le basson* (1847), which provides exceedingly rare information on vibrato and which incidentally has not been discussed in other scholarly publications.

It should be borne in mind that, while these resources are of great value to the performer seeking to emulate the style of the period, many authors have cautioned against the blind and slavish application of reclaimed techniques. Clive Brown has noted that recapturing historical practices is a highly speculative activity, and warns that:

the very nature of musical performance has always encouraged diversity and variety of interpretation [and] in most cases the effect envisaged by a composer or theorist can only be guessed at. [...] [T]he gap between documentary evidence [...] and a reliable aural conception of how musicians of the period might have made the music sound is very difficult to bridge. It is precisely the finer nuances of performance, which are so little susceptible to verbal explanation, that make all the difference between one style of performance and another.²¹⁵

In the same vein, Woodfield has observed that:

the existence of a published tradition of prescriptive writing [...] tells us nothing about whether such advice was actually followed. At times, the frequency with which a prescription was repeated, and the extremity with which it was argued, seem to point to the conclusion that it was *not* widely adopted.²¹⁶

In the elaboration of this chapter, I have also consulted several secondary sources. The practices of early nineteenth-century woodwind vibrato, portamento, and temperament, especially, have been subjected to very little scholarly research to date, and I have found the writings of Bania, Pustlauk, Lawson, Haynes and Burgess to be especially useful in elucidating these more enigmatic issues.

²¹⁵ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (London: Oxford University Press, 1999), 2.

²¹⁶ Ian Woodfield, *Music of the Raj* (Oxford: Oxford University Press, 2000), xi. Italics are mine.

5.2. HENRI BROD

Before embarking on an in-depth examination of the performance techniques laid out in Brod's *Méthode*, it will be useful here to provide a brief overview of its author, who deftly combined the roles of performer, builder and composer.²¹⁷ Of Protestant Alsatian origin, Henri Brod (1799-1839) is a canonical figure in the history of the oboe, and in addition to contributing greatly to the instrument's evolution and design, he bequeathed a large corpus of sonically rewarding chamber works to its repertoire.²¹⁸

After studying with Gustave Vogt at the Conservatoire de Paris and obtaining his *premier prix* in 1818, the following year, at the age of 20, Brod was named *hautbois titulaire* at the *Opéra de Paris*, initially playing second to his teacher until being promoted to the principal chair when Vogt retired in 1834. Between 1834 and his untimely death in 1839 at the young age of 39, Brod would have been the first oboist to perform numerous solos from staged lyrical works premiered at the *Opéra*: *La Juive* by Halévy in 1835; *Les Huguenots* by Meyerbeer in 1836; and *Benvenuto Cellini* by Berlioz in 1838, all directed by François Habeneck from the violin. In addition to performing at the *Opéra*, Brod was employed at the *Théâtre Italien* during Rossini's tenure, and was also made principal oboe in Louis XVIII's *Chapelle Royale* upon Vogt's retirement in 1830. Furthermore, as a founding member of the *Société des concerts du Conservatoire* in 1828, Brod participated in the French premières of Beethoven's and Mendelssohn's orchestral works.

Dissatisfied with the limitations of the four-keyed oboe used by Vogt, Brod turned his talents to producing instruments with his younger brother Jean-Godefroy around 1827,²¹⁹ and is survived by 24 oboes.²²⁰ Fétis revealed that Brod obtained the reamers that had belonged to the celebrated Parisian woodwind builder Christophe Delusse, so that his oboes "combined all of the finest

²¹⁷ Like Berlioz, Brod had studied composition with Antoine Reicha while attending the Conservatoire.

²¹⁸ For a comprehensive biography of Brod, see André Lardrot, 'Henri Brod : Hautboïste, luthier, inventeur, compositeur,' *La lettre du hautboïste* (Vol. 8, 2001).

²¹⁹ These instruments, with between ten and thirteen keys, are among the finest exemplars of the simple-system oboe in France. Brod's instruments are characterised by excellent intonation and response, especially in the lower register. Before building his own models, Brod was employed as an advisor for the Triebert firm by 1823, and would remain associated with them up until 1833.

²²⁰ These instruments are fully indexed by Alain Girard in a forthcoming study. Girard has identified four different phases in Brod's oboe-building career, based on the evolution of his builder's stamp. A first period of collaboration with his brother is survived by three oboes labelled '*Brod Frères*.' Jean-Godefroy was a member of the order of the Saint-Simonéens and spent 1833 in Cairo as part of a delegation sent from France to partake in the construction of the Suez Canal. When the plague broke out in Cairo in 1836, Jean-Godefroy left for St-Petersburg, where he was appointed to the court orchestra. A second period of instrument building, presumably after the departure of his brother, features the stamp 'BROD' in capital letters; a third, '*Brod*' in cursive letters; and a fourth, 'Brod' with the insignia of the *légion d'honneur*, which Henri was awarded in 1837. Jean-Godefroy Brod, who died in 1863, is mentioned in Glinka's *Mémoires* of 1887.

features without distorting the instrument's natural tone quality.²²¹ Delusse's oboes were considered exceptional, and in 1828 Vény likened their rarity and value to the violins by Amati, Guarneri and Stradivari.²²² Due to their fine craftsmanship, Girard has demonstrated that oboes continued to be sold under the name 'Brod' after Henri's demise in 1839, when production was taken over by the string luthier Jules Rémy, who had been a *contremaître* in Brod's workshop.²²³ Alongside instrument building and an active performance schedule, Brod was also a prolific composer whose large corpus, though largely neglected today, is a major constituent of the oboist's nineteenth-century repertoire and merits further attention.²²⁴ While Brod's works will be discussed in a separate chapter on repertoire, the extreme technical demands that his *fantaisies* and *morceaux de salon* make on the soloist (remote tonalities, virtuosic passagework, and long phrases that offer little chance to breathe) offer a glimpse at the virtuosity of Brod the performer at the height of his career. And yet despite his technical prowess, it was for his sweet timbre that Brod was especially renowned, and enraptured acclaim of his warm tone that could "pacify a tigress" abounded in the musical press.²²⁵ The following review from 1835 is typical:

*A melting tone in soft passages and the sustained singing of the instrument is the prevailing side of this soloist, who also proved to be very expert and tasteful in his variations.*²²⁶

Fétis provides further testimony of Brod's mellow timbre, claiming it was softer and sweeter than that of his teacher Vogt:

²²¹ François-Joseph Fétis, *Biographie Universelle des Musiciens et biographie générale de la musique*, 2nd ed., Tome I (Paris: Librairie de Firmin-Didot et Cie., 1883), 79: "Dans les derniers temps, il était devenu possesseur des calibres de perce du hautbois du célèbre facteur d'instruments Delusse, considéré comme les meilleurs et les mieux calculés par les artistes les plus habiles; en sorte que les instruments construits par Brod réunissent toutes les conditions désirables, sans altérer la qualité naturelle des sons."

²²² Louis-Auguste Vény, *Méthode abrégée pour le hautbois* (Paris: Pleyel et Cie, 1828), 15. "Le plus célèbre facteur était DELUSSE qui est mort il y a plusieurs années; ses hautbois étaient forts chers et [...] ceux de ce facteur fabriqués en petit nombre sont très estimés et encore plus rares que ne le sont aujourd'hui les fameux violons de Stradivarius, des Amati, des Guarnerius et autres."

²²³ In 1839, Brod's widow published an advertisement in *Le Temps* (27 June 1839) stating that Brod's oboes continued to be produced by Rémy. Girard has also surmised that the composer's father, Jean Henry Brod (who died in 1845), a registered luthier and organ builder, may also have taken part in this enterprise.

²²⁴ Brod's compositions include 58 works with opus numbers and many without. He also collaborated with other composers such as Jadin; transcribed chamber works by Ernst, Mozart and others; and even composed an opera, *Thésée*, in c.1826.

²²⁵ Louis Huart, *Galerie des charges et croquis de célébrités de l'époque* (Paris: Deloye, 1839): "Brod est un des musiciens les plus distingués de l'Opéra, si riche en artistes de talent. Brod sait tirer de son hautbois des sons capable d'adoucir des tigres et des tigresses, si l'on trouvait des tigresses à l'Opéra."

²²⁶ Carol Padgham Albrecht, 'Joseph Sellner Praises Henri Brod's New Gougging Machine,' *The Double Reed* (vol. 40, no. 1), 89-90. In 1835, Brod embarked on a soloist tour to Austria where he performed his own compositions including *La Savoyarde* and the *Fantaisie sur un Thème de Winter*, which are the works reviewed in the above quote by a Viennese critic.

*The sound of his oboe is sweeter, mellower and softer than that of his master [Vogt]; his manner of phrasing is elegant and graceful, and execution in quick passagework both lively and brilliant. A member of the Société des concerts du conservatoire, Mr. Brod shares the role of principal oboe there with Mr. Vogt, as he does at the Opera. In all of his performances in Paris and abroad, he has achieved the most brilliant success.*²²⁷

As soloist and chamber musician, Brod often appeared with the *Soci t  des concerts du Conservatoire*, performing his own compositions twelve times in the ten-year period between 1828 and 1838. The particularly dynamic Parisian music scene in the 1830s acted like a magnet for foreign pianists seeking fame and fortune, and during the decade Brod appeared alongside several virtuosi at concerts organised by the *Soci t *, including Chopin, Kalkbrenner and Liszt, with whom he performed Hummel’s Septet in D minor, op. 74 in 1833.

An avid innovator, Brod created many of the tools and mechanisms that oboists still use today, including the first gouging machine and shaper tip (1834), half-hole plate (before 1830),²²⁸ low B-flat key (c.1835),²²⁹ straight-bodied cor anglais ‘*moderne*’ (c.1830, which until then had been curved), and according to Berlioz, even used “rational acoustic principles” to create the first seven-pedal timpani.²³⁰ His inquisitiveness as a builder gave birth to exotica such as the baritone oboe, a fourteen-keyed basset horn, clarinets in B natural, a contrabass clarinet, and even a small organ “built on new principles.”²³¹ Brod is also known to have been proficient on the double bass, and de la Fage even reports that in the year preceding his death, Brod had begun “studying Chinese and was already making rapid progress.”²³² And although his compositions and expressive timbre may have faded from collective memory, Brod is still familiar to oboists today for his *M thode* published in two volumes (1826/1830). In addition to providing explicit

²²⁷ Fran ois-Joseph F tis, *Biographie Universelle des Musiciens et biographie g n rale de la musique*, 2nd ed. (Paris: Librairie de Firmin-Didot et Cie., 1833). (1834-1835): “*Le son qu’il tire du hautbois est plus doux, plus moelleux, et moins puissant que celui de son ma tre ; sa mani re de phraser est  l gante, gracieuse, son ex cution dans les traits, vive et brillante. Membre de la soci t  des concerts du conservatoire, M. Brod y partage avec M. Vogt, ainsi qu’  l’Op ra, la place de premier hautbois. Dans tous les concerts o  il s’est fait entendre   Paris et dans ses voyages, il a obtenu les plus brillants [sic] succ s.*”

²²⁸ Brod mentions the “*demi trou*” in Part II of his *M thode*, published 1830, although in the drawing of his oboe on Plate V, the instrument is shown without this key.

²²⁹ In Brod’s *Souvenir musical*, op. 30 (c.1835) this note appears for the first time. Brod was also reputed to have lowered the oboe’s range to A , but none of these models survive today.

²³⁰ Hector Berlioz, *Journal des d bats*, 21 July 1835: “*Puisque nous en sommes sur l’accord des timbales, je dois faire mention d’une d couverte importante dont les compositeurs sont redevables   M. Brod. Cet artiste, dont le beau talent sur le hautbois est si justement c l bre, est en outre un habile m canicien. Il a cherch    donner   l’accord des timbales une prestesse et une pr cision dont on sent tous les jours la n cessit  ; il y est parvenu au moyen de cercles plac s dans la caisse m tallique, et qu’une p dale fait mouvoir de bas en haut pour les appliquer contre la face inf rieure de la peau [...] Esp rons que la pr cieuse d couverte de M. Brod ne sera pas perdue, et que dans quinze ou vingt ans les directeurs des th  tres lyriques mettront les compositeurs et le public   m me d’en profiter.*”

²³¹ Andr  Lardrot, ‘Henri Brod : Hautbo ste, luthier, inventeur, compositeur,’ *La lettre du hautbo ste* (Vol. 8, 2001), 31-35.

²³² *Ibid.*, 27.

instructions on reed-making that will be dissected in a separate chapter, Brod's treatise describes several phrasing conventions and fingering techniques that are of particular interest to this study, and which will be examined below.

5.3. 'PAPILLOTAGE' VS. THE LONG LINE PHRASE

Historical sources

As with many authors of the period, Brod opens his *Méthode* with the quintessential praise of 'bon goût':

*The Oboe can convey a large range of nuances [that] cannot be subjected to any general rules. [...] Each performer has their own way of phrasing, guided only by good taste. There are, however, certain principles that constitute proper phrasing, although their application should by no means be viewed as general.*²³³

These 'principles,' which were generally unmarked in the score and presumably viewed as second nature to an accomplished performer of Brod's calibre, would have been necessary to explain to a student. Brod begins by identifying several conventions that apply to articulation, many of which may not strike today's performer as obvious:

*One must almost always detach the notes at the beginning of a measure [...] Notes grouped by two, three, four or six have standard articulations that must be applied unless they are marked otherwise.*²³⁴

Among these 'standard' (and therefore unmarked) articulations are paired slurs for semiquavers that move in conjunct motion or in thirds.²³⁵ Triplets should be slurred '2 + 1', whereas quick passages of four semiquavers should be slurred '3 + 1', rather than the two-slurred/two-tongued pairing more common in eighteenth-century practice. And while he identified these articulations as standard, it is with some paradox that Brod the composer filled his works with copious dynamic and articulation markings, leaving little to chance. Brod's articulation markings are not unique and follow in a long tradition of French woodwind tutors. Indeed, most of the treatises from this period, including those by Wunderlich, Ozi and Lefèvre, dedicate much ink to proper articulation.

²³³ Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1826), 9: "Le Hautbois possède une grande étendue de son: la faculté de pouvoir en diminuer progressivement la force, au point de le rendre presque inappréciable à l'oreille, cette grande diversité de nuances qui constitue la facilité avec laquelle cet instrument exprime les différentes sensations qui peut prendre la musique; ne peuvent être soumises à des règles générales, chacun a sa manière de les conduire, de les placer, et le goût seul en indique l'emploi, cependant il est certains passages, certaines phrases de musique sur lesquels on peut établir quelques principes, qu'il ne faudra cependant pas admettre comme généraux."

²³⁴ *Ibid.*, 7: "Il est à remarquer, 1°. Qu'on doit presque toujours détacher le commencement de chaque mesure, à moins qu'il en soit autrement indiqué [...] 3°. Que les notes de toute valeur, réunies par deux, trois, quatre, ou six, ont des articulations particulières et régulières qu'on doit toujours leur donner lorsqu'elles ne sont point marquées d'une manière différente."

²³⁵ *Ibid.*, 7-8. "Les notes réunies par deux, dont l'articulation ne serait pas indiquée, s'exécutent en les coulant de deux en deux."

While the above instructions are valuable, of greater interest for this study are the conventions Brod describes on phrasing. Numerous authors have written about a shift in musical phrasing that occurred at the turn of the nineteenth century, one that moved away from the smaller gestures praised by Quantz (1752) in favour of longer, directional phrases. We see evidence of this shift not only in Brod's tutor, but in several French treatises published after 1830, including those by Berr, Barret and de Bériot.

I will not repeat here what Burgess and Haynes have already concluded about this shift in musical phrasing but will resume their findings and attempt to place them in a broader context. Haynes noted that eighteenth-century phrasing, which he called the 'speaking' or 'rhetorical' phrase, was "built on thousands of these small, constantly changing gestures — a system where, as Quantz put it [...] a continual alternation of the Forte and Piano must thus be observed".²³⁶ He goes on to note that in his 1752 *Versuch*, Quantz included a written-out Adagio that "contained twenty-two [dynamic] changes in the first two bars, and continued in the same manner."²³⁷ Citing both Quantz and Leopold Mozart, Haynes demonstrates how one of the core tenets of late eighteenth-century style was that every note, even the shortest semiquaver, had its own 'hairpin' shape, and that within this shape, there was an audible beginning, middle and end that tapered to a "barely inaudible softness."²³⁸ It would appear that this type of phrasing remained in vogue into the early 1800s, and traces of its many small gestures can still be seen in Ozi's 1802 bassoon treatise:²³⁹

²³⁶ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 226.

²³⁷ *Ibid.*

²³⁸ *Ibid.*, 230. Haynes further quotes Quantz: "Each note, whether it is a quarter, eighth or sixteenth, should have its own Piano and Forte".

²³⁹ Etienne Ozi, *Nouvelle Méthode de Basson par Ozi, Membre du Conservatoire de Musique, Adoptée par le Conservatoire pour servir à l'Étude dans cet Établissement* (Paris: l'Imprimerie du Conservatoire de Musique, 'An XI', 1802/3), 12-19.

Ex. 5.1. Etienne Ozi - *Nouvelle Méthode de Basson* (1802), 12.

Nevertheless, Haynes notes that when Charles Burney heard Quantz in 1770, the English critic perceived that the flautist's playing was not in “the modern manner [...] of gradually enforcing and diminishing whole passages”²⁴⁰ which would seem to suggest that the popularity of the ‘speaking phrase’ was already waning in the last quarter of the eighteenth century, in favour of more *sostenuto* ‘long-line’ phrasing. A first indication of this shift can be seen in bar-by-bar directional phrasing based on melodic contour. Indeed, all French tutors from the first half of the nineteenth century agree that one of the basic principles of ‘proper’ phrasing was to follow the contour of the line. Wunderlich simply states that “*It is generally necessary to play all rising passages by increasing the sound, and to decrease the sound for those which fall.*”²⁴¹ Baillot echoes this, stating: “*all passages that ascend must be played by increasing the sound, and it must decrease for passages that descend.*”²⁴² The same instructions are repeated by Berr in 1836,²⁴³ and Habeneck (c.1840) likewise states: “*Every rising phrase must increase in strength; every*

²⁴⁰ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 232.

²⁴¹ Antoine Hugot & Johann Georg Wunderlich, *Méthode de flûte du Conservatoire par M.M. Hugot et Wunderlich* (Paris: Impr. du Conservatoire, 1804), 20. “*Il faut généralement faire tous les passages qui vont du grave à l’aigu en augmentant le son, et diminuer le son pour ceux qui vont de l’aigu au grave*”

²⁴² Pierre Baillot, *Méthode de violon par MM. Baillot, Rode et Kreutzer, rédigée par Baillot* (Paris, 1802), 137. “*tous les passages qui vont du grave à l’aigu doivent se faire en augmentant la force du son, [il] faut diminuer le son pour ceux qui vont de l’aigu au grave.*”

²⁴³ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 33. “*Comme règles générales on peut recommander : 1. d’exécuter les passages ascendants Crescendo, et les passages descendans Diminuendo*”

descending phrase must decrease.”²⁴⁴ Similar conclusions were being drawn east of the Rhine, and in 1810 Fröhlich revealed in his *Musikschule* that:

*With ascending passages, the sound must as a rule be gradually amplified, just as in the opposite case, the strength must decrease somewhat.*²⁴⁵



Ex. 5.2. Joseph Fröhlich - *Vollständige Theoretische-Praktische Musikschule* (1810), 67.

Increasingly, these melodic contours evolved into a broader, directional phrasing style that Brod describes in his 1825 *Méthode*:

*Generally speaking, a player should make broad nuances (that is, no more than one crescendo or decrescendo in a phrase consisting of three or four measures) rather than many small nuances, one after the other, which is not only harmful to the smaller sections but also destroys the effect of the music, and becomes what is called ‘fluttering’ [papillotage].*²⁴⁶



Ex. 5.3. Henri Brod - *Méthode pour le hautbois* (1825), 10.

It is clear that Brod specifically condemns the type of ‘rhetorical phrase’ described by Quantz and upheld by Ozi at the turn of the century. Berr (1836) shares Brod’s penchant, stating that “*When*

²⁴⁴ François Habeneck, *Méthode théorique et pratique de violon* (Paris: Canaux, c.1840), 109. “*Toute phrase montante doit aller en augmentant de force ; Toute phrase descendante doit aller en diminuant.*”

²⁴⁵ Joseph Fröhlich, *Vollständige Theoretische-Praktische Musikschule* (Bonn: Simrock, 1810), 67. “*Bey aufsteigenden Passagen müssen die Töne in der Regel allmählich verstärkt werden, So wie im umgekehrten Falle die Stärke etwas abnehmen muss.*”

²⁴⁶ Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1825), 10: “*Généralement, on doit nuancer largement c’est-à-dire ne faire plutôt qu’une nuance dans une phrase de trois ou quatre mesures, qu’une quantité de petites nuances les unes à côté des autres, lesquelles non seulement se nuisent entr’elles, mais encore détruisent l’effet de la musique et deviennent ce qu’on appelle du papillotage.*”

a dynamic is spread over three or four measures, do not spoil it with many little gestures.”²⁴⁷ He goes on to explain that “in general, broad phrases are preferable to a large quantity of smaller nuances, which undermine and blur the overall effect.”²⁴⁸



Ex. 5.4. Frédéric Berr - *Traité complet de la clarinette à quatorze clefs* (1836), 39.

The shift was neither unanimous nor was it instantaneous, and both Baillot’s *L’Art du violon* (1843) and Habeneck’s *Méthode* (c.1840) still instruct the student to swell on every held note (“*Toute note de quelque durée doit être filée*”).²⁴⁹



Ex. 5.5. Pierre Baillot, *L’Art du violon* (1843), 133.²⁵⁰

But by 1850 we see Barret condemning *papillotage* in much the same fashion as Brod and Berr.

Unless differently marked, it is a general rule that in ascending passages we should increase the tone, and decrease it in descending passages. [...] It is a great error to make a ‘nuance’ on every note. Many persons practise this exaggeration, thinking it to be expression: they deceive themselves, it is but affectation, and only shows their want of real feeling the more strongly. [...] ‘Nuances’ should be used sparingly, that is to say, it

²⁴⁷ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 39: “*Lorsque la nuance embrasse trois ou quatre mesures, il ne faut point la dénaturer par d’autres petites nuances partielles.*”

²⁴⁸ *Ibid.*, 47: “*il vaut mieux généralement nuancer largement que d’employer une quantité de petites nuances qui se nuisent entre elles, et obscurcissent l’ensemble.*”

²⁴⁹ François Habeneck, *Méthode théorique et pratique de violon* (Paris: Canaux, c.1840), 109.

²⁵⁰ Pierre Baillot, *L’Art du violon* (Paris: Imprimerie du Conservatoire, 1843), 133.

is preferable to use but one in a phrase than to destroy the good effect by frittering it away in several smaller ‘nuances.’²⁵¹



Ex. 5.6. Apollon Barret: *A Complete Method for the Oboe* (1850), 8.

By the 1850s, the ‘speaking’ phrase, inflected with minute rhetorical gestures, was well out of fashion. The Belgian violinist Charles de Bériot makes this clear in his 1857 *Méthode de violon*:

*If one makes too frequent use of these quick bow inflections, they degenerate into a style [of playing] which, from the point of view of tone colour, creates serious hindrances. The practice of swelling the sound towards the middle of each bow stroke creates an unbearable monotony which destroys all grandeur of style. The violinist must avoid using his entire palette of tone colour on a single note. Expression must be carried through an entire phrase, and to drown it in small details destroys the effect of gradation. Nuances that are too frequent and too detailed fatigue the listener.*²⁵²

Haynes notes that on the oboe, broader, directional phrasing perfectly suited the heavier reed set-up of later nineteenth-century instruments, whose players were “reluctant to interrupt the air flow or disturb their embouchures by stopping”²⁵³ to create numerous smaller gestures. He further observes that in her *Oboe Technique* (1953), Evelyn Rothwell includes what she calls ‘bulging’ in a list of ‘bad habits.’:

Beware always of the very common bad habit of making a ‘bulge’, i.e. a little < >, on each note, or over every few notes. It is a monotonous, niggling form of expression,

²⁵¹ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 7-8. Barret, who like Brod had studied with Vogt, moved from Paris to London in 1829 to take up a position at the King’s Theatre. In 1847, he was appointed principal oboe at Covent Garden, a position he kept until 1874. During this time, he also taught at the Royal Academy of Music.

²⁵² Charles de Bériot, *Méthode de violon*, 2e tome (Paris: the author, 1857), 120. “Si on faisait l’emploi trop fréquent de ces inflexions d’archet aux notes de courte durée, ce travail dégénérerait en une manière qui, du point de vue du coloris, aurait de graves inconvénients. Cette façon d’enfler le son vers le milieu de chaque coup d’archet répand sur le jeu une monotonie insoutenable qui détruit toute la largeur du style. Le violoniste doit éviter d’user son coloris sur une note seule. L’expression doit embrasser une phrase toute entière, et la noyer dans les détails de cette phrase, c’est perdre l’effet de gradation. Les nuances trop fréquentes trop détaillées fatiguent l’attention et, par cela même, manquent leur but.” De Bériot was the lover of the celebrated soprano Maria Malibran and the couple had a child together, the pianist Charles-Wilfrid de Bériot.

²⁵³ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press), 117.

*which is unmusical, and maddening to the listener. Unfortunately, it seems fatally easy for oboe players to acquire this bad habit.*²⁵⁴

²⁵⁴ *Ibid.*, 118.

Personal experience

I believe that my own approach to phrasing incorporates elements from both the ‘speaking phrase’ and the ‘long line.’ Having initially been trained as a modern oboist, I had a natural tendency to carry over the concept of broader, directional phrasing when I began studying the baroque oboe at McGill University and my historical oboe teachers Washington McClain and Bruce Haynes encouraged me to dissect these larger phrases into smaller, more rhetorical units. Bruce’s playing, especially, is full of relief and dynamic contrast, and his phrasing uses many small swells to create a highly nuanced, almost *chiaroscuro* style. And while I find his playing thrilling to listen to, in professional settings I have deliberately refrained from replicating it. Often in recording sessions, if I introduced a phrasing unit or an ornament that was ‘too over the top,’ I would be asked to ‘rein it in,’ so to speak, and I have observed a recurring trend in the HP movement that, as it becomes less ghettoised and reactionary, has moved away from these rhetorical gestures that some regard as too eclectic or exuberant. I find that this has permeated into my own practice somewhat, over time creating a more moderated approach to phrasing. Nonetheless, I like to think that in my own praxis, fragments of Bruce’s highly nuanced style remain, and I believe that in the following [recording](#) made in 2015 of Marais’ viol suites, a blend of ‘rhetorical’ and ‘long-line’ phrasing can both be heard.

The image shows a musical score for a prelude. It consists of four staves of music. The first staff is the treble clef, and the second is the bass clef. The music is in B-flat major and 3/4 time. The tempo is marked 'Lentement'. The score includes various musical notations such as slurs, ornaments, and dynamic markings like 'c' for crescendo. The piece is numbered 59.

Ex. 5.7. Marin Marais: *Prélude* from Suite in B-flat major,
Troisième Livre de Pièces de viole (Paris, 1711)

In the accompanying recording portfolio, I include a transcription (c.1830) by Gustave Vogt of a vocalise by the Italian castrato Girolamo Crescentini (1762-1846). In this example, long-line phrasing can be heard, mixed in with smaller rhetorical gestures. Burgess notes that in these études, “Vogt ‘ironed out’ the small-scale dynamic nuances on individual notes (the ‘papillotage’)

in favour of phrase units of about four bars.”²⁵⁵ Vogt was one of many composers to transcribe these vocal exercises throughout the nineteenth century, but “Vogt’s transcription is the most radical in replacing the small-scale dynamics with longer phrase units. Most of the small-scale dynamics of the original [...] are smoothed out, giving each phrase a broader sweep.”²⁵⁶

In my [performance](#) of Pixis’ 1824 *Romanze* I have tried to bring out the four-bar phrasing unit promulgated by Brod, Barret, Berr and their contemporaries. Phrases often begin *piano*, crescendo to the downbeat of the third bar, and then taper away. In the third and fourth systems, where Pixis marks *dolce*, smaller two-bar units *crescendo* as the line ascends and taper as it descends.

The image shows a page of a musical score for 'ROMANZE' by Johann Peter Pixis, Op. 63. The title 'ROMANZE.' is written in large letters at the top left. Above the first staff, it says 'HALTBOIS ou FLUTE' and 'Op. 63.'. The score is written for oboe and piano. It consists of ten staves of music. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 3/4 time signature. The music is marked with various dynamics and articulations: 'Dol.', 'pp', 'p', 'mf', 'Dim.', 'tr.', and 'ff r. repdo.' at the end. The score includes several measures with first and second endings. At the bottom of the page, the number '746.R.' is printed.

Ex. 5.8. Johann Peter Pixis: *Romanze* (1824) for oboe and piano

²⁵⁵ *Ibid.*

²⁵⁶ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 42.

5.4. KEYED VERSUS CROSS FINGERINGS

Historical sources:

Many are the authors who have likened the right-hand bow stroke of a string player to the breath and/or tonguing of a wind player. But in the same vein, a parallel can be drawn between the violinist's left-hand finger positions and the fingerings of an oboist. In both cases, the same pitch can be produced using several different fingerings, and it is at the discretion of the performer to decide which combination they use in a given context. Fingerings can therefore be seen as a highly personal expressive tool.

In 1810, Fröhlich alludes to the intimate nature of fingerings on woodwind instruments, and encourages the student to spend time experimenting until they find their own optimal configurations:

Owing to the different construction and various manners of blowing wind and reed instruments, there are no generally applicable rules of fingering. All one can do is give the usual fingerings and a critique on each note, and, at the same time, to inform the student of the various manners in which the same note can be fingered, in order to make the dark notes brighter and more sonorous, and to improve the bad ones. Consequently, one must really see to it that each player evolves the fingering for himself.²⁵⁷

Simple-system oboes such as the Adler are fully chromatic, and for several notes one can choose to use traditional 'hautboy' cross fingerings or innovative keys instead.²⁵⁸ Cross fingering can be defined as "fingering out of serial order"²⁵⁹ – in other words, a fingering that requires a closed hole or holes below an open one. Their use had been an integral part of the hautboy's technique since its creation in the 1660s, and made accidentals possible without the use of keys. In the *Danse des Nymphes* from the Gobelins tapestry atelier (Paris, c.1660), a reclining shepherd can be seen employing a cross fingering (albeit a fictitious one, as the depicted combination does not produce a real note).

²⁵⁷ Joseph Fröhlich, *Vollständige theoretisch-praktische Musikschule* (Bonn, 1810), 15. Quoted in Colin Lawson, *The Early Clarinet: A Practical Guide* (Cambridge: Cambridge University Press, 2000), 1. Translation by Lawson.

²⁵⁸ For example: F¹, F^{#1}, G^{#1}, Bb¹, F², F^{#2}, and G^{#2}.

²⁵⁹ <https://www.merriam-webster.com/dictionary/cross-fingering>, accessed 9 July 2019.



Fig. 5.1. Danse des Nymphes, Gobelins tapestry atelier (Paris, c.1660)

Compared to the veiled quality of cross fingerings, keyed fingerings tend to produce a more penetrating, overtone-rich timbre, one that incidentally projects better in an orchestral setting. It comes as no surprise, then, that there was an ongoing and heated debate throughout much of the nineteenth century as to whether the gains of adding keys to ‘simplify’ technique outweighed the losses it inflicted on tone quality. As late as 1879, the British physician Dr. W. H. Stone affirms that

*hardly any instrument, except the flute, has been so altered and modified [...] in its mechanism [...] as the oboe. [...] It has thus become by far the most elaborate and complicated of reed instruments, and it is a question whether a return to an older and simpler pattern, by lessening the weight of the machine, and the number of holes breaking the continuity of the bore, and by increasing the vibratory powers of the wooden tube, would not conduce to an improved quality of tone.*²⁶⁰

While it has been postulated many times in scholarly works that keys were added to facilitate technique, we will observe that nineteenth-century oboists found the timbral homogeneity afforded by keys, as well as their tempering capabilities, to be more advantageous than any gains in simplifying technique, and Haynes notes that the Mozart oboe concerto is “easier to play on a keyless recorder than on a conservatoire oboe”.²⁶¹ Burgess observes that around 1855 the Italian oboe virtuoso Antonino Pasculli (1842-1924), known as the ‘Paganini of the oboe’, acquired a Triebert *système 3* oboe.²⁶² In many of Pasculli’s virtuosic compositions, rapid passagework is “virtually impossible to play at speed [...] on the Conservatoire or thumb-plate system, but

²⁶⁰ Colin Lawson in *The Early Clarinet: A Practical Guide* (Cambridge: Cambridge University Press, 2000), 17, quotes this passage from *Grove’s Dictionary of Music and Musicians* (vol. 1, London, 1879).

²⁶¹ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 116.

²⁶² *Ibid.*, 156.

presents no difficulties with the cross-finger[ings]”.²⁶³ Vogt was conservative on the subject of added keys, openly criticising them in his tutor (c.1816):

*This is the place to say a word about the hautbois used now in Germany, which have more keys than ours. There is one that has as many as nine. It is claimed that the keys make passagework easier in tonalities with numerous accidentals, such as E flat..., A flat, C minor, D flat, and so on. But these advantages are strongly counterbalanced by the inconvenience that results when the keys do not hermetically seal the holes over which they are placed, an inconvenience that occurs all too often even on hautbois that have only four keys, and that gives us good reason to wonder about those with eight or nine. [...] [More keys] do not improve the tuning and can impede execution as they are placed so close to the holes that there is the constant fear that, in the endeavor of closing a hole, the player will touch one of these, interrupt the air stream, and consequently disrupt the entire technique.*²⁶⁴

But by the 1820s his opinion had changed, with Vogt moving on to an oboe with seven keys by 1824 (the instrument on page 45). While the evolution of the oboe in nineteenth-century Germany stands outside the brief of this dissertation, it is interesting to note that east of the Rhine, similar conclusions were being drawn. Wilhelm Braun (1796-1867) was Germany's leading oboist and a close contemporary of Vogt, and much like his French counterpart, he initially adopted a conservative view on added keywork. But in 1823, while stating that only four keys were essential on his 'old oboe' from 1811,²⁶⁵ Braun adds that an additional four were now desirable, bringing the total to eight:

on my older [oboe], I consider the four most necessary keys those for low C, C-sharp, E-flat, and the high-F key [i.e. the octave key]. In the lower octave, keys for F-sharp, A-flat, and B-flat are also advantageous; and I wish he [Herr Bischoff of Darmstadt]

²⁶³ *Ibid.*

²⁶⁴ Gustave Vogt, *Méthode de hautbois* (Paris: unpublished, c.1816). “*C'est ici la place de dire un mot des hautbois dont on se sert maintenant en Allemagne et qui ont un plus grand nombre de clefs que les nôtres. Il en existe qui en ont jusqu'à neuf; ces clefs ont été imaginées pour parcourir avec plus de facilité les gammes où les accidents se multiplient telles que Mib, LA♭, FA mineur, UT mineur, RÉ♭, etc. Cet avantage est trop fortement contrebalancé par l'inconvénient qui résulte des clefs en ne bouchant pas quelques fois bien hermétiquement les trous au-dessus desquels elles sont adaptées, inconvénient qui se présente assez fréquemment sur nos hautbois qui n'ont que quatre clefs, et qui à plus forte raison, doit être plus redoutable sur ceux où il s'en trouve huit à neuf. [...] Les autres ne contribuent pas au perfectionnement de la justesse, et peuvent entraver l'exécution parce qu'elles sont placées à côté des trous de l'instrument qui sont percés à des distances si rapprochées qu'il est à craindre à chaque instant qu'en voulant boucher un trou, le doigt ne touche à une de ces clefs, ne rompe alors la colonne d'air et ne détruise par conséquent tout le mécanisme.*” Translation by Geoffrey Burgess in “*The Premier Oboist of Europe*”: *A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 85. Vogt used a Delusse oboe made c.1780 with only four keys (C, C#, Eb and F#) until about 1824, at which point he switched to another instrument by Delusse fitted with seven keys and which he would continue to use until retiring in 1843.

²⁶⁵ Michel Gérard, “Du hautbois à trois clefs au hautbois à treize clefs,” (Doctoral thesis, Université des Sciences Humaines de Strasbourg, 1984).

would add them, as well as possibly a key for the low B, because the oboe thereby gains a semitone in its low range.²⁶⁶

Furthermore, it is with some fascination to read that as early as 1802, Koch reports in his *Musikalisches Lexikon* that many oboes are already equipped with six keys, including an octave key and a low F# key.²⁶⁷

In 1827, Sellner observes that the tonal strength and clarity [*énergie*] of forked fingerings for both Bb⁴ and F^{1,5} are “not completely aligned” [*n’est pas tout à fait en rapport*] with the adjacent notes, and that this “imperfection has since been corrected with the addition of keys”.²⁶⁸ Likewise, in 1830 Brod alludes to a hierarchy among fingerings, stating that:

*When acquiring a first instrument beginners can economise on the exterior; but most importantly they must get an instrument fitted with all the keys. Otherwise, having an instrument that is not in tune, they will have to humour or force certain notes up or down and will get used to poor fingerings which avoid the use of keys.*²⁶⁹

Vény echoes Sellner and Brod in his *Méthode* (1828), remarking: “The [traditional two-keyed] oboe is a defective wind instrument; it uses irrational fingerings, uneven tones, and cannot be played in all tonalities.”²⁷⁰ In an analysis of the fingering chart contained in his 1828 *Méthode*, we can see that Vény provides separate fingerings for five pairs of enharmonic equivalents, systematically prescribing the use of keys for flattened notes and cross fingerings (which tend to

²⁶⁶ Wilhelm Braun, ‘Bemerkungen über die richtige Behandlung und Blasart der Oboe,’ *Allgemeine Musikalische Zeitung* (12 March 1823), 168. Braun refers to a four-keyed instrument made for him by “Herr Bischoff in Darmstadt”, referring to the maker Johann Gottlieb Carl Bischoff (1780-1870). Original German: “...die meinige ältere, an welcher sich mir die vier nothwendigsten Klappen befinden, nämlich die untere für das tiefe c; cis, es, und oben die hohe f Klappe. Vortheilhaft sind noch die Klappen in der untern Octave für fis, as und b; und ich wünschte, dass diese von ihm hinzugefügt würden, wie allenfalls auch noch eine Klappe für das tiefe h, weil die Oboe dadurch einen halben Ton in der Tiefe an Umfang gewinnt; für andere Tone würde die Klappe von keinem weitem Nutzen seyn. Zu viele Klappen schaden offenbar dem Tone, und führen den Nachtheil herbey, dass, wenn sie nicht vollkommen gut gemacht sind, bald die eine bald die andere nicht gehörig deckt. Alle übrigen Klappen sind weit entbehrlicher, und ihr Mützen überwiegt nicht den Nachtheil den sie mit sich führen”.

²⁶⁷ Heinrich Christoph Koch, *Musikalisches Lexikon* (Frankfurt am Main: August Hermann der Jüngere, 1802), 1082. Koch states that many oboes have an octave key, as well as keys for low C, low C#, E-flat, low F# and A-flat. He observes that the low F# key on the middle joint is particularly useful since without it, the note is too flat, and that the slur key [*F-Klappe*] is useful for slurring between E¹ and E², F¹ and F², F#¹ and F#², G¹ and G², and for attacking the upper octave smoothly and softly in *piano* passages.

²⁶⁸ Joseph Sellner, *Méthode pour le hautbois, traduite de l’Allemand par Heller et revue par Fouquet, 1er hautbois du Théâtre Royal de l’Opéra Italien* (Paris: Richault, 1827), vi.

²⁶⁹ Henri Brod, *Méthode pour le Hautbois* (Paris: Schönewald, 1830), 2: “Lorsqu’il s’agit de l’acquisition d’un premier instrument les commençants pourront bien, par mesure d’économie ne point s’attacher à l’extérieur, mais, ils ne devront rien épargner pour qu’il soit bon, et pourvu surtout de toutes ses clefs; sans cette précaution ils s’exposeraient à contracter de mauvaises habitudes, ayant un instrument peu juste, ils seraient obligés de ménager ou forcer certains sons, selon qu’ils seraient trop hauts ou trop bas, et s’habitueraient à de mauvais doigts, que leur ferait l’usage des clefs.”

²⁷⁰ Louis-Auguste Vény, *Méthode abrégée pour le hautbois* (Paris: Pleyel et Cie, 1828), 30. “Le Hautbois ordinaire est un instrument à vent défectueux puisqu’il présente des doigtés bizarres, des sons inégaux et l’impossibilité de jouer dans tous les tons.”

be markedly sharp on simple-system oboes) for sharpened notes. For instance, he prefers the keyed fingering for B-flat¹ and the traditional cross fingering for A#¹. Brod did likewise, and indicates that B-flat should be cross fingered only in rapid passagework, but because the note “must be lower than A-sharp, one must humour it.”²⁷¹ The strategic use of keys to differentiate between enharmonic pairs points to the novel practice of high leading tones to produce ‘expressive’ intonation, and will be examined below. To illustrate Vény’s and Brod’s preference for keyed fingerings on flattened notes, I have used them in the following [excerpt](#) from Berlioz’s overture to *Benvenuto Cellini* (1838):

Ex. 5.9. Berlioz: Overture to *Benvenuto Cellini* (1838) - oboe solo, bb 220 - 248

Another trend that the use of keys would seem to herald was a growing desire for timbral homogeneity. Because keyed fingerings are more resonant compared to the dampened effect of cross fingerings, their timbre is acoustically more aligned to the instrument’s natural scale. In his 1836 clarinet tutor, Berr reveals that:

*Differences in timbre have been skillfully eliminated thanks to the clarinet’s fourteen-keyed mechanism; through diligent study, a talented artist can therefore remedy the instrument’s faults and achieve a sound that is always equal in all registers.*²⁷²

He then instructs the student to smooth out any gaps that may occur from using keys:

²⁷¹ Henri Brod, *Méthode pour le Hautbois* (Paris: Schonenberger, 1830), 21: “Comme le si b doit être plus bas que le la #, il faudra le ménager.” Brod also prescribes the B-flat cross fingering whenever “the finger that should use the key for the standard fingering is being used to close [another] hole.”

²⁷² Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 6: “Ces différences de timbre ont été adroitement effacées par l’habileté du mécanisme résultant de l’emploi des quatorze clés de la clarinette ; un artiste de talent peut donc par l’étude remédier aux défauts de l’instrument et arriver à obtenir un son toujours égal dans tous les registres.”

Because keyed fingerings sound brighter, it is important to adjust breath support accordingly when using them, so as not to overpower [écraser] the adjacent tones, and to try to level all the notes so that any differences in timbre are not perceived.²⁷³

²⁷³ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 7. “Comme les sons doigtés avec les clefs sortent plus éclatans, il faut ménager le souffle en les jouant, pour ne pas écraser les autres, et tâcher de lier toutes les notes afin que les différences de timbre ne soient pas senties.”

Personal experience:

In performing symphonic works by Berlioz, Schubert, Beethoven, Wilms and Weber on the Adler, I have found that the added projection provided by keyed fingerings is particularly strategic in ‘cutting through’ a dense orchestral texture. Conversely, I have not found keys to be especially useful from a technical point of view and have found that most early nineteenth-century orchestral repertoire can easily be navigated without their use. (This opinion was apparently shared by Sellner, who in 1827 stated that “*the [new] keys in no way supplant the old fingerings, with which many passages are easier to play than they are with the keys.*”²⁷⁴) For example, the compositions of Berlioz from the 1830s, which require a certain amount of chromatic dexterity, are still easily navigable on the ten-keyed Adler model. I have displayed this in two excerpts (videos [1](#) and [2](#)) from his overture to *Benvenuto Cellini* (1838). The score for the latter excerpt is identical to Ex. 5.9 on the preceding page.

Ex. 5.10. Berlioz: Overture to *Benvenuto Cellini* (1838) - oboe solo, bb 151 - 179 ([1](#))

It would appear that Vogt (c.1816) was of a like-minded opinion:

*As for orchestral parts, they are never difficult enough to necessitate resorting to these mechanical excesses. I thus don't consider this advantage [of adding keys] to be great enough to multiply the accidents that could result from it. Has it not been proven incontestably that the oboe can be played perfectly without the encumbrance of so many keys? I will mention as proof the Lebruns, Ramms, and Sallantins; will not these virtuosos always be cited as the finest models to imitate? And was their technique on this ungrateful instrument not of the highest degree of perfection and, moreover, without being familiar with the innovation here in question?*²⁷⁵

²⁷⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 116, quoting Joseph Sellner, *Méthode pour le hautbois* (Paris: Richault, 1827), 6.

²⁷⁵ Translation by Geoffrey Burgess in “*The Premier Oboist of Europe*”: *A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 53, citing Gustave Vogt, *Méthode de hautbois* (unpublished, c.1816): “*Quant aux parties d’orchestre, elles ne sont jamais d’une difficulté qui rende nécessaire ce surcroît de mécanisme.*”

Although Vogt vociferously defended the avoidance of added keywork, because he kept his position of *professeur titulaire de hautbois* at the Conservatoire up until 1853 (aged 74), he would have trained many students who played on Triebert's later mechanised models. We have proof of this from a lithograph drawing of Auguste Bruyant (1827-1900), who at his graduation in 1849 is shown holding a *système 3* or 4 model.²⁷⁶



Fig. 5.2. Auguste Bruyant

Engraving from *Manuel général de musique* (1849)²⁷⁷

Bruyant, who graduated from Vogt's class in 1849 and later became his musical executor, donated the sole manuscript copy of his teacher's unpublished *Méthode* to the *Bibliothèque du Conservatoire* in 1873. In a fascinating side-note scribbled on page 18, Bruyant comments on the seven-keyed Delusse oboe used by Vogt and that he had since acquired:

The oboe I have at home, which belonged to Monsieur Vogt, in boxwood and with silver keys, is more elaborate [than the four-keyed model shown in the Méthode]. It has three additional keys, and he even approved of the other keys we had [on our oboes] in his class [such as] the two octave keys and the left-hand E-flat key. As for the half-hole plate and the F-sharp brille mechanism, he did not approve of them, and I

²⁷⁶ It is impossible to discern which of the two is portrayed because Bruyant's left hand is covering the mechanism.

²⁷⁷ Sigismund Stern, *Manuel général de musique à l'usage de l'enseignement élémentaire du chant, des instruments et de la composition* (Paris: Brandus, 1850). Engraving by A. Collette.

*believe he was right not to, unless one is able to adjust the F-sharp which is always too high.*²⁷⁸

And while from personal experience I have found most early nineteenth-century orchestral scores technically easier on a simple-system oboe than on later mechanised instruments, a good amount of solo repertoire is also more straightforward *without* the use of keys.

Nonetheless, in June 2020, I performed several of Franz Ferling's *Études*, op. 31 (1837) on both a copy of a 9-keyed simple-system oboe by Carl Theodor Golde (c.1840) and a mechanised antique by Louis Buffet (c.1850, a 12-keyed *systeme* 3). Playing through these studies on the Golde (videos [here](#) and [here](#)), I experienced a very different 'feel', not only timbrally, but also in degree of difficulty. Because the 48 studies run the gamut of all major and minor keys up to seven sharps and flats, there is a clear turning point where the études become exponentially more difficult. I was able to play through those with up to three sharps or flats quite comfortably on the Golde, but anything beyond became awkward and increasingly precarious, and I quickly felt the need for mechanised keys.²⁷⁹ Likewise, playing through many of Brod's works for oboe and piano on the Golde or Adler, which often feature extended passages in remote keys such as G-flat major or D-flat major (for example, his *Valse* in D-flat major, op. 31), I could appreciate why makers such as Brod and Triebert sought to add keys to the instrument's mechanism so as to facilitate mobility in these extreme tonalities. Hassiotis has shown that Ferling's études were conceived to demonstrate that models such as the Golde could "play equally well in all keys, whereas [two-keyed] Classical oboes were constructed to play mainly in 'good tonalities'."²⁸⁰

²⁷⁸ Gustave Vogt, *Méthode de hautbois* (unpublished, c.1816), 19. Translation by Geoffrey Burgess. "*déjà le hautbois de Monsieur Vogt, en buis, clefs d'argent, que j'ai chez moi est plus compliqué ; il y a trois clefs de plus et il a approuvé les autres en plus que nous avions à la classe : deux clefs d'octave, la double clef de mi bémol ; quant au demi-trou et à l'anneau de fa dièse, il ne l'approuvait pas, et il avait raison selon moi, à moins qu'on arrive à modifier ce fa dièse qui est toujours trop haut.*"

²⁷⁹ For example, the left-hand E-flat key, needed to slur smoothly from D-flat (or C-sharp to D-sharp).

²⁸⁰ Kostis Hassiotis, "A critical edition of the 48 studies for oboe, op. 31 by Franz Wilhelm Ferling (1796-1874), based on original historical evidence and viewed within the context of the evolution of didactic material for oboe, with particular reference to nineteenth-century performing practices," (unpublished doctoral thesis, City University London, 2010), 8. Quoting Richard Earle, Hassiotis remarks: "A Triebert system 4 from about 1840 seems ideal for this music, in that the keys are better designed, for instance for the awkward moves for the right-hand little finger. One of the problems of these earlier oboes is that there was no connection between b' and c#': to slur these notes would mean closing the c' key at the same time as the b key, then simultaneously releasing the b key and sliding to the c#' key. [...] Sliding was easier to execute on the French instruments."

Larghetto.

N. 11.

Adagio cantabile.

N. 17.

Ex. 5.11. F. W. Ferling: *Etudes* in D minor and B-flat major for oboe solo (1837)

Videos [here](#) and [here](#)

Oboe manufacture in 1830s France had come to the ‘end of a branch,’ so to speak, and because of the increasing omnitonicity of nineteenth-century repertoire, it would appear that the technique of the simple-system oboe had been taken as far as it could go. As Holoman observes, a “sweeping change in the sound of [early nineteenth-century] orchestras resulted from improved mechanisms for the traditional instruments. These innovations had the effect of improving the abilities of the players, particularly with regard to the new spectrum of keys and the vivid melodic configurations that the progressive composers increasingly required.”²⁸¹ Presumably, these new “vivid configurations” were a motivating factor in rethinking the instrument’s mechanism, with Guillaume Triebert (1770-1847) responsible for the first phase of the oboe’s mechanisation in

²⁸¹ D. Kern Holoman, *The Cambridge History of Musical Performance* (Cambridge: Cambridge University Press, 2012), 329.

1840. In 2018, when I participated in a recording of several Offenbach operettas²⁸² from the 1860s on a Buffet *système 3* oboe, I definitely felt that a later model equipped with more keys would be advantageous to help navigate the omnitonicity of the composer's writing, which often ventured into B major and other 'hostile' tonalities. With only 12 keys, I often felt hindered when playing in keys with four or more accidentals, and could appreciate why improvements were quickly made to the *système 3*.²⁸³ And while both the *système 3* (1840) and the *système 6* (1872) are considered to be mechanised, there is in fact a rather significant gap between the two models, with Burgess noting that "in place of the long harmonic fingerings formerly used for $b\flat 2-c\sharp 3$, short fingerings were standardised on [the system 6] model,"²⁸⁴ thereby simplifying technique.

In the following section, I scrutinise the timbral and technical differences between these long and short fingerings, how they were used, and which results are garnered from their use. I will close this segment on added keywork with an observation drawn from my own practical experience. I have indeed found the added keywork on the Adler to be beneficial for playing music in remote tonalities with more than four accidentals, but otherwise, I consider that the traditional cross fingerings carried over from the two-keyed hautboy make for a more straightforward and fluid technique. The more focused timbre of keyed fingerings can be used strategically to accent a given note, or for added projection in an orchestral context. We have also established that keys were initially added to homogenise the oboe's scale and that performers presumably took advantage of these subtle differences in timbre and intonation to project better in orchestral settings and to differentiate between enharmonic equivalents as an expressive tool.

²⁸² An excerpt of this recording can be heard [here](#).

²⁸³ *Système 4* appeared in 1843, followed by *système 5* in 1849.

²⁸⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 140.

5.5. THE TRANSITION FROM SHORT TO LONG FINGERINGS (AND BACK AGAIN)

Historical sources:

The first oboe treatises to appear prescribed the use of ‘short’ fingerings to produce high B-flat², B², and C³, instructing the performer to use the same fingerings as for the lower octave, and to simply overblow these three notes. Notably, both Hotteterre (1707) and Freillon-Poncein (1700) give high C³ as ‘all-open.’²⁸⁵ Conversely, the fingerings historical oboists now use to produce these three notes can be qualified as ‘long’ or harmonic fingerings, and are in fact ahistorical on two counts. They are neither the ‘short’ fingerings found in oboe tutors up until the 1770s, nor are they the same ‘long’ fingerings found in treatises thereafter. And while they may be ahistorical, in today’s saturated and highly competitive job market, these new ‘hybrid’ fingerings offer the performer many advantages: stable pitch, a secure attack, a round tone quality, and the possibility to elegantly taper these notes to *niente*. Let us bear in mind, however, that they are a truly modern invention without any historical foundation, somewhat akin to the practice of using natural trumpets with holes: a quick, albeit anachronistic solution to bringing eighteenth-century HIP in line with modern expectations. On this, Michel Piguet noted:

I do think we can speak of modern and Baroque fingerings for the Baroque oboe, too. My definition of a Baroque fingering: one never used by today’s player. My definition of a modern fingering: one not to be found in any Baroque charts. The modern [long] fingerings were used by the first generation of German Baroque oboists, then by Jürg Schäftlein and myself.²⁸⁶

The three long fingerings used by historical oboists today are shown below:

B-flat ²	12456 + E-flat key
B ²	1345
C ³	2345 + E-flat key

Table 5.2. Modern long fingerings

²⁸⁵ Jacques-Martin Hotteterre, *Principes de la flûte, etc.* (Amsterdam: Estienne Roger, 1707), trans. Paul Marshall Douglas as *Principles of the Flute, Recorder and Oboe* (New York: Dover, 1968), 72. “The high C (note twenty-three) is produced by opening all the holes.”

²⁸⁶ Michel Piguet, ‘Historical Oboes: Sound and Fingering,’ *A Time of Questioning: Proceedings of the International Early Double-Reed Symposium*, Utrecht 1994, ed. David Lasocki (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994).

While on original models the above fingerings produce pitches that are noticeably sharp in relation to the adjacent tones, on modern replicas they are all but required.²⁸⁷ This is because modern makers consciously tune their instruments to be used with these ahistorical fingerings, with Ecochard noting that:

most modern hautbois have gradually moved away from the tuning of original instruments in order to come nearer to equal temperament; this adaptation is a result of the requirements of musicians and customers and is a consequence of their use of different fingerings and reed setups from those prevailing at the time the original instrument was made. More or less consciously, the modern maker adapts his copy to modern ears. A modern hautboy is almost never a true copy of an original instrument.²⁸⁸

It therefore comes as no surprise that the historical fingerings for these three notes, as shown in contemporary French tutors,²⁸⁹ are markedly lower in pitch and work ideally on the Adler to produce a much truer scale.²⁹⁰ These include:²⁹¹

B-flat ²	12456
B ²	13456 + E-flat key
C ³	2345

Table 5.3. Historical long fingerings

Long fingerings become ‘historical’ around 1770, when they first start appearing in German tutors,²⁹² and by 1772, B-flat² and C³ are fingered long in an English tutor by the oboe virtuoso Johann Christian Fischer (1733 -1800)²⁹³ (the latter also appears in 1774 in a Spanish tutor by

²⁸⁷ It should be noted that the historical fingering for D³ (123 + 5 + C key), found in all French tutors from this period, produces a noticeably lower pitch than the one used by hautbois today (which is played without finger 5), and constitutes yet another example of ahistorical fingerings used by hautbois on modern replicas.

²⁸⁸ Marc Ecochard, *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde*, trans. Jem Berry as *Tuning the hautboy. A perspective on original tuning and modern adaptations* (unpublished, 1996), 1.

²⁸⁹ Those by Vanderhagen (1792), Garnier (1802), Vogt (1816), Brod (1826), Sellner (1827), Corret (1854), Barret (1850), and Garimond (1880).

²⁹⁰ Seen [here](#) and [here in isolation](#).

²⁹¹ The only exceptions are for B-flat² (which is fingered 12456+Eb in Vanderhagen, Garnier and Vogt) and B² (fingered ‘1’ by Vanderhagen).

²⁹² Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 100. In *The Ancient staple* (unpubl.), Haynes notes that “Long fingerings had been known since the beginning of the 18th century; the recorder used long fingerings for the corresponding notes (and most hautbois were also recorder players). Hotteterre used long Bb2 for the hautboy trill fingering c3-Bb2 [...] but the fingering he gave for the normal untrilled Bb2, by contrast, was the short 1 [+] 3.”

²⁹³ Johann Christian Fischer, *New and Complete Instructions for the Oboe or Hoboy* (London: Cahusac, c.1772).

Pablo Minguet y Irol).²⁹⁴ In France, long fingerings appear for the first time in 1792 in Armand Vanderhagen’s *Méthode nouvelle et raisonnée pour le hautbois*²⁹⁵ (for both B² and C³), and long B² does not appear until c.1802 in Garnier’s *Méthode raisonnée*.

In the following [video](#), I have demonstrated the necessity of adhering to historical long fingerings when performing on the Adler oboe. An excerpt of Berlioz’s overture to *Benvenuto Cellini* (1838) is first played using Brod’s historical fingerings. The same passage is then repeated using ahistorical long fingerings. It is immediately audible that the intervals between B², Bb² and A² are out of tune in the latter excerpt. (Note that the same reed and oboe are employed throughout, and pitch here is fixed at 425 Hz.)

Ex. 5.12. Berlioz: Overture to *Benvenuto Cellini* (1838) – oboe solo, bb 23 - 41

I then proceed to isolate B², using three different fingerings to illustrate the variation in pitch that each produces. The first, that shown in Brod with the full right hand down, is stable at 425 Hz. The second, today’s ‘ahistorical long’ fingering is a full 40 cents sharp (almost a quarter tone), producing a B² that would be in tune at 433 Hz. The last fingering, given by Vanderhagen as late as 1792, is the traditional eighteenth-century short ‘hautboy’ fingering, which produces B² by simply overblowing B¹ (much as hautboists do for notes from D¹ to A³). While the result is stable in pitch, tone quality is rather thin and strident. As can be heard in the video, performing a taper with this fingering is troublesome, and as with all short fingerings in the oboe’s upper octave, the note tends to drop the octave when air flow and breath support diminish. C³ is then isolated in the same manner, where I compare both historical and ahistorical long fingerings (the latter with the added E-flat key). The variation in pitch here is even greater, and deviates by a full quarter tone (50 cents). While Brod’s C³ is in tune at 425 Hz, the ahistorical fingering produces a note in tune at 436 Hz. The next section of the video demonstrates an ascending chromatic scale from G² to D³, again, first using historical fingerings, then repeated with ahistorical.²⁹⁶ Yet again, it is clear

²⁹⁴ Pablo Minguet y Irol, “*Escala...del Obuè*” in *Reglas y Advertencias Generales*, 2nd ed. (Madrid, 1774). The fingering given for C³ is the same as in Brod, Sellner and Corret: 2345, *without* the Eb key.

²⁹⁵ Armand Vanderhagen, *Méthode nouvelle et raisonnée pour le hautbois* (Paris: Boyer, ca. 1792).

²⁹⁶ In addition to Brod’s fingerings for Bb², B² and C³, those he prescribes for C#³ and D³ are also applied here. These are: 12345FC for C#³; and 1234FC for D³.

that the historical fingerings are more in tune. The video ends with a comparison of octaves, where those that are played using ahistorical fingerings are clearly too wide.

In addition to their reliable intonation, Brod’s long fingerings make for easy navigation, an essential asset in the many exposed solos that exploit the oboe’s upper register. An example of this is the oboe solo from the *Ouverture* from Daniel Auber’s immensely popular *La muette de Portici*, première at the *Opéra de Paris* in 1828.



Ex. 5.13. Daniel Auber: *La muette de Portici* (1828) - Ouverture; oboe solo.

Because the fingerings for these three notes (B-flat², B² and C³) moved from ‘short’ (before 1770) to ‘long’ (after 1770) and then back to ‘short’ again (after the 1872, with the introduction of the Triebert *systeme* 6), it would appear that, for over a century (c.1770-1870) the simple-system oboe *complicated* technique rather than simplifying it. Indeed, from an evolutionary point of view on instrument design, the use of somewhat convoluted long fingerings for these three semitones does not seem sensible. And yet, their use was seen as justifiable: compared to the acoustically thin short fingerings, they produced a fuller sound richer in overtones, which meant they offered added projection, highly advantageous in larger venues to cut through dense orchestral textures. Their attack, as mentioned previously, was more reliable, their intonation surer. For these reasons, they continued to be preferred in later treatises even after octave keys appeared. One example of this is Barret’s *Complete Method* (1850), written in part for a *systeme* 4 mechanism. Indeed, despite that model’s two *octaviers*, Barret continued to view octave keys as a means to prevent the second octave from “breaking down”²⁹⁷ or dropping while tapering. Barret notes however that “Some notes have double, triple or quadruple fingerings, they are numbered separately and connected by a brace to denote the identity of sound. The first [long] fingering is the most used.”²⁹⁸

²⁹⁷ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 15.

²⁹⁸ *Ibid.*

On the modern conservatoire oboe, the short fingerings for B-flat², B² and C³ are acoustically deficient and produce a rather thin and weak tone quality. For this reason, it can be surmised that early nineteenth-century oboists were willing to compensate finger dexterity for richer resonance, in turn creating a more homogenous and even scale. Incidentally, the same harmonic fingerings continue to be standard in modern Viennese oboe technique.

Personal experience

Coming from a background of formal training on both modern and ‘baroque’ oboe, I find it unproblematic to switch between short and long fingerings, and to move fluidly between the two systems. I particularly enjoy the added resonance that long harmonic fingerings provide when performing on Romantic models and try to use them whenever possible. In certain passages, however, it is more efficient to use short fingerings. One example is in my [performance](#) of Vogt’s second *Vocalise* (c.1830). The last bar of the second system is particularly awkward, and I chose to simplify it by opting for the ‘short’ B² fingering (moving from G^{#2} to B² to A² on the second beat). Brod, Vogt and Vény all recommend this configuration in their tutors.²⁹⁹

The image shows a page of musical notation for an oboe and piano. At the top, it is labeled 'HAUTOIS.' and 'N° 2.'. The tempo is marked 'Largo'. The score consists of six staves of music. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The music is characterized by rapid sixteenth-note passages, often with slurs and trills. There are various fingering numbers (1, 2, 3, 4, 5, 6) and trill markings (tr) throughout the piece. The notation is dense and technical, typical of a virtuoso study.

Ex. 5.14. Gustave Vogt: *Vocalise no. 2 d'après Crescentini* (c.1830) for oboe and piano

²⁹⁹ Vény specifies that “when the little finger of the right hand must shift between the Eb and C# keys (which can only be done with difficulty), finger the high B only with the first finger of the left hand, as in the lower octave.” Louis-Auguste Vény, *Méthode abrégée pour le hautbois* (Paris: Pleyel et Cie, 1828), 24: “afin d’éviter le passage (qui ne peut pas s’exécuter sans difficulté) du petit doigt de la main droite, de la clef de Mib à celle d’UT # [...] on pourra prendre SI^h d’en haut avec le seul premier doigt de la main gauche comme à l’octave inférieure.”

5.6. PORTAMENTO

Historical sources

The practice of gliding between adjacent notes (variably known during the period as *porter la voix*,³⁰⁰ ‘gliding’, *glissando*, *portamento*, *Durchziehen der Töne*, *Überziehen der Töne*, or ‘*cercar della nota*’) is described in several German and English flute tutors, including those by Tromlitz, Fröhlich, Nicholson, Dressler, Wragg, Alexander, Lindsay, Fürstenau. Pustlauk observes that in his *Preceptive Lessons* (1821), “Nicholson is the only author who describes gliding over larger intervals. He applies gliding to all possible situations. He uses it frequently in slow as well as in fast movements, between long as well as short notes, over two to five successive notes, on main notes as well as on appoggiaturas.”³⁰¹ While gliding may have been an integral component of nineteenth-century flute technique, the only source that I have been able to locate that makes any mention of this practice on the oboe is Fröhlich’s *Musikschule* (Bonn, 1810), where the author states:

*There is also another type of cercar della nota (‘searching for, or preparing the note’) which is common today and is especially abused by singers. [...] It is an almost imperceptible rise or fall between one note to the next. On the violin, viola, the violoncello, it happens when the player pulls two notes together with the same finger on a string and, as it were, melts them together. Oboists, clarinetists, and bassoonists can read through the following article on the flute and try to apply the same technique to their instruments.*³⁰²

Pustlauk observes that the flautist Carl Augustin Grenser (1794-1864), the eldest son of the eminent Dresden woodwind builder, commented on an oboist ‘gliding’ in an article that appeared in the 1828 *Allgemeine musikalische Zeitung*. The oboist in question was Eugen Friedrich Thurner (1785-1827), who in Munich had studied with Ramm (the dedicatee of Mozart’s oboe quartet), and who was a friend and colleague of Spohr:

³⁰⁰ See François Habeneck, *Méthode théorique et pratique de violon* (Paris: Canaux, c.1840), 103; and Pierre Baillot, *L’art du violon* (Paris: Imprimerie du Conservatoire, 1843), 77.

³⁰¹ Anne Pustlauk, “The simple system flute between 1790 and 1850, its performance practice and chamber music repertoire with pianoforte and/or strings,” (doctoral diss., Vrije Universiteit Brussel, 2016), 71.

³⁰² Joseph Fröhlich, *Vollständige theoretisch-praktische Musikschule* (Bonn: Simrock, 1810), 58. “*Es giebt auch noch ein anderes cercar della Nota (Suchen oder Vorausnehmen der Töne) welches heut zu Tag allgemein ist, und besonders von den sängern sehr missbraucht wird. Es besteht in einem gelinden unmerklichen Auf- oder Unter. ziehen mit der Stimme von einem Tone zum andern. Bei der Violin, Viola, dem Violoncell, u. s. w. geschieht es, wenn der Spieler mit einem Finger auf einer Saite 2 verschiedene Töne an einander zieht, und gleichsam in einander schmelzt. Die Oboisten, Clarinetisten, Fagottisten können den Artikel in der Flötenschule vom Durchziehen hier über durchlesen, und dasselbe auf ihre Instrumente überzutragen suchen.*”

*Among the German wind instruments virtuosos that I have had the opportunity to hear, I remember two who tastefully glided between tones, namely the late oboist Thurner and the famous flautist Fürstenau.*³⁰³

According to Pustlauk, “Gliding can be executed in various ways: 1) by pulling or pushing the fingertip from or off the hole (Tromlitz, Fröhlich, Nicholson Dressler, Wragg, Alexander, Lindsay, Fürstenau), 2) by a sort of rolling movement or a gradual opening and closing of the hole by a hole finger (Tromlitz, Fröhlich) or, 3) by a gradual and sideward lifting or lowering of a finger from or off the hole respectively (Fürstenau 1844).”³⁰⁴

An intriguing passage in Berr’s clarinet tutor (1836) refers to the separate but similar practice of *changing fingerings on two notes of the same pitch* which are tied together, as if to mimic the effect of switching strings on a violin.

*Changing fingerings on the same note: To change position on the clarinet, it is important 1) to ensure that finger movement does not interrupt the sound, and 2) to seek to imitate the effect produced by stringed instruments. To imitate these gliding sounds, some instrumentalists gradually withdraw the fingers placed over the tone holes; this results in a garbled sound quite similar to a diatonic meow [sic]. Changing [finger] position [on the clarinet] is rare; however, students must be familiar with the technique and diligently practice its application.*³⁰⁵

Berr goes on to include seven examples on how to perform these shifts on the clarinet. In these examples, keyed fingerings are “gently released” while applying forked (cross) fingerings, and vice versa. Brod, who worked with Berr at the *Théâtre-Italien*, would have been exposed to this practice and may have applied it to his own playing, although there is no mention of it in his *Méthode*, nor in any other nineteenth-century oboe tutors.

³⁰³ Anne Pustlauk, “The simple system flute between 1790 and 1850, its performance practice and chamber music repertoire with pianoforte and/or strings,” (doctoral diss., Vrije Universiteit Brussel, 2016), 73, quoting AMZ 1828, 115: “*Unter den teutschen Virtuosen auf Blasinstrumenten, die ich zu hören Gelegenheit gehabt habe, erinnere ich mich hierbey an zwey, die mit Geschmack das Durchziehen der Töne anwendeten, nämlich an den verstorbenen Oboisten Thurner, und an den berühmten Flöüsten Fürstenau*”.

³⁰⁴ *Ibid.*, 70.

³⁰⁵ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 62. “*Changement de doigté sur une même note: Pour changer de position sur la clarinette, il faut 1. que le déplacement des doigts n’interrompe point la vibration donnée sur un premier son, et 2. chercher à imiter les sons portés des instrumens à cordes. Pour imiter ces sons glissés, quelques instrumentistes retirent au fur et à mesure les doigts placés sur les trous ; il en résulte un son équivoque assez semblable à un miaulement diatonique. L’emploi de ces changemens de position est rare ; cependant, il faut les connaître et les pratiquer avec toute l’adresse qu’ils exigent.*”

Personal experience

In my experience, the extremely small tone holes on the oboe make the act of gliding, or “gradual and sideward lifting or lowering of a finger” difficult if not impossible to execute convincingly. In effect, oboes have the smallest tone holes of all woodwind instruments (some on the Adler model are only 2 mm wide), making both gliding and *flattement* (as will be seen later in the section on vibrato) highly impractical. Furthermore, because French oboes tended to have even smaller tone holes than German models, gradually rolling a finger off a hole is nigh impossible in a live context, even at a very slow tempo. When the *brille* system was introduced on the oboe with Triebert’s mechanisation in 1840, which effectively covered the larger tone holes with rings, the practice would become effectively impossible. Not surprisingly, Pustlauk observes that “In French methods gliding cannot be found. One could assume that the small holes on French instruments had little effect on gliding.”³⁰⁶ At the time of writing, I have not had any firsthand experience with Berr’s technique of changing fingerings on two notes of the same pitch.

³⁰⁶ Pustlauk, “The simple system flute between 1790 and 1850,” 72.

5.7. HIGH LEADING TONES AND 'EXPRESSIVE' INTONATION

Historical sources

In meantone temperament, widely used in the eighteenth-century, leading tones were generally tuned low and often played a comma flatter than their enharmonic equivalents. Quantz, for instance, designed a traverso with separate keys to differentiate the tuning of Eb and D#, and in his 1752 *Versuch* indicates that “E flat must be a comma higher than D sharp.”³⁰⁷ But by the end of the century this practice had shifted to a preference for *high* leading tones. As Pustlauk notes, the new trend found its roots in late eighteenth-century performance practice, with German flute tutors such as Tromlitz (1800) describing “*durchgehende*” [passing tones] or “*zufällige*” [random] notes that are not part of the harmony. These notes should be played higher.”³⁰⁸ Barbieri dates the apparition of this practice, which he calls ‘expressive’ intonation, even earlier, citing Delusse who in 1760 prescribed fingerings for the flute that “placed sharps higher than flats.”³⁰⁹ He cites other French primary sources by Roussier (1770) and Bemetzrieder (1776) which also confirm that “sharps were played higher than the enharmonically equivalent flats.” It will be shown later that this technique was reserved chiefly for solo performance (less so for ensemble settings) and was therefore used as an ‘expressive’ component, much like an ornament, to colour or draw attention to a specific note. Berlioz articulates this practice in his *Grand Traité* of 1844:

[...] *musical practice, musical common sense, in fact the ears of all peoples who cultivate modern music all agree that in certain circumstances the notes called ‘leading notes’ are more or less subject to the attraction of the tonic above, and that minor sevenths and minor ninths are subject to the attraction of the note below on to which they resolve. Therefore the first of these, the leading note, can get a little sharper than it would be in the tempered scale, and the second a little flatter.*³¹⁰

That enharmonic equivalents continued to be differentiated in nineteenth-century practice well into the 1830s is evidenced by Isaac Nathan, who in his vocal treatise entitled *Musurgia Vocalis* (London, 1836) notes:

³⁰⁷ Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen* (Berlin: Voss, 1752), trans. by Edward R. Reilly as *On Playing the Flute* (Boston: Northeastern University Press, 1966), 46.

³⁰⁸ Anne Pustlauk, “The simple system flute between 1790 and 1850, its performance practice and chamber music repertoire with pianoforte and/or strings,” (doctoral diss., Vrije Universiteit Brussel, 2016), 29. Quoting Johann Tromlitz, *Über die Flöten mit mehreren Klappen* (Leipzig, 1800), 51, 56, 76. <http://anne-pustlauk.de/wp-content/uploads/Portfolio-Anne-Pustlauk.pdf>, accessed 21 July 2019.

³⁰⁹ Patrizio Barbieri and Sandra Mangsen, ‘Violin Intonation: A Historical Survey,’ *Early Music*, Feb. 1991, Vol. 19, No. 1 (Oxford: Oxford University Press, 1991), 82.

³¹⁰ Hector Berlioz, *Grande traité d'instrumentation et d'orchestration modernes* (Paris: Henry Lemoine, 1844), trans. Hugh Macdonald as *Berlioz's Orchestration Treatise: A Translation and Commentary* (Cambridge: Cambridge University Press, 2004), 307.

*D# and Eb being but one and the same sound of the piano-forte, and two separate and distinct sounds on a violin, the imperfection must be detected, if the sharp were performed on one instrument, while, at the same time, the flat should be executed on the other; but, it is worthy of observation, that although a single sharp or flat on the piano-forte would certainly not be in unison with either of those sounds on the violin, yet the harmony produced by the combination [...] affects the sound to a degree, that it appears actually to sharpen and flatten entirely by sympathy, and gives the sensation to the ear of being in correct tune. This imperfection in harmony, like a defective leaf among the variety of flowers that form a bouquet, escapes individual attention while grouped with the rest, but, when separated, its faults become apparent.*³¹¹

Twenty years ago, Lawson observed that the use of high leading tones had been “relegated to the periphery”³¹² of nineteenth-century performance practice, and in discussing it with a panel of colleagues, it would appear to remain a protocol of which exceedingly few hautboists are aware. Even so, it appears that the technique was widespread, and evidence of it abounds in French woodwind tutors from the period. One of the most telling is from the *Méthode de flûte* (1835) by Jean-Louis Tulou:

*To play wind instruments in tune, one must use fingerings which raise leading tones. For instance, in G major, when the F-sharp rises to G-natural, it is the leading tone of G major and must sound higher to the ear than if it were to descend to E-natural. [...] One easily understands that an F-sharp approaching the tonic (G) must not be played with the same fingering one uses for G-flat (which descends to F-natural), and yet with the simple fingering, these two notes on the flute are absolutely identical. Therefore, if one uses the standard fingering to produce F-sharp when it is a leading tone, it will be too flat.*³¹³

In his flute treatise of 1827, Drouët goes so far as to provide an entire fingering chart for high leading tones, which he calls “augmented passing tones” [*notes de passage augmentées*]. He states that “it is very difficult to be clear about something that does not yet have a name. For this reason, I will from this point on call these notes, which must be a bit higher than usual, augmented passing tones.”³¹⁴

³¹¹ Issac Nathan, *Musurgia Vocalis* (London: Fentum, 1836), 130-131. Corri could observe likewise in 1810. See: Domenico Corri, *The Singer's Preceptor* (London: Chappell, 1810), 12.

³¹² Colin Lawson, *The Early Clarinet: A Practical Guide* (Cambridge: Cambridge University Press, 2000), 55.

³¹³ Jean-Louis Tulou, *Méthode de flûte*, op. 100 (Paris: Schonenberger, 1835), 39: “*Pour jouer juste sur les instruments à vent, il faut des doigtés particuliers qui donnent les moyens de hausser les notes sensibles: ainsi je suppose le ton de SOL majeur: lorsque le FA# monte au SOL naturel, il est note sensible du SOL et doit être plus haut à l'oreille que s'il descendait au MI naturel. [...] On comprendra aisément que le FA# tendant à se rapprocher de la tonique (du SOL), ne doit pas être fait avec le même doigté que celui qu'on emploierait pour faire le SOLb qui demande de son côté à descendre au FA naturel, et cependant par le doigté simple, ces deux notes sur la flûte sont absolument les mêmes; donc si on se serait du doigté ordinaire pour faire le FA# lorsqu'il est note sensible, ce FA n'étant pas altéré serait trop bas.*”

³¹⁴ Louis Drouët, *Méthode pour la flûte* (Paris: Pleyel, 1827), 68. “*Il est fort difficile de s'entendre quand on parle d'une chose qui n'a pas encore de nom, je nommerai désormais ces Notes, qui doivent être un peu plus haut qu'à l'ordinaire, NOTES DE PASSAGE AUGMENTÉES.*”

Another telling source comes from Hyacinthe Klosé's clarinet method of 1843:

*The tonic is the first note of the tone, the leading tone is the seventh, which is always a semitone below the tonic. This note should be played slightly higher, especially when it resolves to the tonic. [...] The leading tone is always drawn to the tonic, especially when it resolves to the latter; in this case it should be played as high as possible. Melodic leading tones should also always be played as high as possible in a concerto, or in a solo; but in an orchestral context, when the note is doubled by flutes, oboes or bassoons, the leading tone must be played using the standard fingerings to avoid creating dissonances with the other instruments. The following table illustrates the different fingerings used for leading tones, and I encourage the student to learn them by heart so that they can be applied whenever required.*³¹⁵

Yet another testimony is provided by Berr (1836), who advises using “primitive” (cross) fingerings, naturally higher in pitch, to play resolving sevenths on the clarinet, in order to “*obtain a pleasing timbre on leading tones*”,³¹⁶ whereas he recommends using keyed fingerings for held notes. Further on, Berr instructs that:

*In general, melodic leading tones should be played as high as possible; to play these notes, use the old [fork] fingering, or artificial fingering; using a key for these notes would make them too low [...] However, if the fingering allows for it, the key closest to the tone hole can be used to raise the note.*³¹⁷

A handful of nineteenth-century oboe treatises mention the technique, and on account of its ubiquitousness, this type of ‘expressive’ intonation was presumably familiar to all wind instrumentalists during the period. Nonetheless, the earlier tutors by Vanderhagen (1792) and Garnier (1802) only differentiate between two enharmonic pairs, namely A^{#1}/Bb¹ and A^{#2}/Bb². Likewise, both the original flute treatise of Devienne (1794)³¹⁸ and its revised version (1835)³¹⁹

³¹⁵ Hyacinthe Klosé, *Méthode pour servir à l'enseignement de la clarinette à anneaux mobiles* (Paris: Meissonnier, 1843), 33. “*La tonique est la première note du ton, la note sensible en est la septième, elle est toujours à un demi-ton au-dessous de la tonique. Cette note doit être entendue un peu haut surtout lorsqu'elle fait sa résolution sur la tonique. [...] La note sensible tend toujours à s'approcher de la tonique, surtout lorsqu'elle fait sa résolution sur cette dernière; dans ce cas il faut la faire entendre le plus haut possible. Les notes sensibles mélodiques doivent être également toujours entendues le plus haut possible dans un concerto, ou dans un solo; mais, lorsqu'on joue avec l'orchestre, et que cette note est doublée par les flûtes, hautbois ou bassons, il faut que la sensible se fasse par les doigtés réguliers, afin d'éviter de produire des dissonances [sic] avec les autres instruments. On trouvera ci-après le tableau des différents doigtés des notes sensibles, et j'engage l'élève à les connaître par coeur, afin de pouvoir les appliquer lorsque l'occasion s'en présentera.*”

³¹⁶ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 6. “*Il faut absolument employer le doigté primitif, et d'obtenir des sons agréables sur les notes sensibles de la mélodie; dans ce cas les clés rendraient les sons durs.*”

³¹⁷ *Ibid.*

³¹⁸ François Devienne, *Nouvelle méthode théorique et pratique pour la flûte* (Paris: Imbault, 1794). Only one distinction here is made between A^{#2} and Bb².

³¹⁹ François Devienne, *Méthode complète pour la flûte par Devienne, nouvelle édition revue et arrangée [...] par Ludovic Lepus* (Paris: Aulagnier, 1835). Only one distinction here is made between Db⁵ and C^{#5}.

distinguish only between one pair, whereas distinctions are altogether absent in the tutor by Walckiers (1829).³²⁰ Nonetheless, extensive distinctions are made in the flute tutor by Tulou (1835), as well as in the clarinet methods of Berr (1836) and Klosé (1841), suggesting the practice came into fashion in the 1830s. Anneke Scott also notes that a similar practice was applied to horn technique: in his *Méthode pour le cor chromatique ou à cylindres* (1840), Joseph Meifred states that leading tones should always be played stopped. Although Meifred’s tutor was the first written in France specifically for the valved horn, his instructions combine both valved and hand-stopping techniques. Scott observes that hand-stopping a note gives the horn player greater control over intonation, and would allow the player to ‘bend’ leading tones slightly higher, depending on their harmonic function.³²¹

Intriguingly, Frédéric Chalon (c.1815) provides a detailed fingering chart in his tutor at *quarter-tone* intervals, so that students could “have the necessary flexibility to play perfectly in tune in all situations.”³²²

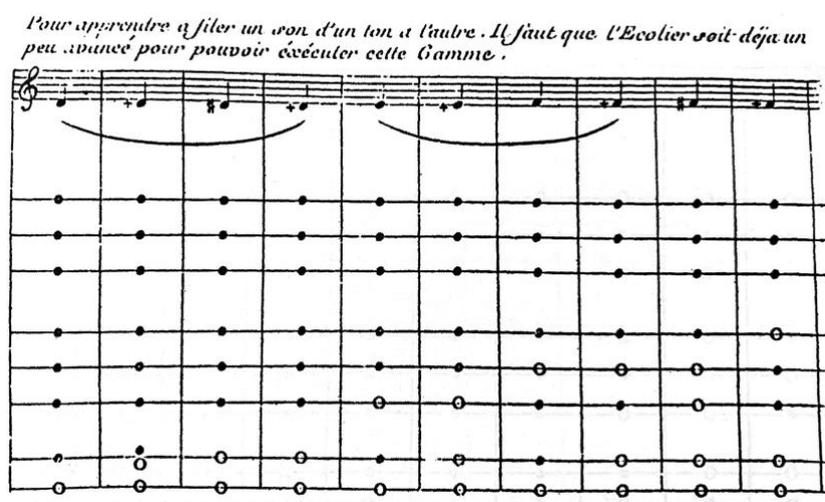


Table 5.4. Frédéric Chalon - *Méthode pour le cor anglais ou hautbois* (c.1815).

In addition to Vény’s fingering chart (1828) that we have already discussed in the section of keyed vs. cross fingerings, Burgess notes that in his *Méthode* (c.1816), Vogt “gives detailed instructions on how to finger all notes according to their harmonic context”.³²³ Indeed, when discussing the Gb/F#[♯] enharmonic pair, Vogt considers that:

³²⁰ Eugène Walckiers, *Méthode de Flûte, op. 30* (Paris: the author, 1829).

³²¹ Personal commentary, Anneke Scott, Oct. 2018.

³²² Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 53, citing Frédéric Chalon, *Méthode pour le cor anglais ou hautbois*. (Paris: Imbault, c.1815).

³²³ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 105.

when it is fingered with the [Eb] key, the note must be held in check, otherwise it will be too sharp; without the key it is too flat. At the same time, two alternatives can be used according to the tonality in which the note occurs. When used as F# in the keys of G major and minor, it can be played without restraint, because it is the leading note, and as such will not be too sharp when fingered with the key. [...] When it occurs as Gb, in the scales of Bb minor, Eb minor, Db major, etc., it can be fingered without the key because Gb is naturally flatter than F#.³²⁴

In similar fashion, Sellner (1827) also confirms that F# must be played high when it occurred as a seventh:

*As for F-sharp and G-flat, which are naturally too low on the oboe to be used as leading tones, we have added a key for the little finger of the right hand.*³²⁵

While it has been posited that differentiating between enharmonic equivalents by employing separate fingerings for each note was a uniquely French practice,³²⁶ several German tutors and Italian sources³²⁷ also address the issue, suggesting it was pan-European. One example is found in the *Hoboeschule* (1810) by Fröhlich, who writes:

*Regarding intonation, the following remark is necessary. If you make the tone of the oboe more lovely, more pleasant, whereby you have to pinch the reed closed, the pitch rises; but it lowers if you want to produce a stronger tone by opening your lips wider. As a rule, for the leading tones, which one would like to hear a little higher, such as C-sharp to D, and F-sharp to G, play them softly and more gently.*³²⁸

³²⁴ Gustave Vogt, *Méthode de hautbois* (unpublished, c.1816), 89. Translation by Burgess. “*En prenant la clef il faut le ménager sans quoi il est trop haut, et sans la clef il est trop bas ; cependant on peut user des deux manières en observant bien le ton dans lequel il se présente ; comme FA# par exemple, dans la gamme de SOL majeur et mineur on peut le donner sans ménagement parce qu’il est note sensible. [...] Lorsqu’il se présente comme SOLb, dans les gammes de Sib mineur, Mib mineur, REb majeur, etc, on peut prendre sans la clef, le SOLb se trouvant naturellement plus bas que le FA#.*”

³²⁵ Joseph Sellner, *Méthode pour le hautbois, traduite de l’allemande par Heller et revue par Fouquier, 1er hautbois du Théâtre Royal de l’Opéra Italien*. (Paris: Richault, 1827), vii: “*Pour le FA# et le SOLb qui dans la nature de l’instrument sont trop bas pour être employés comme des notes sensibles on a aussi ménagé une clef devant servir pour le petit doigt de la main droite.*”

³²⁶ Bruce Haynes, *The New Grove Dictionary of Music and Musicians*, vol. 8. ed. Stanley Sadie. (London: Macmillan, 2002), 270: “The practice of distinguishing enharmonic equivalents with different fingerings was retained in France [in the nineteenth century] by contrasting cross- and keyed fingerings, with the higher of two fingerings for a particular pitch assigned to the sharpened note.”

³²⁷ Barbieri cites the works of Eximeno (1775), Galeazzi (1791), and Campagnoli (c.1797). See Patrizio Barbieri and Sandra Mangsen, ‘Violin Intonation: A Historical Survey,’ *Early Music*, Feb. 1991, Vol. 19, No. 1 (Oxford: Oxford University Press, 1991), 82. Asioli’s *Trasunto* (1827), which contains a fingering chart for an eight-keyed oboe, also distinguishes between several enharmonic pairs, namely A#/Bb¹ and A#²/Bb².

³²⁸ Joseph Fröhlich, *Vollständige Theoretische-Praktische Musikschule* (Bonn: Simrock, 1810), 44. “*In Rücksicht der Reinheit der Töne ist noch folgende Bemerkung nötig. Wen man nämlich den Laut der Oboe lieblicher, angenehmer macht, wobei man das Rohr zusammen kneipen muss, so steigt der Ton, er sinkt aber, oder geht tiefer, wenn man einen starken Klang hervorbringen will, und desswegen die Lippen mehr öffnet Man muss daher die Leitetöne z. B. cis zu d. fis zug, und in der Regel altejene Töne, welche man etwas mehr erhöht haben will, mildern weniger stark, sondern lieblicher nehmen.*”

As noted earlier, on simple-system oboes such as the Adler, cross fingerings produce notes that are slightly sharper while keyed fingerings are generally lower, and oboists at the time would have taken advantage of these slight variations in tuning to inflect a given note based on its harmonic role. This can be seen in the fingering charts of Vogt, Brod and Sellner, which all make distinctions between enharmonic pairs to varying degrees. The *Méthode* by Vény (1828) goes so far as to make five of these distinctions,³²⁹ prescribing forked (and therefore sharper) fingerings for sharpened notes and keyed (flatter) fingerings for those that are flattened. Burgess also draws attention to the addition of the C-corrector key, which “allowed c#2 to be tuned higher and thus serve as an “expressive” leading note.”³³⁰

By mid-century, the practice of ‘expressive’ intonation appears to have died down, corresponding to the gradual adoption of equal temperament. Indeed, the *Tablature de hautbois à 15 clefs* (1862) by Charles Triebert and written for a *système* 4 oboe, differentiates only between D-flat³ and C#³ (giving a fingering that is, at 435 Hz, 10 cents higher for the latter and 7 cents flatter for the former), while the 1854 fingering chart by Corret (which displays both a Nonon and a *système* 3 oboe) does not make any distinction between enharmonic equivalents. Likewise, Barret’s *Complete Method* of 1850 does not provide different fingerings for enharmonic pairs, and the author states that:

*The foregoing Chromatic scales, placed exactly one over the other, are intended to assist pupils, in ascertaining the identity that exists between certain notes, which although differently written, sound exactly the same, such as A# and Bb, E# and F# &c.*³³¹

As mentioned earlier, the practice of ‘expressive’ intonation, where leading tones are played as sharp as possible, seems to have been reserved for virtuosic performances of solo concertos, and Lawson remarks that Klosé recommended that “normal fingerings be used in order to blend with the other instruments”³³² in ensemble or orchestral setting. On this, Berlioz states:

*The two-way modification of an interval between two notes which attract each other (in musical practice) is a very delicate nuance which solo instrumentalists and singers should use with immense care; orchestral players should normally do without it, and composers should anticipate its application and handle it accordingly.*³³³

³²⁹ These include E#¹/F¹; A#¹/Bb¹; B#¹/C²; E#²-F²; and A#²/Bb².

³³⁰ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 54.

³³¹ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 14.

³³² Quoted in Colin Lawson, *The Early Clarinet: A Practical Guide* (Cambridge: Cambridge University Press, 2000), 55.

³³³ Hector Berlioz, *Grande traité d'instrumentation et d'orchestration modernes* (Paris: Henry Lemoine, 1844). Translated by Macdonald, Hugh as *Berlioz's Orchestration Treatise: A Translation and Commentary* (Cambridge: Cambridge University Press, 2004), 307-308.

Burgess observes that Berlioz expected the orchestra to behave as a “great tempered instrument”, that is, like a keyboard instrument which is incapable of producing enharmonic distinctions”.³³⁴ Indeed, by the 1840s, equal temperament appears to have been universally adopted in France, with Berlioz stating that “The concertina, having fixed pitches like the piano, organ and melodium, should clearly be tuned according to the principle of equal temperament.” He further argued that the practice of pitch variation between enharmonic equivalents, which although it “conformed to acoustical doctrine [was] a doctrine entirely at variance with musical practice.”³³⁵

In performances with fixed-pitch instruments such as the piano, intentionally placing leading tones higher than the keyboard will create obvious intonation problems, and because “by the time Vogt was teaching in Paris [1816], equal temperament was the most commonly used tuning system for keyboard instruments,”³³⁶ we can assume that the practice was not applied to performances of chamber music involving piano. Indeed, “Around 1840 Habeneck warned violin students not to be alarmed when playing with a piano; he thus asserted that it was not the student, but the equal temperament of the piano, that was suspect.”³³⁷ Nonetheless, enharmonic fingerings appear to have been an integral part of nineteenth-century woodwind technique, and in a chamber music setting with non-fixed-pitch instruments (such as an oboe quartet with strings, or in a wind quintet) the practice could be implemented effectively. And while it is impossible for us to fully appreciate to what degree ‘expressive’ intonation was practised in the nineteenth century, nor to thoroughly understand exactly how it was executed, our current lack of knowledge does not preclude the possibility that the practice might well be adopted in years to come; for looking back on the evolution of contemporary eighteenth-century performance practice, it would have seemed unlikely fifty years ago that musicians and concert-goers alike would soon come to accept, or even expect, low leading tones in meantone performances of Bach and Händel.

³³⁴ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 58, citing Berlioz’s *Grand Traité*.

³³⁵ Hector Berlioz, *Grande traité d’instrumentation et d’orchestration modernes* (Paris: Henry Lemoine, 1844), trans. Hugh Macdonald as *Berlioz’s Orchestration Treatise: A Translation and Commentary* (Cambridge: Cambridge University Press, 2004), 306: “the English concertina has introduced enharmonic intervals between Ab and G# and between Eb and D# in the lower three octaves, making Ab a bit higher than G# and Eb a bit higher than D# and conforming thus to acoustical doctrine, a doctrine entirely at variance with musical practice.”

³³⁶ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 53.

³³⁷ *Ibid.*, 54.

Personal experience

I have had little opportunity to actively experiment with expressive intonation. All of the nineteenth-century orchestral repertoire that I have performed in professional settings has been at equal temperament. Likewise, because the 1840 Erard pianoforte used on the adjacent creative portfolio was also at equal temperament, our recording does not make use of this practice.

During the recording process, I discovered that one of the greatest challenges for me was in fact performing alongside a fixed-pitch instrument, and I was unaccustomed to playing in equal temperament with an oboe that was not designed to do so. As Burgess remarks, while the acoustic set-up of classical woodwinds may have been ideally designed for meantone temperament, they were “not well suited to “expressive” intonation, and some of the mechanical modifications added by nineteenth-century makers addressed this problem”³³⁸ by making the instrument equally tempered. This is further evidenced by Drouët, who in 1827 alludes to the tuning modifications flute players must make when playing alongside instruments “whose sound [i.e. intonation] cannot be altered during performance, like the pianoforte.”³³⁹ The Adler oboe is still very much tuned as a meantone eighteenth-century *hautboy*, with its share of tuning idiosyncrasies that, at times, were difficult to reconcile with the equally tempered Erard pianoforte. For acoustic reasons, leading tones such as C^{#2} on the Adler are tuned flat. Likewise, E² tends to be sharp, as does Bb¹/A^{#1}, whereas B¹ tends to be quite low. When performing with a string trio (as in the Mozart oboe quartet) or with a harpsichord tuned in meantone (or Vallotti or Young, or other temperaments), the oboe’s innate tuning tendencies can easily be matched by the accompanying instruments, whereas even the slightest intonation discrepancies become clearly audible when performing a duo with an equally tempered keyboard. Reconciling these two tuning systems was perhaps the most challenging aspect of the recording process, and I found it particularly taxing while playing through Schumann’s [Mondnacht](#) (1840), set in the key of E major. The unison C^{#2}s in the oboe and piano took several takes to get in tune:

³³⁸ *Ibid.*, 53.

³³⁹ Louis Drouët, *Méthode pour la flûte* (Paris: Pleyel, 1827), 72. “On ne doit point augmenter ces Notes de passage quand on joue [...] avec des Instrumens dont les Sons ne peuvent pas être altérés pendant l’exécution, comme le Piano &.”

Mondnacht.

Zart, heimlich. Op. 39. No 5.

31. *p* *ritard.* *p* *ritard.* *p*

Es
war als hätt der Him - mel die Er - de still geküßt,
daß sie im Blü - tenchim - mer von ihm nur
träu - men müßt.
Die Luft ging durch die Fel - der,

Ex. 5.15. Schumann: *Mondnacht* (1840)

Stowell remarks that historical practice in the 1830s and 40s initially favoured meantone temperament, which was still practised. When a pianoforte, for example, was introduced into a larger ensemble such as an orchestra, Habeneck opted “for concealing the different temperament of the fixed-pitch instrument rather than bring the tuning of the other instruments in line with it.”³⁴⁰ Indeed, the violinist remarks that:

*there is no need to take into account [the perceptible difference in pitch] when the entire harmonic ensemble is produced by instruments with variable notes and one single instrument with fixed notes joins in, whereupon the main object must be to remove the difference forthwith if the intonation is not to be made intolerable; suffice it to say that this is done to prevent students being taken by surprise, which would plunge them into a state of distress and perplexity by making them doubt the accuracy of their own ears.*³⁴¹

³⁴⁰ Robin Stowell, *Violin Technique and Performance Practice in the Late Eighteenth and Early Nineteenth Centuries* (Cambridge: Cambridge University Press, 1985), 255.

³⁴¹ *Ibid.*, 255-256, quoting François Habeneck, *Méthode théorique et pratique de violon* (Paris: Canaux, c.1840), 78.

5.8. THE THIRD OCTAVE

Historical sources:

The seven semitones above high C³ (C^{#3} through G³) comprise the uppermost reaches of the nineteenth-century oboe's ambitus. This 'third octave' was notoriously risky, and both tutors and orchestration treatises caution against its use. Garnier observes that "*these four notes [D^{#3}, Eb³, E³ and F³] are rarely used because they can be detrimental to the musician's talent.*"³⁴² A decade earlier, Vanderhagen remarked that "*the four last notes of the scale do not have fixed fingerings since teachers of the instrument use different combinations to produce these notes that extend beyond the standard range, which ends at high D.*"³⁴³ Kastner (1836) notes that the oboe's "*highest and lowest notes must be used with caution, because they are difficult to produce and even create a comical effect when used in rapid passagework*",³⁴⁴ and Dauprat (1857) observed the same.³⁴⁵ Even in 1880, Garimond notes that the high E and F are "*très peu usité*" (i.e. very seldomly used). Nonetheless, the fingering charts of virtuosos such as Vogt (1816), Brod (1826) and Vény (1828) all go up to G³, while that of Sellner (1824/27) astonishingly climbs to A³, a note not seen in oboe literature until well into the twentieth century. By the early nineteenth century, the oboe's third octave had long been used as a special effect in solo works. For example, as early as c.1750, Matteo Bissoli included F³ in a solo sonata with continuo. Mozart made dramatic use of the note in his oboe quartet KV 370 (1781) by ending the work on F³, and it makes an appearance in many classical concertos such as those by Lebrun, Fiala and Krommer.³⁴⁶ In much the same way, French composers such as Garnier, Brod, Vény and Vogt used the note as a final flourish in their works for solo oboe, with F³ often making a cameo appearance at the end of a solo passage before segueing into the final tutti ritornello. Vogt notes that the four semitones from C³ through Eb³ are "very lovely" ("*forts belles*") and that to play them securely one must pinch the lips. Conversely, he notes that the next four semitones (E³ through G³) are "extremely risky. They

³⁴² Francois-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, c.1802), 16. "*Ces quatre note[s] [sont] peu usité[s] parce qu'elle[s] nuisent au talent.*" Nonetheless, Garnier used these notes liberally in his 'Quintet/Concerto' c.1797. A modern edition of this work has been made available by Florence Badol-Bertrand.

³⁴³ Armand Vanderhagen, *Méthode nouvelle et raisonnée pour le hautbois* (Paris: Boyer, ca. 1792), 2. "*Les quatre dernières notes [sic] de la gamme [...] n'ont point de doigté déterminé car les professeurs de cet instrument employant différentes positions pour faire les notes qui passent l'étendu ordinaire qui est le re de la seconde octave.*"

³⁴⁴ Jean-Georges Kastner, *Traité général d'instrumentation* (Paris: Philipp, 1836). "*Les notes les plus hautes ainsi que les plus basses doivent être employées prudemment, parcequ'elles [sic] sont difficiles à intonner et produiraient même un effet comique dans les morceaux très rapides.*"

³⁴⁵ Louis-François Dauprat, *Le professeur de musique : ou, L'enseignement de cet art : mis à la portée de chacun...* (Paris: Quinzard, 1857), 106. "[...] *dans l'accompagnement, on ne dépasse guère le ré de la deuxième octave.*"

³⁴⁶ The note is also frequently featured as a final flourish in later nineteenth-century solo concertos by German composers, such as those by Rietz, Kalliwoda and Molique.

must be used only in final passages leading into cadences [in concertos], or in orchestral solos because, as their tone quality is not large, they have no effect at all in the midst of the orchestra.”³⁴⁷

Vogt’s warning appears to have been heeded by most early nineteenth-century French composers, and in their orchestral works the third octave is only rarely encountered. Nonetheless, numerous exposed solos written by Berlioz in the 1830s, for example those in *Roméo et Juliette*, *Le roi Lear* and *Benvenuto Cellini*, freely exploit the oboe’s uppermost reaches and require the player to move freely between D³, D^{4/3} and E³. Burgess notes that

Berlioz’s orchestral writing stretched the oboe’s range more than any other mid-nineteenth-century composer did. [...] Berlioz did this in an effort to create more brilliant orchestration than Gluck, whom he criticised for constantly keeping the treble instruments in the middle register.³⁴⁸

In his *Grand Traité*, the composer indicates that solos for the oboe should not be written beyond E³, and that anything beyond this range sounded “*flabby or thin, harsh or garish and [...] of rather poor quality.*”³⁴⁹ There seems to have been consensus that notes above E³ were acoustically poor, and as late as 1954, Charles Koechlin remarks that, because the French oboe school sought to “*equalise dynamics throughout the scale*” composers could be sure that “*E, F and even F# no longer sound thin and skimpy as was almost always previously the case.*”³⁵⁰

³⁴⁷ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 93. “*sont extrêmement scabreuses ; on n’en doit faire usage que dans les traits finals qui précèdent la cadence, dans les Concertos, ou dans les parties d’orchestre comme Solo, car dans les masses d’orchestre elles seraient sans aucun effet, la qualité de son n’en étant pas assez volumineuse.*”

³⁴⁸ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 145.

³⁴⁹ Hector Berlioz, *Grande traité d’instrumentation et d’orchestration modernes* (Paris: Henry Lemoine, 1844), 104: “*flasques ou grèles, durs ou criards et [...] d’une assez mauvaise qualité.*”

³⁵⁰ Charles Koechlin, *Traité de l’orchestration* (Paris: Eschig, 1954), 21-22. “[...] *égaliser les nuances sur toute l’échelle.*” Koechlin goes on to demonstrate how early twentieth-century French composers such as Ravel and Milhaud freely exploited the oboe’s range in the orchestra up to G³. Of course, Koechlin was describing the modern conservatoire model, an oboe with very different acoustic properties from the simple-system.

Ex. 5.16. Berlioz: *Le roi Lear* (1831) - oboe solo

An even more prominent solo is featured in Berlioz's concert overture *Rob Roy* (1831), this time for cor anglais. Berlioz would later recycle this particularly melancholic theme as the opening viola solo in *Harold en Italie* (1834):

Ex. 5.17. Berlioz: Overture to *Rob Roy* (1831) - cor anglais solo

The oboe's third octave had to speak, and the risks for the performer were very high. Literally dozens of different fingerings can be found for each of these notes in nineteenth-century tutors,

and as Berr comments for the clarinet in his 1836 *Méthode*, its five uppermost notes are in fact “artificial tones for which there are no established fingerings.”³⁵¹

Personal experience

Not surprisingly, it is once again Brod who provides third octave fingerings most compatible with the Adler oboe, and although they do not use an octave key, they allow for surprisingly smooth navigation and response. The Adler speaks reliably above D³, and one gets the impression that the instrument was almost designed to be at home in this register. Given that reeds are discussed at length in the following chapter, I will only briefly note here that, in order to have a secure attack in the third octave, I have found it especially advantageous to use narrower French-style reeds as described by Brod. His tip width of 7.0 mm facilitates speaking in this register, and I have found that reeds with tips wider than 8 mm become unreliable above D³. Likewise, Brod’s short, bevelled scrape, which leaves a large amount of bark exposed, helps to secure response, whereas the long scrape used by many hautboists nowadays produces a less reliable attack in this register. Finally, it should be noted that modern conservatoire third octave fingerings do not yield satisfactory results on the Adler oboe.

Berlioz was not alone in writing for the oboe in this tessitura: Fromental Halévy also invoked the instrument’s upper register in the following cantilena from *La Juive* (1835), and to perform the excerpt below I have found Brod’s fingerings indispensable for their easy navigation and response.

The image shows a musical score for oboe solo, consisting of two systems of music. The first system is marked 'Allegretto' and 'pp' (pianissimo). It features a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody is characterized by a series of eighth-note runs and slurs, moving upwards in pitch. The second system continues the piece, also marked 'pp' and 'Roll'. It includes a triplet of eighth notes and a 'Roll' instruction, indicating a rapid, tremulous passage. The bass line in both systems provides harmonic support with chords and single notes.

Ex. 5.18. Halévy: *Boléro “Mon doux seigneur et maître”* - Act III, *La Juive* (1835)

oboe solo, mm 1 - 11

³⁵¹ Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836). “Sous factices pour lesquels il n’y a pas de doigté fixe.”

On the adjacent creative portfolio, several passages, such as the two excerpts below ([Bochsa](#) and [Brod](#)), call for the third octave. In both of these instances, I opted for Brod's fingerings which provided optimal tuning and response. As Vogt remarks, both composers reserve the third octave to make a climactic flourish near the end of their works.



The image shows three staves of musical notation. The top staff is in G major (one sharp) and contains a melodic line with slurs and accents. The middle staff is in D minor (two flats) and contains a piano accompaniment with dynamic markings: 'cresc.', 'Agitato', 'f', and 'p'. The bottom staff is in D minor and contains a bass line with dynamic markings: 'f'.

Ex. 5.19. Bochsa: *Nocturne in D minor*, op. 50 no. 1 for oboe and piano (c.1816)



The image shows a single staff of musical notation in G major. It features a melodic line with slurs and accents, ending with a flourish in the third octave. Dynamic markings include 'fp' and 'pp'.

Ex. 5.20. Brod: *Elégie sur la mort d'un objet chéri* for oboe and piano (c.1838)

5.9. VIBRATO

Historical sources

While the practice of vibrato on woodwind instruments in the nineteenth century still requires further research, up until about 1900 it was viewed almost exclusively as an ornamental feature. Brown notes that there was a “broad consensus among the great majority of musical authorities that the basic sound should be a steady one and that vibrato, along with other ornamental techniques, should occur as an incidental colouring or embellishment on particular notes.”³⁵²

Types of woodwind vibrato that can be identified in contemporary sources include *finger* vibrato (Fr: ‘*flattement*,’ where a finger is used to repeatedly and partially cover the edge of the nearest open hole below a given fingering, and which by definition lowers the pitch of the note being held³⁵³) and *breath* vibrato (also known as *chest* vibrato, achieved by varying the intensity of pressure in the airstream, producing a ‘wa-wa’ effect well known to hautboists in the works of J. S. Bach,³⁵⁴ and which corresponds to bow vibrato on string instruments, that is, a pulsation on a note *without* pitch variation). Brown observes that “the modern concept of continuous vibrato as a fundamental element of tone production began to evolve [...] only towards the end of the nineteenth century.”³⁵⁵ Indeed, it is significant that there are no references to it in the corpus of nineteenth-century woodwind tutors. Produced by the throat or diaphragm in modern oboe technique, the following twenty-first century observation would certainly have been regarded with bewilderment by nineteenth-century audiences:

as an essential adjunct to the realisation of each phrase, [v]ibrato forms a vital technique in the armoury of every mature performer. [...] Listening to great musicians from around the world merely confirms how essential is its admittance (or deliberate omission) to the integrity, goal and flowering of every phrase, and every note within it.³⁵⁶

The omnipresence of vibrato in oboe tone production is relatively recent, though, and in 1957 Baines could still observe that:

On the continent and in America [...] Vibrato, if heard at all, is typically of the fast ‘instinctive’ kind, introduced to heighten a phrase at its climax, rather than of the

³⁵² Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (Oxford University Press, Oxford: 2002), 521.

³⁵³ John Gunn, *The Art of Playing the German Flute* (London, c.1793), 13. Describes by Gunn as “*made by approaching the finger to the first or second open hole, below the proper note that is sounded, and moving it up and down over the hole, approaching it very near each time, but never entirely upon it*”.

³⁵⁴ Such as the bass recitatives accompanied by double-reed choir from the second cantata of the *Weihnachtsoratorium*, and often notated by Bach as a tie over the same pitch.

³⁵⁵ *Ibid.*

³⁵⁶ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), 52.

slower, incessantly-continued tremulant so common in England. One may feel that one is hearing the oboe for a change, rather than the oboist.³⁵⁷

In France during the first half of the nineteenth-century, references to vibrato in any form and on any instrument are scarce; in fact, Habeneck, in his *Méthode théorique et pratique de violon* (c.1840), omits any mention of it altogether. Reference to a form of modern left-hand string vibrato is described in Baillot's *L'Art du violon* (1834), where he describes an "*ondulation produite par la main gauche.*" He states that while

*the rocking of the finger momentarily modifies the pitch of the note [the undulation] produces a sound analogous to the human voice when it is strongly touched by emotion. This form of expression is very powerful, but if overused it runs the risk of distorting the melody and stripping the style of that precious innocence which is the greatest charm of art.*³⁵⁸

Concurrently, Baillot describes bow vibrato ("*ondulation produite par l'archet*") that, because it does not alter the pitch of a note, produces a "*calm and pure [...] sort of palpitation*" which he notates as a slur over four dots. In the French translation of his *Violinschule* (1832), Spohr dedicates three pages to *tremolo*, the execution of which appears to be similar to modern vibrato. He instructs to: "*shake the string without too much stiffness. This implies that intonation will be slightly affected, either going up or down. It is made by a trembling movement in the left hand, towards the bridge, but the effect must be almost imperceptible.*"³⁵⁹ Spohr viewed vibrato as a sort of ornament, and describes four very specific types of it: "fast, for sharply accentuated notes; slow, for sustained notes in impassioned melodies; accelerating, for *crescendos*; decelerating, for *decrescendos.*"³⁶⁰

No reference to vibrato can be found in oboe tutors from the first half of the nineteenth-century, not even those by Brod (1826/30), Sellner (1827) and Barret (1850), otherwise highly articulate in describing concepts of expression and phrasing. Burgess notes that

³⁵⁷ Anthony Baines, *Woodwind Instruments and Their History* (London: Faber & Faber, 1957), 93.

³⁵⁸ Pierre Baillot, *L'Art du violon* (Paris: Imprimerie du Conservatoire, 1843), 138. "*Le balancement du doigt altère momentanément la justesse du ton. [...] L'ondulation placée avec discrétion donne au son de l'instrument beaucoup d'analogie avec la voix lorsqu'elle est fortement émue. Ce moyen d'expression est très puissant, mais s'il était souvent employé, il aurait bientôt perdu la vertu d'émouvoir et n'aurait plus que le dangereux inconvénient de dénaturer la mélodie, et de faire perdre au style cette précieuse naïveté qui fait le plus grand charme de l'art.*"

³⁵⁹ Louis Spohr, *Violinschule* (Vienna: Haslinger, 1832). French translation: *Ecole ou méthode pour le violon à l'aide du teneur de violon, traduit de l'allemand par Mr Heller* (Paris: Richault), 147. "*il faut donc agiter la corde sans trop de raideur, ce qui nécessite de dépasser un peu la justesse de l'intonation, soit en montant ou en descendant, on l'obtient par un mouvement tremblé de la main gauche, dans la direction du chevalet, mais il doit être presque insensible à l'oreille.*"

³⁶⁰ Translation from *The Cambridge Historical Performance Encyclopedia*, ed. Lawson and Stowell (Cambridge: Cambridge University Press, 2018), 653.

Nowhere does Vogt mention vibrato, but one of his comments suggests that he did not approve of regular and uncontrolled fluctuations in the tone. In the section on the formation of the embouchure [...] he cautions the player to hold the lips firmly against the teeth to prevent a trembling effect which is harmful to the sound. Vogt was concerned to play all notes of the instrument as evenly as possible.³⁶¹

It is therefore not surprising that Maria Bania, who has published a comprehensive study of vibrato techniques on the flute between 1800 and 1900, reveals that “the lack of vibrato-related information in the French flute methods from the late 18th century persists in the 19th century. The treatises by [Peraut, Hugo, Wunderlich, Berbiguier, Drouët, Walckiers, Tulou, Camus, and Dorus] are all completely silent on this matter. These well-written methods (many of them used at the Paris Conservatory) had a huge influence on French flute playing and reflect the praxis of their time.”³⁶² An exception to this is the *Méthode pour servir à l’enseignement de la nouvelle Flûte* by Victor Coche (1838), in which the author describes a sort of chest vibrato indicated by an accent symbol:

*That which is called vibration of the voice in the art of singing, is equally practised on instruments. It is the action of producing the first sound with force, and the second much more sweetly. This kind of accent is recognizable in musical notation by the chevron > placed above or below the note which one is supposed to vibrate strongly.*³⁶³



Ex. 5.21. Victor Coche - *Méthode pour servir à l’enseignement de la nouvelle Flûte* (Paris, 1838), 82.
Explanation of “vibration”

³⁶¹ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham, MD: Scarecrow Press, 2003), 39.

³⁶² Maria Bania, ““Sweetenings” and “Babylonish Gabble”: Flute Vibrato and Articulation of Fast Passages in the 18th and 19th centuries,” (PhD diss., University of Gothenburg, 2008).

³⁶³ *Ibid.*, 101, quoting Victor Coche, *Méthode pour servir l’enseignement de la nouvelle Flûte* (Paris: Schonenberger, 1838). Original Fr: “Ce que l’on appelle vibration de la voix, dans l’art du chant, se pratique également sur les instruments. C’est l’action de produire le premier son avec force et le second beaucoup plus doucement. Cette sorte d’accent se reconnaît dans l’écriture musicale au chevron > placé au dessus ou au dessous de la note qu’on doit faire vibrer fortement.”

Contemporary German flute tutors tended to be more eloquent on the matter, with the eighteenth-century term *Bebung* (described by Mattheson, Marpurg and C.P.E. Bach when referring to the tremolo effect produced on the clavichord, and notated as a slur with dots over the note) carried over to the nineteenth century and used to refer to what we would characterise today as breath or chest vibrato. Fürstenau in his *Flöten-Schule* (Leipzig, 1826) gives an account of the sparing application of *Bebung*, noting: “*if it is to be wholly certain of its aesthetic success, [it] must finally be confined every time to a single note, and indeed, to the one on which the culmination point of the passionate feeling occurs, and even here, yet again, to a three- or four-fold quivering motion.*”³⁶⁴ Elsewhere in the same publication, he uses the term *Klopfen* to describe finger vibrato. Meanwhile, in his *Elementarbuch für Flötenspieler* (Leipzig, c.1815) Müller also describes what would appear to be breath vibrato, produced by varying the degree of air pressure given: “*this embellishment [the word Tremolo or several dots over a note] can only be produced by a moderate increase or decrease of wind pressure.*”³⁶⁵

In Britain, John Gunn calls finger vibrato a “sweetening” or *flattement* in *The Art of Playing the German Flute* (London, c.1793), where he instructs the flautist to approach “*the finger to the first or second open hole, below the proper note that is sounded,*”³⁶⁶ echoing Quantz’s instructions for producing *flattement* in his 1752 *Versuch*, as well as Tromlitz in his *Ausführlicher und gründlicher Unterricht die Flöte zu spielen* of 1791. As in Germany, it is clear that in Britain, *flattement*, or finger vibrato, was the predominant form used on the flute until at least 1850, as it was mentioned in no less than five different flute tutors published between 1815 and 1850.³⁶⁷ Clinton goes as far as to observe that finger vibrato, “*when judiciously employed [...] heightens the effect.*”³⁶⁸ Brown summarises this, noting “the finger vibrato remained a standard part of the flautist’s technical equipment for at least the first half of the nineteenth century.”³⁶⁹

It is safe to surmise that contemporary performance techniques used by flautists would have been transferable and practised on other woodwind instruments such as the oboe, and that by extension, solo works for oboe composed during the first half of the nineteenth century would have incorporated both finger and breath vibrato in strategic spots to heighten expressivity.

³⁶⁴ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (Oxford University Press, Oxford: 2002), 530 (quoting Fürstenau 1826).

³⁶⁵ *Ibid.*, 542.

³⁶⁶ John Gunn, *The Art of Playing the German Flute* (London, c.1793), 13.

³⁶⁷ Nicholson’s *Complete Preceptor for the German Flute*, London c.1816; Weiss’ *A New Methodical Instruction Book for the Flute*, London c.1821; Alexander’s *Complete Preceptor for the Flute*, London c.1821; Lindsay’s *The Elements of Flute Playing*, London 1828; Clinton’s *A School or Practical Instruction Book for the Boehm Flute*, London, c.1850.

³⁶⁸ John Clinton, *A School or Practical Instruction Book for the Boehm Flute* (London: Cramer, Beale & Co. 1846).

³⁶⁹ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (Oxford University Press, Oxford: 2002), 544.

Nonetheless, as Pustlauk observes, the extremely small tone holes of the oboe would make finger vibrato (and, incidentally, portamento) difficult if not impossible to execute convincingly. As previously stated, the introduction of *brille* in 1840 and pierced pads covering tone holes in the 1840s on Triebert *système* oboes would make *flattement* all but impossible on certain notes. Nonetheless, as late as 1847, there is evidence to the contrary. Remarkably, neither Bania nor Brown mention an extensive chapter on what Eugène Jancourt describes as *vibration* and *tremblement* in his *Méthode théorique et pratique pour le basson*, Op.15 (Paris, 1847). The entire passage will be cited here as it is directly relevant to our consideration of the practice of vibrato on double-reed instruments in the first half of nineteenth-century France:

Tonal vibration must not be confused with other graces. It is not an ornament guided by taste, but rather the result of a profound feeling expressed on the instrument. When a speaker is deeply moved by the topic he defends, and when he speaks from the soul, his voice experiences a kind of sympathetic vibration; the same can be said of a singer who feels strongly about that which he expresses. What nature has done for the speaker and the singer, so too must art and sentiment do for the bassoon [...] This vibration is produced by shaking the right hand above the tone holes. [...] Its practice should not be abused because the effect loses its power as soon as it seems calculated; only when the artist's soul is deeply moved can he impress upon the listener these emotions; only then, when guided by sentiment, can this quivering [tremblement] produce a guaranteed effect, otherwise it becomes ridiculous. Below I have included an example of notes that feature an audible vibration [vibration sonore] without tonal variation [altération du son], and have indicated them with dots (...)³⁷⁰

Jancourt then goes on to list ten specific pitches that can benefit from the *tremblement* (“notes whose timbre produce a sympathetic effect”) and, remarkably, certain notes where it is produced by flapping two or three fingers simultaneously. Eugène Louis-Marie Jancourt (1815–1901), who had studied with Gebauer at the *Conservatoire de Paris* and later became the professor of bassoon at that institution, was considered to be one of the most influential bassoonists of the nineteenth century. At various stages, he held principal positions at the *Opéra-Comique* and the *Théâtre-Italien* and was a member of the *Société des Concerts du Conservatoire* for over thirty years. It is clear that Jancourt describes a form of finger vibrato, yet the closing passage, where he refers to notes that have a “*vibration sonore sans altération du son*” is perplexing. May he have

³⁷⁰ Eugène Jancourt, *Méthode théorique et pratique pour le basson*, op.15 (Paris, 1847), 44. “*La VIBRATION du son ne doit pas être confondue avec les agréments. Ce n’est point un ornement dicté par le goût, mais bien le résultat d’un sentiment profond exprimé sur l’instrument. Lorsqu’un Orateur est profondément pénétré du sujet de son discours, et lorsqu’il parle suivant son âme, sa voix éprouve une sorte de vibration sympathique ; il en est de même du chanteur qui sent vivement ce qu’il exprime. Ce que la nature a fait pour l’orateur et le chanteur, l’art et le sentiment réunis doivent le faire pour le Basson [...] On obtient cette vibration au moyen du tremblement de la main droite au dessus des trous. Il ne faut point en abuser, car son effet manque dès qu’il semble calculé ; l’Artiste qui sent profondément et dont l’âme est émue, peut seul faire comprendre à l’Auditeur l’émotion qu’il éprouve ; c’est alors que le tremblement produit un effet assuré, car il est dicté par le sentiment, sinon il devient ridicule. J’ajoute ici une Exemple pour les notes qui comportent une vibration sonore sans altération du son. Je les désignerai par des point (...)*”

been referring to a form of modern-day vibrato, of a pulsation with no alteration of pitch? Several historical bassoonist colleagues have confirmed that shaking the right hand on the bassoon does not in fact impact pitch, which would make Jancourt’s mention of “audible vibration without tonal [pitch?] variation” logical. This is therefore a type of *flattement* that does not alter the pitch of a note.

J'ajoute ici un Exemple pour les notes qui comportent une vibration sonore sans altération du son, Je les désignerai par des points. (.....)

Andante con espressivo. (♩ = 80)

EXEMPLE.

Ex. 5.22. Eugène Jancourt - *Méthode théorique et pratique pour le basson*, op.15 (Paris, 1847), 45.
Explanation of “vibration”

In any case, it is noteworthy that, unlike the vast majority of contemporary sources in England and Germany, Jancourt does *not* consider vibrato to be an ornament, but rather a spontaneous by-product of deeply felt expression. As such, he adheres to Brown’s observation that “in the nineteenth century, contrary to current notions of what is appropriate to the performance of so-called Romantic music, it seems very likely that vibrato [...] was introduced more for its expressive qualities than as one among a host of ornaments with which an individual note could be enlivened.”³⁷¹

Because Jancourt cautions that the effect cannot be produced on all notes (presumably because certain tone holes were covered by pads), its practice seems to have endured even after the apparition of keys on the instrument; by extension it is plausible that a similar technique was practiced on the oboe. At the time of Jancourt’s publication, some oboes had up to 14 keys; as such, on the Triebert *système 4* (released in 1843), *flattement* would only be possible on eight notes (A^{1,2}, G#/Ab^{1,2}, G^{1,2}, and E^{1,2}), since all of the other tone holes were covered by keys or pads.

³⁷¹ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (Oxford University Press, Oxford: 2002), 529.

In light of the finger vibrato described by Jancourt, the chest vibrato reported by Coche, and the absence of any other references to it in all other French woodwind tutors, a clear picture emerges that the use of vibrato in France was not widespread. In an overview of literature from the period, a ‘less is more’ aesthetic quickly emerges, and high praise of simple phrases (*chants simples*) and natural expressivity abounds in early nineteenth-century French tutors. Indeed, Jancourt and Coche apply ‘*vibration*’ sparingly and only in strategic places that seem logical from a modern ‘long-line’ phrasing perspective, avoiding its use on cadential notes. Nonetheless, as if to foil any attempts of categorically dismissing vibrato on the oboe, the following quote by Dauprat (1857) tells a different story:

[...] *it has become fashionable to make the voice quiver on all held notes. This is called ‘faire vibrer les sons,’ proof that some take pride in what taste has frowned upon [...]. Instrumentalists who wish to imitate this type of charade have also begun to ‘quiver,’ either with their wrists on the neck of the violin or cello, or with their fingers over the holes of the flute or oboe. But let us never deviate from that which is true and natural; anything else in the arts is but mannerism or charlatanism.*³⁷²

Personal experience

During my ‘baroque’ oboe graduate studies, my professors repeatedly requested that I eliminate any trace of vibrato from my playing. Having initially been trained as a modern oboist, I had come to view vibrato as an ‘essential adjunct’ of tone production and used it almost continuously and unconsciously (a vibrato-less tone on the oboe is not at all popular nowadays). In fact, as with many modern singers, I had been trained to highlight a particularly expressive note by *omitting* vibrato. After completing my studies with Bruce Haynes, I came to view vibrato as ornamental, and used it sparingly, even on held notes. I believe that this approach can be heard in the Marais earlier on in this chapter, where I vibrate in only two strategic locations (on the D³ in measure 6, and on the B-flat² in measure 4, see excerpt in section 5.3.). In professional settings, however, and especially in recordings, I was required to reintegrate vibrato into performances on the baroque and classical *hautboy*, in order to comply with numerous explicit requests from conductors and sound engineers to ‘be more expressive,’ and was yet again confronted with another of Butt’s ‘selective uses of historical evidence.’ Over time, what I initially viewed as a professional constraint, I have come to regard as a personal preference, and I now use throat vibrato

³⁷² Louis-François Dauprat, *Le professeur de musique : ou, L’enseignement de cet art : mis à la portée de chacun...* (Paris: Quinzard, 1857), 82. “[...] *il est devenu de mode de faire trembloter [sic] la voix sur tous les sons tenus. On appelle cela faire vibrer les sons, et l’on se fait un mérite de ce que le goût réproûve [...]. Les instrumentistes qui veulent imiter cette sorte de mensonge font aussi trembler, soit le poignet sur le manche du violon ou du violoncelle, soit le doigt sur les trous de la flûte ou du hautbois. Ne sortons jamais de la nature et de la vérité; hors de là, tout, dans les arts, n’est qu’affectation ou charlatanisme.*”

(pulsation without pitch alteration) quite freely when performing on nineteenth-century oboes such as the Adler.³⁷³ Yet instead of considering it to be an ‘essential adjunct’ of tone production (as taught in modern oboe pedagogy), I apply vibrato consciously and intermittently to heighten the expressivity on a given note or to build up intensity in a phrase. An example of this approach can be heard [here](#), in an oboe solo from Beethoven’s second piano concerto in B-flat major, op. 19 (1801).



Ex. 5.23. Beethoven: Second Piano Concerto in B-flat major, op. 19 (1801)
Second mvt oboe solo

Likewise, in [recording the cor anglais solo](#) (and in many subsequent performances) of *Ich bin der Welt abhanden gekommen* from Mahler’s *Rückert-Lieder* (1901), I was asked by both the soloist and conductor to use long-line phrasing (“no small shapes, no hairpins!”) and copious amounts of vibrato, despite the fact that both practices are anachronistic with Mahler’s music.



Ex. 5.24. Mahler: *Ich bin der Welt abhanden gekommen* (*Rückert-Lieder*, 1901)
cor anglais solo

In performances of French eighteenth-century chamber music before 1780, I also practice a moderate amount of *flattement* or finger vibrato (as in the Marais excerpt), but, as can be heard on the adjacent portfolio of recordings, I have consciously refrained from using it in nineteenth-

³⁷³ It has been my observation that many of today’s most influential hautboy players employ a substantial amount of modern throat vibrato in their performance: Marcel Ponselee’s copious use of it in recordings of Bach from the 1990s is but one example. Conversely, other performers such as Alfredo Bernardini tend to avoid its use. In the end, it would appear that the use of vibrato, and whether it is viewed by the performer as an integral element of tone production, is highly personal.

century repertoire (both orchestral and chamber), as I feel that it produces an unfamiliar effect that current aesthetics simply would have difficulty assimilating.

In the [Bochsá excerpt below](#), I have used throat vibrato sparingly in certain passages and more generously in others, and often employ it strategically to highlight or accent a given note, or to intensify a crescendo. In other instances, I have chosen to vibrate on certain held notes to enrich or enliven their tone.

Ex. 5.25. Bochsá: *Nocturne in D minor*, op. 50 no. 1 for oboe and piano (c.1816)

It is likewise significant to note here that the majority of the historical oboists who participated in the survey in Appendix II have consciously chosen to incorporate vibrato into their performances of nineteenth-century repertoire. The general conclusion drawn from these interviews revealed that collectively, the respondents believe that vibrato should indeed be used “parsimoniously” and strategically, or rather, “musically” as one participant phrased it, and not applied constantly or “continuously like singers.” Taka Kitazato articulated my own personal approach to vibration, noting:

I like it. Without vibrato, from the beginning to the end of the nineteenth century, is a bit odd. In the entire history of music it was never used before? I can't believe this. The

question is *how* to use vibrato. *No* vibrato vs. *sempre* vibrato. A tiny bit, used to make a note shine, to be more expressive, that I really like.³⁷⁴

³⁷⁴See Appendix II for a complete overview of participant commentaries.

6. TIMBRE

*“The first requirement of a wind instrument is a beautiful tone. Of all the wind instruments, the oboe presents the most difficulties in this regard, because its tone is one of the most strident.”*³⁷⁵

Such was the opinion of Gustave Vogt in his *Méthode de hautbois* (c.1816), whose own reedy, pungent tone was heard by many a concert-goer in early nineteenth-century Paris. Yet how does one objectively qualify ‘*une belle qualité de son*’? Indeed, knowing exactly what the early nineteenth-century French oboe may have sounded like is beyond our reach, since as Jenkins notes, “The past has occurred. It is gone and can only be brought back by historians in very different media, for example books, articles, documentaries, etc., not as actual events.”³⁷⁶ Likewise, the absence of sound recordings makes it all but impossible for us to recapture soundscapes of a long-lost age with any certainty of accuracy. Nonetheless, literary remnants can help in reconstructing a contemporary image of the timbre and tonal identity of the oboe in France between 1800 and 1850, if only to shed light on how the instrument was viewed and received during our period of study, essential in helping us revive part of that soundscape. Primary sources including tutors, orchestration manuals, encyclopaedic entries, articles in the musical press, concert reviews, and personal correspondence have already been thoroughly documented, analysed and compiled by Burgess in many of his publications, most notably in his article *The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature*,³⁷⁷ where the author has done much to reconstruct the aural identity of the French Romantic oboe.

Timbre can be defined as the “characteristic of a tone which depends upon the richness of its harmonic structure. [It is an] instantaneous cross section of the tone quality.”³⁷⁸ Ledet observes that, to a certain extent, timbre is dependent on what he calls the “sociological acceptance of

³⁷⁵ Gustave Vogt (c.1816), quoted in Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt*. (Lanham: Scarecrow Press, 2003), 81. “*La première chose qu’on exige d’un instrument à vent est une belle qualité de son; le hautbois est celui de tous les instruments de cette nature qui offre le plus de difficultés à cet égard.*”

³⁷⁶ Keith Jenkins, *Re-thinking History* (London & New York: Routledge, 1991), 7.

³⁷⁷ Geoffrey Burgess, ‘The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature’ in *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. Utrecht 1994, ed. David Lasocki (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994).

³⁷⁸ David A Ledet, *Oboe Reed Style: Theory and Practice*. (Bloomington: Indiana University Press, 1981), 42-43. Ledet identifies the composite factors that make an instrument’s timbre audibly distinguishable, which are “the number, intensity, distribution, and phase relations of the partials that make up the tone.” While the scientific analysis of acoustics stands outside the brief of this dissertation, Ledet defines partials as “the result of out-of-tune harmonics, difference tones, summation tones, reed buzz, and air noise. In the composite oboe sound there is a formant range just below C”” (the top C on the piano) this is about four times louder than the fundamental range. This formant, it has been suggested, is what gives the oboe its characteristic sound.”

styles of playing” dictated by the listener/audience, noting that “our musical society [...] has grown over the years to accept and prefer a certain type of oboe sound. In other words, *it is thought that the oboe should sound a certain way.*”³⁷⁹ Glenn Gould held the recording industry partially accountable for these preconceived notions, observing that the “preferences engendered by phonographic reproduction [...] will determine to a considerable extent the kind of sound with which we shall want our musical experiences to be endowed.”³⁸⁰ And while this is certainly true of our own era, in the era of Brod and Berlioz the oboe was also expected to ‘sound a certain way,’ as can be surmised from the didactic, organological, and musicological primary sources we will briefly touch upon below. Whether that sound was different from what *we* expect an oboe from their time to sound like can never be fully ascertained, for although we are able to retrieve one of the three components of the oboe-reed-oboist tripartite unit described earlier on (namely, the oboe) and we can attempt to reconstruct another (the reed), the third and conceivably most influential component (the oboist and their personal style of playing) is irretrievably lost. Furthermore, it is impossible for us to fathom just how greatly listener/audience expectations may have shifted over the past two hundred years. To appreciate the extent to which our own ‘sociological acceptance’ has shifted, we need only look (or rather, listen) back two or three decades, for as Salter notes, “styles are shifting across the borders of Europe. [...] It is of some fascination to compare the changes that have overtaken the oboe world even in these last thirty years, for, on the whole, tone has strengthened, unified and darkened.”³⁸¹ The same author notes that styles are beginning to shift among the “younger European generation [where] there is enormous fluidity as students and professionals move around Europe. What is striking is how much more ‘Baroque’ many of the fuller Italian, Iberian, Scandinavian and Chinese [reed] designs can sound.”³⁸² The ‘Eurosound’ Salter coins is attributed to the fact that “oboe tones have darkened and merged worldwide. It is no longer possible instantly to name any orchestra solely by the originality of the oboe playing – as we all used to do, astounding non-cognoscenti.”³⁸³

Indeed, if within the span of a single generation the sound of the oboe has undergone audible changes, they are minor when compared to the soundscapes one discovers on century-old recordings from the early 1900s. Take, for example, the 1906 recording of Paris’ *Orchestre de la Garde Républicaine* in the *Idylle bretonne* for two oboes and orchestra by Jules Pillevestre (1837-1903).³⁸⁴ While the soloists’ thin tone and liberal use of a quick, tremulous vibrato may not appeal

³⁷⁹ *Ibid.*, 53. Italics are mine.

³⁸⁰ Glenn Gould, ‘The Prospects of Recording,’ *High Fidelity Magazine* (Vol. 16, April 1966).

³⁸¹ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), xiii.

³⁸² *Ibid.*, 149.

³⁸³ *Ibid.*, 133.

³⁸⁴ This recording can be heard here: <https://open.spotify.com/track/0L19zlgBIGfqvYRi2olBq6>, with further details here: <https://www.oboeconcerts.com/digital/Archive%20France1%20details.pdf> (accessed 19 Sept 2022)

to our postmodern ears, Louis Gaudard (1890-1920) and Camille Montenat (dates unknown) were leading oboists of their time, mimicking a style of vibrato that was the height of fashion at the turn of the twentieth century, as heard in many operatic recordings by widely acclaimed singers such as Gemma Bellincioni, Fernando de Lucia and Alessandro Bonci.³⁸⁵ It is therefore highly probable that an equivalent if not greater discrepancy in timbre also existed between Brod's time and that (or those) encountered in the early twentieth century. On this, Ledet observes:

over the years styles of playing have changed as players have found it necessary to meet technical and aesthetic demands of changing musical eras, social preference, and the desires of players, composers, conductors, and public for a particular oboe tonal quality. Closely interrelated changes in the oboe, the methods of tone production of the player, and the dimensions of the reed styles have resulted from and contributed to these changes in playing styles.³⁸⁶

Our extreme limitations in knowing just how Brod and his contemporaries may have sounded are further alluded to by Brown, who, using both written accounts and recorded sound to explore the use of vibrato in the late nineteenth century, notes that a:

Comparison of the two is instructive, for it illustrates that words do not always prepare us for what we hear; different speeds, degrees of pitch variation, and fluctuations of intensity [...] would be difficult if not impossible to extrapolate from the written record. So in the study of earlier periods, when the aural source is not available, it is necessary to accept that however much information is assembled and whatever patterns of change are identified, we are still far from knowing what kinds of sounds would have been considered tasteful and beautiful by our forebears.³⁸⁷

The subjectivity and mutability of taste should therefore not be understated, for just as the aesthetic premises of twentieth-century performing styles may not have appealed to a nineteenth-century audience (Taruskin considers that "Beethoven would have listened to Mr. Norrington's rendition [of his symphonies] with utter discomfort and bewilderment"³⁸⁸), those of the nineteenth century, about which we can only hypothesise, may likewise not appeal to listeners of our time.

³⁸⁵ Richard Taruskin makes a similar analogy with portamento in string playing which, though historical, is unadapted to modern taste: "Listen sometime to the single-sided acoustical 78 of Mischa Elman's quartet playing Tchaikovsky, circa 1914, and see if you can keep a straight face at their authentic scoops and slides, transmitted to Elman directly from his teacher Leopold Auer, for whom Tchaikovsky wrote his violin concerto." *Text and Act: Essays on Music and Performance*. (Oxford: Oxford University Press, 1995), 169.

³⁸⁶ David A Ledet, *Oboe Reed Style: Theory and Practice* (Bloomington: Indiana University Press, 1981), 46.

³⁸⁷ Clive Brown, *Classical & Romantic Performance Practice 1750-1900* (Oxford University Press, Oxford: 2002), 523.

³⁸⁸ Richard Taruskin, *Text and Act: Essays on Music and Performance*. (Oxford: Oxford University Press, 1995), 131.

6.1. PRIMARY SOURCES - DIDACTIC AND CRITICAL LITERARY WORKS

The writings of Berlioz provide a useful point of departure in reconstructing the oboe's aural identity in nineteenth-century France. Because he used musical journalism to supplement his income throughout his career, Berlioz provides us with an astute and articulate (if highly opinionated) view of the Parisian musical scene and its latest fashions. Indeed, as Holoman observes, Berlioz illuminates “many issues of performance practice, among them orchestral placement, the tone quality expected of the instruments, how they were generally played, what was possible and what the writer thought needed to be improved.”³⁸⁹ In his 1844 *Traité d'instrumentation*, the composer observes that:

*First and foremost, the oboe is a melodic instrument. It has a pastoral character, full of tenderness, even timidity I should say. [...] Candour, artless grace, pure innocence, mellow joy, the pain of a tender soul—all these the oboe can render admirably with its cantabile. [...] The complaints of an innocent voice, the incessant and ever-increasing supplications – what instrument could better express them than the oboe?*³⁹⁰

This description, with its emphasis on the oboe's pastoral, tender voice and its disinclination for rapid passagework, sets an overarching framework for how the instrument's tonal identity was perceived throughout nineteenth-century France, and it will be seen that this perception was shared by composers, audiences and performers themselves. This is on one hand reflected in the propensity of *romances*, *élégies*, *vocalises*, *nocturnes*, and other lyrical titles in the instrument's nineteenth-century solo repertoire, which exploits the oboe's poignant and expressive voice (a sampling of these have been recorded in the adjacent creative portfolio). Berlioz further adds that:

*A certain degree of excitement is also within its power; but one must refrain from increasing it to cries of passion, the stormy outburst of fury, menace or heroism; since then its small voice, sweet and somewhat tart at the same time, becomes completely grotesque.*³⁹¹

³⁸⁹ D. Kern Holoman, *The Cambridge History of Musical Performance* (Cambridge: Cambridge University Press, 2012), 336.

³⁹⁰ Hector Berlioz, *Grande traité d'instrumentation et d'orchestration modernes* (Paris: Schöenberg, 1844), 104. Translation from Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 144.

“Le hautbois est avant tout un instrument mélodique ; il a un caractère agreste, plein de tendresse, je dirai même de timidité. [...] La candeur, la grâce naïve, la douce joie, ou la douleur d'un être faible, conviennent aux accents du hautbois : il les exprime à merveille dans le cantabile. [...] Ces plaintes d'une voix innocente, ces supplications incessantes et toujours plus vives, pouvaient-elles convenir à aucun autre instrument autant qu'au hautbois ?”

³⁹¹ *Ibid.* “Un certain degré d'agitation lui est encore accessible, mais il faut le garder de le pousser jusqu'aux cris de la passion, jusqu'à l'élan rapide de la colère, de la menace ou de l'héroïsme, car sa petite voix aigre-douce devient alors impuissante et d'un grotesque parfait.”

In truth, Berlioz's commentary, with its contrast of tart vs. sweet, picks up where late eighteenth-century descriptions of the instrument's timbre leave off. Indeed, in an overview of primary sources, the dichotomies of tart vs. sweet, harsh vs. dulcet, and nasal vs. singing are ever-present, and one quickly gets the impression that only through their artistry, talent and diligence could oboists tame and subjugate an otherwise imperfect and wild instrument into something more docile. A case-in-point, in 1825 Brod considers that:

*The oboe is one of the instruments whose study requires the greatest diligence and patience. Its complicated and unrewarding embouchure is what primarily discourages and deters beginners. It is only after long practice and perseverance that one can manage to make this instrument tolerable, and that the shrill, blaring sounds produced by the first attempts turn soft, mellow and flexible, and which place the oboe among the first rank of instruments. The nature of the oboe makes it suitable for performing graceful, singing and uninvolved music; [...] One pleases and charms with a sweetness of tone, whereas the greatest technical feats, however perfect their execution, often only baffle the listener. The great composers only wrote solos for the oboe that were singing and lyrical, most often in slow movements. In the orchestra this instrument is essential, and when used strategically it produces a memorable effect.*³⁹²

It is worth noting that in the 1890 edition of Brod's *Méthode* [heavily revised by Georges Gillet (1854-1920)], the following passage, containing an example of anthropomorphising, was appended:

*It is quite certain that only by long practice properly directed, patient study and perseverance, that one can obtain a mastery over the instrument and break it to docility and sympathy. The harsh tone, sharp and sometimes comical, which is produced at the first attempt, is to be reduced to softness, ease and penetrating charm, by patient study alone. The character of the Oboe lends itself especially to the performance of works of varied tint, graceful, melodius [sic] and rather simple in form. [...] You are sure to please and captivate your hearers by sweetness of tone and correct phrasing, whereas, the execution of the most astonishing difficulties will rarely move an audience.*³⁹³

³⁹² Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1825), 2. “Le Hautbois est un des instruments dont l'étude exige le plus de soins et de patience. Son embouchure difficile et ingrate est principalement ce qui décourage et rebute les commençants. Ce n'est qu'après un grand travail, un travail assidu, qu'on parvient à rendre cet instrument supportable, et que les sous aigres et criards qu'offrent les premiers essais, deviennent doux, moelleux et flexibles, ce qui met le Hautbois au rang des premiers instruments. La nature du Hautbois semble le rendre propre à l'exécution d'une musique gracieuse, chantante et peu travaillée ; [...] on plaît, on charme avec une belle qualité de son, les plus grandes difficultés, quelque parfaite qu'en soit l'exécution, ne font souvent qu'étonner. Les grands compositeurs n'ont employé le Hautbois, comme solo, que dans des chants mélodieux et le plus souvent d'un mouvement lent. A l'orchestre cet instrument est indispensable, et lorsqu'il y est placé convenablement, il y produit le plus grand effet.”

³⁹³ Henri Brod, *Method for oboe, revised edition by G. Gillet, English translation by E. Salabert*. (Paris: Henry Lemoine & Cie, 1895), 1. Original Fr. text in *Brod, Méthode de hautbois, édition, revue par G. Gillet, ... pour servir à l'étude du hautbois modifié tel qu'il est adopté dans les conservatoires*. (Paris: Lemoine et Fils, 1890), 1: “Ce n'est que par un travail long, assidu et bien dirigé qu'on parvient à rendre cet instrument docile et sympathique. Les sons aigres, criards, parfois même burlesques qu'on produit au cours des premiers essais, ne deviennent que par une patience étude, faciles, doux et d'un charme pénétrant. La nature du Hautbois se prête surtout à l'exécution d'œuvres gracieuses, colorées, chantantes et

Indeed, as Burgess explains, “Nineteenth-century writers portrayed the oboe as temperamental. Treated with gentle but persuasive control, it was capable of producing a timbre of voluptuous beauty, but if unrestrained it was likely to emit extraneous squawks and cracked notes.”³⁹⁴ Choron & de la Fage, in their *Manuel complet de musique vocale et instrumentale* (1836), also hint at the artistic mastery required to coax and subdue an otherwise imperfect instrument:

*This instrument is imperfect in certain keys: some cannot be played in tune regardless of the performer’s talent, while others, because of their awkward fingerings, must be avoided in solo passages altogether.*³⁹⁵

In the same vein, upon hearing Verroust in 1843 in a *morceau de concert* by Vogt at the *Société des concerts du Conservatoire*, a critic also alludes to the oboist having to ‘sweeten’ (“*modifier*”) the “naturally rough and dry” tone of the oboe into one that was “soft and velvety”:

*Mr. Verroust sings on the oboe as well as any artist can. He sweetens its tone, by nature somewhat dry and harsh, admirably, moving freely from a full, bright and richly concentrated timbre to one that is soft, velvety, and full of delicate nuance. Mr. Verroust has every right to be featured as a soloist.*³⁹⁶

Finally, in an article that appeared in *Le Corsaire* in 1827, a journalist warns Brod to avoid pushing the tone of the oboe beyond the outer limits of what was socially acceptable:

*Mr. Brod worthily upheld his reputation; the air which he performed with piano accompaniment elicited the general applause of the public, but let us address an observation to Mr. Brod for the sake of his own artistry. The oboe is an instrument whose timbre is not devoid of a certain amount of acidity, and Mr. Brod knows better than anyone the secret of concealing this defect. Nevertheless, in the few instances where he seeks to produce a special effect by reinforcing its tone, his instrument retaliates with all of its inherent sourness. This is the only criticism that we can address to this artist.*³⁹⁷

assez simples de facture. [...] On plait, on captive, par une agréable sonorité et un phrasé correct, tandis que l’exécution des plus surprenantes difficultés provoque rarement l’émotion.” Italics are mine.

³⁹⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 234.

³⁹⁵ Alexandre Etienne Choron & Adrien de la Fage, *Manuel complet de musique vocale et instrumentale* (Paris: Roret, 1836), 164. “*Cet instrument n’est pas parfait dans tous ses tons : il y en a que l’art de l’exécutant ne peut rendre parfaitement justes : il y en a aussi (comme on le verra par la suite) dont le doigté est très-difficile, et qu’il faut avoir soin d’éviter surtout dans les solo.*”

³⁹⁶ Maurice Bourges, in *Revue et Gazette musicale*, 16 avril 1843 (Paris: l’auteur, 1843), 134. “*M. Verroust chante sur le hautbois aussi bien qu’aucun artiste. Il en modifie le son, naturellement un peu sec et âpre, avec une précieuse habileté ; il le rend tantôt plein, éclatant, richement timbré, tantôt doux, velouté, parsemé de nuances délicates. M. Verroust a droit de figurer et de se faire écouter à titre de soliste.*”

³⁹⁷ *Le Corsaire : journal des spectacles, de la littérature, des arts, des mœurs et des modes* (14 février 1827), 3. “*Enfin M. Brod a dignement soutenu sa réputation ; l’air qu’il a exécuté avec accompagnement de piano a généralement excité les bravos de l’assemblée, mais qu’il nous soit permis d’adresser une observation à M. Brod dans l’intérêt de son art. Le hautbois est un instrument dont le timbre n’est pas exempt d’un peu d’aigreur, et M. Brod possède mieux que personne le secret de dissimuler ce défaut. Néanmoins, il est des*

The acidic, lemony, tart or sour nature of the oboe's timbre was often viewed pejoratively, a fault that needed dissimulating. Not everyone was in agreement with this, however. Debussy, for example, viewed the acidic tone of the oboe as an essential component of a well-proportioned and harmonious orchestral palette, which he compared to a perfectly balanced meal. In 1903, writing under the pseudonym *Monsieur Croche*, he commented on Grieg's orchestration of *The Swan*, observing that the Norwegian composer had evoked:

*An orchestral banquet where the harp's sweet fragrance mingles with the lemony tone of the oboe, all bathed in the gravy of the stringed instruments.*³⁹⁸

Likewise, the oboe's tart, penetrating tone was viewed by some as one of its most prized qualities. For example, in his 1870 *Método*, the Spaniard Enrique Marzo considers that the oboe's:

*timbre may be the product of a small instrument, but such is its vigour, that it often stands out even in the largest of orchestras, much like the modest violet, amidst a vast garden, gives off a more pungent fragrance than the proudest of flowers.*³⁹⁹

Prior to underlining the oboe's innate tartness, however, Berlioz emphasises the instrument's bucolic appeal. Because the instrument's sound is generated by a double reed like the chanter of a bagpipe, its strong association with the pastoral was axiomatic from its genesis in the 1660s in the orchestra of Lully. As Haynes notes, oboes "were regularly called on in Lully's scores to evoke a pastoral atmosphere. They often depicted a mythical shepherd's life: peaceable, innocent, and untroubled, evoking idyllic nature."⁴⁰⁰ Its pastoral association continued well into the Romantic era, as seen from numerous references to its "*rustic timbre that evokes calm pastures*"⁴⁰¹ in dictionaries and orchestration treatises by Castil-Blaze⁴⁰² (1825), Kastner⁴⁰³ (1836),

momens [sic] où le désir de produire de l'effet dans les renforcements [sic] des sons, rend à son instrument toute l'aspérité qui lui est naturelle. C'est le seul reproche qu'on puisse adresser à cet artiste, mais enfin c'est est un."

³⁹⁸ Christian Goubault, *La critique musicale dans la presse française de 1870 à 1914* (Paris: Slatkine, 1984), quoting Claude Debussy, *Monsieur Croche et autres écrits* (Paris: Gallimard, 1971): "Par une cuisine orchestrale où le parfum des harpes se mêle au citron du hautbois, le tout baignant dans un jus d'instruments à cordes [...]"

³⁹⁹ Enrique Marzo, *Método de Oboé progresivo y completo con nociones de corno inglés* (Madrid: Romero, 1870), 9: "su sonido es el producto de un instrumento pequeño, pero tal es su vigor, que sobrepasa muchas veces a los demás en las orquestas más numerosas, a la manera que la modesta violeta, colocada en un vasto jardín, despide mayor fragancia que las más orgullosas flores."

⁴⁰⁰ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 126.

⁴⁰¹ Antoine Elwart, *Petit traité d'instrumentation à l'usage des jeunes compositeurs* (Paris: Colombier, 1869), 24.

⁴⁰² François Henri Joseph Castil-Blaze, *Dictionnaire de musique moderne, 2e édition* (Paris: Lyre moderne, 1825)

⁴⁰³ Jean Georges Kastner, *Traité général d'instrumentation* (Paris: Philipp, 1836)

Elwart⁴⁰⁴ (1869) and Gevaert⁴⁰⁵ (1885), as well as in Verroust's 1857 *Méthode* ("Its clear, poignant voice is best suited to pastoral and melodic phrases."⁴⁰⁶) Nowhere is this evocation made clearer than in the works of Berlioz himself, such as the iconic 'Scène aux champs' in his *Symphonie fantastique* (1830) and the 'Sérénade d'un montagnard des Abruzzes à sa maîtresse' from *Harold en Italie* (1834). As Burgess notes, during his sojourn in Italy after winning the *Prix de Rome* in 1830, the composer was drawn to "performances by shepherd-pipers who came down from the mountains above Rome. [...] For Berlioz, these modern-day shepherds playing their oboe-like pifferi symbolized the simple life of the Arcadian shepherd."⁴⁰⁷

Written at the dawn of the French Revolution, Grétry's *Mémoires, ou Essai sur la musique* (1789) confirm that the oboe's rustic association was no less present under Louis XVI. Describing a two-keyed instrument such as those by Prudent and Delusse, Grétry observes that:

*The oboe, pastoral and gay, provides a ray of hope in the midst of torment.*⁴⁰⁸

Four years later, in his *Méthode de violon* (1793) Baillot comments on the "naïve and pastoral tone"⁴⁰⁹ of the oboe, which Garnier echoes in 1802:

*The oboe is pastoral and expresses amorous complaints, as much as by the inherent nature of its tone as by the fire of the imagination. [...] The sound of a new oboe is inevitably tart. [...] The tone of the oboe is shrill, nasal and coarse unless it is sweetened by the art of the musician playing it.*⁴¹⁰

The instrument came to connote the pastoral genre to such an extent that it became stereotyped, leading critics like Louis Dauprat to condemn its caricaturization by 1857:

⁴⁰⁴ Antoine Elwart, *Petit traité d'instrumentation à l'usage des jeunes compositeurs* (Paris: Colombier, 1869)

⁴⁰⁵ François-Auguste Gevaert, *Nouveau traité d'instrumentation* (Paris: Lemoine et fils, 1885)

⁴⁰⁶ Stanislas Xavier Verroust, *Méthode pour le Hautbois, d'après Joseph Sellner, op. 68*. (Paris: Richault, 1857), V: "son ton clair et touchant le destine à exécuter des phrases pastorales et mélodiques."

⁴⁰⁷ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 221-223.

⁴⁰⁸ André-Ernst-Modeste Grétry, *Mémoires, ou Essai sur la musique*. (Paris, the author: 1789), 279. "Le hautbois, champêtre et gai, sert aussi à indiquer un rayon d'espoir au milieu des tourmens." Grétry scored oboe solos in many pastoral scenes from his *opéra-comiques*. One of these, an *entr'acte* from *La Caravane du Caire* (1783) has been recorded by the author on the ATMA Classique label in 2020 (*L'Amant jaloux*, ACD22797).

⁴⁰⁹ Pierre Baillot, *Méthode du Violon par MM. Baillot, Rode, et Kreutzer, Membres du Conservatoire de Musique. Rédigée par Baillot. Adoptée par le Conservatoire pour servir à l'Etude dans cet Etablissement* (Paris: Le Roy, 1793), 159: "le son naïf et champêtre du Hautbois"

⁴¹⁰ François-Joseph Garnier, *Méthode Raisonnée pour le Haut-bois* (Paris: Pleyel, 1802). "Le hautbois est pastoral et exprime les plaintes amoureuses et c'est autant par la nature de ses sons que par le feu de l'imagination qu'il est employé à cet effet. [...] Un hautbois neuf a nécessairement le son aigu. [...] Le son du hautbois est aigu, nasillard et disgracieux lorsqu'il n'est point adouci par l'art du Musicien qui en joue."

*Since the tone of the oboe is somewhat similar to that of the musette, pieces that highlight its pastoral attributes are quite common. That is all well and good; however, when an artist of such great talent as Brod demeans his instrument by imitating the rustic [shawm of the] Auvergnats, both in the style of his performances as well as in that of his compositions, sensitive ears take offence. Granted, one can, in a salon setting, find temporary amusement in such forms of imitation, or rather caricature; but as soon as that parody is taken seriously, by both the audience and by the musician himself, desperate to seek the public's approval, the connoisseur is scorned. Treated thus, the instrument is no longer that of his master, Mr. Vogt, who produced so pure a tone, both flattering and full; neither is it that of another of Vogt's pupils, Mr. Veroust [sic], now a professor at the Conservatoire; in short, it is not the standard we have come to expect of the oboe in musical performance today, which has been brought to such a high degree of perfection in France.*⁴¹¹

Apart from its association with idealised country life, Badol-Bertrand has demonstrated that in France the instrument came to represent the Ancien Régime, a bond that played a part in its momentary decline after the Revolution. Born under the reign of Louis XIV, the oboe, like the musette, bass viol, lute and harpsichord, was regarded as an ‘appanage’ of the monarchy after its downfall.⁴¹² As such, during the Revolutionary period, it was perceived as “too symbolic of the Ancien Régime” and its use was deliberately bridled.⁴¹³ Also, because France was its cradle, the oboe came to represent a certain ‘Frenchness’ beyond the borders of its birthplace. Because its use was disseminated abroad by Frenchmen, its identity had a cultural connotation as well. Introduced in England by four French oboists in 1673,⁴¹⁴ the oboe was also brought to Italy by

⁴¹¹ Louis François Dauprat, *Le Professeur de musique ou l'enseignement de cet art mis à la portée de chacun...* (Paris: Quinzard, 1857), 106. “Comme le son du hautbois a quelque analogie avec celui de la musette, on ne manque pas de le mettre en évidence dans les pièces du genre pastoral. Jusque-là, c’est fort bien ; mais qu’un artiste, homme de beaucoup de talent, et que l’on regrette avec raison, Brod, se soit avisé de rabaisser son instrument au niveau de celui des Auvergnats, et même d’y conformer trop souvent le style de sa musique et celui de son exécution, voilà ce qui affecte péniblement les gens délicats. On peut, dans un salon, s’amuser un instant d’une semblable transformation, pour ne pas dire d’une pareille caricature ; mais du moment où la plaisanterie est prise au sérieux, et par le public et par le musicien lui-même, jaloux de plaire à la multitude, alors le connoisseur se retire. En effet, ce n’est plus là l’instrument que jouait son maître, M. Vogt, avec un son si pur, si flatteur et si plein ; ce n’est pas non plus celui d’un autre de ses élèves, M. Veroust [sic], maintenant professeur au Conservatoire ; ce n’est pas enfin le hautbois modèle, tel qu’on doit l’entendre aujourd’hui dans l’exécution musicale, portée en France à un si haut degré de perfection.”

⁴¹² Florence Badol-Bertrand, “Évolution de la pratique du hautbois à Paris de la fin du règne de Louis XV à la fin du Premier Empire,” (doctoral dissertation, Université François-Rabelais, Tours, 1996), 14, 22: “Instrument privilégié par Lully, il semble, en effet, avoir constitué l’un des apanages de la musique française bien au-delà du siècle de Louis XIV, en France comme à l’étranger. [...] La pratique du hautbois français sera donc nourrie du jeu des musiciens étrangers et nous pensons que cette absorption concourra à la survie de l’instrument par rapport à la viole, le luth, le clavecin ou la musette, représentatifs de l’Ancien Régime au même titre.”

⁴¹³ *Ibid.*, 13: “la voix du hautbois ait été ressentie comme trop symbolique de l’Ancien Régime.” The oboe’s aristocratic connotations incidentally facilitated the rise in popularity of the clarinet, which was considered more accessible, popular, modern, and, by extension, Revolutionary.

⁴¹⁴ As Haynes reveals, these four oboists (Paisible, des Besmes, Guiton and Boutet) were also flautists and had come to England to participate in a 1674 production of Robert Cambert’s *Ariane*. Jacques Paisible (who came to be known as James Peasable) was the best-known of the four and remained in England for the rest of his life, where as a contemporary of Purcell, he played bass violin and recorder in many of his operas. Another French oboist, François Le Riche, arrived in England in 1685 at the bidding of James II,

Frenchman in 1677⁴¹⁵ and to Vienna in the 1690s. As Haynes indicates, when the hautboy first appeared in the 1670s, “French music was in vogue. Well-paid posts were thus on offer to French hautboy players willing to travel.”⁴¹⁶ Because of the Francophile atmosphere cultivated in courts across Europe (notably in Prussia under Frederick the Great and in Saxony under Augustus II), the instrument quickly became fashionable abroad. National styles had emerged by the late eighteenth century, and by the time of Garnier’s *Méthode* (1802), distinct regional schools of oboe playing were already well-rooted. Whereas the French oboe continued to exert its influence in England, prominent schools arose in Germany and Vienna. In Germany, Dresden had long been the centre of woodwind manufacture, and Carl Theodor Golde (1803-1873), the city’s most prominent oboe maker in the nineteenth century, continued building instruments in the tradition of Grenser, Grundmann and Floth.⁴¹⁷ In parallel, a new school flourished in Vienna, centred around the virtuoso Joseph Sellner (1787-1843) and the instruments of Stephan Koch (1772-1828), who, working in tandem, conceived a new prototype, the ‘Sellner-Koch’ model that would eventually evolve into today’s *Wiener* oboe.⁴¹⁸ Viewed as anathema by the French for their ‘fat,’ ‘hard’ and ‘woolly’ tone, these Germanic oboes were physically stockier and more robust, with thicker bore walls and keys that were mounted on wooden blocks, factors that contributed to its broader sound, as did its reed set-up that used wider, shorter reeds. As Haynes & Burgess observe, “Romantic music developed along distinct and strongly defended national lines. [...] Among oboists, the type of instrument used, the approach to tone production, reed-making and musical style were all governed by national style. The preferences of one particular school were rarely appreciated elsewhere.”⁴¹⁹

While the instrument’s physical characteristics itself may in part be responsible for the “sensitive and refined tone” of the French and the “warmth and robustness” of the German models,⁴²⁰ in 1825 Brod notes that tone quality had more to do with reed design:

and likely “served as Purcell’s hautboy soloist.” Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 146-149.

⁴¹⁵ In the case of Italy, one of the Frenchman to disseminate its use was Alexis Saint-Martin, who arrived in Milan in 1690. Like Paisible, he stayed in his adopted country for the rest of his life. Saint-Martin’s “eldest son Giuseppe was to become a famous player under his Italianized name, Sammartini.” *Ibid.*, 133.

⁴¹⁶ *Ibid.*, 121-122.

⁴¹⁷ The Dresden model also found favour in Italy, and was preferred by Italian oboists over French instruments. For example, Baldassare Centroni (1784-1860), Rossini’s oboist, is known to have used a five-keyed oboe by Grenser. Because Milan was under Austrian rule until 1860, the Sellner-Koch model was also used there. See: Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 153.

⁴¹⁸ For a detailed description of this model, see: Stefaan Verdegem, ‘Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,’ *The Galpin Society Journal*, Volume 61, 2008.

⁴¹⁹ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 131.

⁴²⁰ Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 57.

*The making of reeds is not the same in different countries where one plays the Oboe; the Italians, the Germans and in general almost all foreigners make them stronger than us. Therefore they have a hard sound which denatures the essential character of the instrument, and makes their playing so unbearable that it becomes exhausting for listeners. The tonal quality which is obtained from the oboe in France is indisputably the finest, and brings the oboe the closest to the sound of the violin.*⁴²¹

As Bate notes, by the time of Brod, “two entirely different ideals of oboe tone were being pursued in Europe.”⁴²² Notice how Brod’s comments above are echoed by Fétis some forty years later in 1868:

*Since 1855, M. Triebert has, while retaining the advantages of new construction, succeeded with exacting care to rediscover the delicate tone of the French oboe, much preferred over the fat sound of the German instrument. [...] The oboes of Mr. Ziegler, of Vienna, and of Mr. Lausemann, of Linz, have a characteristic German sound, which lacks charm.*⁴²³

Whereas the French praised a clear, ringing tone that could rise above orchestral textures, Bate suggests that “in Germany from the early classical period onward the oboe has been valued quite as much for its ability to blend in an ensemble as for its qualities as an outstanding solo voice.”⁴²⁴ And yet despite the aversion in France for the German sound, it is with some irony to learn that Sallantin, regarded as the father of the French oboe school, honed his craft with a German. Indeed, Fétis recounts that a young Sallantin met the virtuoso Johann Christian Fischer (1733-1800) in Paris in the 1760s:

Before Antoine Sallantin, all French oboists had a brash and wild sound. There were nearly as many oboes as there were violins in the Opera orchestra, they played off the same parts and blew with all their might without any hint of nuance. The young artist was about twenty years old when Fischer arrived in Paris; inspired by the virtuoso’s talent, Sallantin became one of his disciples, taking lessons from him that completely changed his manner of playing. Joining the opera orchestra in 1773, he remained there

⁴²¹ Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1825), 2. “La facture des anches n’est point la même dans les différens pays où l’on joue le Hautbois ; les Italiens, Allemands et en général tous les étrangers, les font plus fortes que nous, aussi ont ils un son dur et sourd qui dénature l’instrument, et rend leur exécution si pénible qu’elle devient fatigante même pour les auditeurs. La qualité de son qu’on est parvenu à obtenir du hautbois en France est sans contredit la meilleure, et qui rapproche le plus cet instrument du Violon.”

⁴²² Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 57.

⁴²³ François Joseph Fétis, *Rapports du Jury international, Exposition Universelle, 1867, Groupe II, classe 10* (Paris: P. Dupont, 1868), 51-52/282f. “Depuis 1855, M. Triebert, tout en conservant les avantages de la nouvelle construction, est parvenu, par des soins délicats, à retrouver le joli timbre de hautbois très préférable au gros son des hautbois allemands.” [...] “Les hautbois de MM. Ziegler, de Vienne, et Lausemann, de Linz, ont le caractère de la sonorité allemande, qui manque de charme.” Translation from: Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press), 137.

⁴²⁴ Philip Bate, *The Oboe. An Outline of its History, Development and Construction* (London: Ernest Benn, 1956), 74.

*until 1792, at which point he was granted leave to travel to London to hear Fischer again and further hone his talent.*⁴²⁵

Acidity, Frenchness, rusticity, the Ancien Régime – these were the predominant images that the oboe’s characteristic timbre evoked for the nineteenth-century concert-goer. Further citations drawn from primary sources that elaborate these associations can be consulted in the works of Geoffrey Burgess cited at the opening of this chapter, and paint a clearer picture of what audiences expected of the oboe, and of what it was capable. As a musical journalist, biographer, historian, and one of “the leading authorities of his generation on the subject of musical instruments,”⁴²⁶ Fétis meticulously documented current practice, and various passages in his *Revue musicale*⁴²⁷ are illuminating on how the oboe was perceived in France during the 1830s and 1840s. As Weber notes, in the 1820s, the rapidly growing musical press reformed concert attendance in Paris, where “Music-lovers read these periodicals voraciously, spending far more time doing so than is the case today.”⁴²⁸ These journals provide contemporary accounts that allow us to reimagine the timbres of individual oboists, and provide dozens of reviews of Brod, Vény, Vogt, and Verroust. Whether one prefers lemony over sweet is of course as subjective a question now as it was two hundred years ago, and as Burgess notes, “British audiences who heard Continental players like Centroni [Rossini’s oboist], Vogt, Barret and Lavigne complained of their nasal sound, although they acknowledged that it was the oboe’s ‘true’ tone.”⁴²⁹

⁴²⁵ François-Joseph Fétis, *Biographie de musiciens* (Bruxelles: Méline, 1835), article on Sallantin. “*Avant Antoine Sallantin, tous les hautboïstes français avaient un son dur et sauvage : on les employait en nombre presque égal à celui des violons dans l’orchestre de l’Opéra, ils jouaient les mêmes parties et soufflaient de toutes leurs forces sans aucunes nuances. Le jeune artiste (François-Alexandre II Sallantin) était âgé d’environ vingt ans lorsque Fischer arriva à Paris; enthousiasmé par le talent de ce virtuose, il s’attacha à lui, en reçut des leçons et changea complètement sa manière. Entré à l’orchestre de l’opéra en 1773, il y resta jusqu’en 1792 et obtint alors un congé pour se rendre à Londres y entendre encore Fischer, pour perfectionner son talent.*”

⁴²⁶ Peter Bloom, *Music in Paris in the Eighteen Thirties* (New York: Pendragon Press, 1987), 55.

⁴²⁷ This periodical was founded by Fétis in 1827. In 1835, it merged with Maurice Schlesinger’s *Gazette musicale de Paris* to form the *Revue et gazette musicale de Paris*. Contributing critics included Berlioz, Alexandre Dumas, Jean-Georges Kastner, Franz Liszt, Joseph d’Ortigue, Georges Sand, Robert Schumann and Richard Wagner.

⁴²⁸ William Weber, *The Great Transformation of Musical Taste: Concert Programming from Haydn to Brahms*. (Cambridge: Cambridge University Press, 2008), 88.

⁴²⁹ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 131.

6.2. PERSONAL EXPERIENCE

In the previous chapter, I endeavoured to demonstrate how certain performance techniques I consciously employ in nineteenth-century repertoire may be ahistorical yet unavoidable within the framework of current professional practice (for example, vibrato, choice of fingerings, phrasing). I use the term *consciously* in an attempt to ‘own up’ to my own selective use of historical evidence. This chapter has briefly addressed timbre, which, although not a performance practice in and of itself, can be viewed as an offshoot of technique, in the sense that one can ‘work’ on tone to improve it. Neuhaus considered it to be “the substance of music” itself, observing that through diligent practice, one “can acquire a ‘good,’ beautiful tone”, thereby “raising music itself to a greater height.”⁴³⁰

While training as a modern oboist, I was immersed in the North American tradition of oboe playing, which cultivates a particularly dark, round tone, and as a performer of historical oboes, I have inherited that school’s preconceived ideas of how the oboe ‘should’ sound. Like Bruce Haynes, who as a performer was raised in the same praxis, my ideal aural concept has been shaped by that modern, twentieth-century aesthetic. In an interview with Marc Ecochard, Haynes revealed that:

We oboists get a sound in our ear, and it stays a long time. I am doomed for my whole lifetime to be trying to get a Tabuteau [father of the North American style of oboe playing] sound from my hautboy, and it would be very satisfying to me if I ever achieved it.⁴³¹

Because of my rather ‘dark and round’ ideal tonal concept (perhaps more akin to the ‘woollen’ sound of wider-bored German oboes that Brod so vehemently criticised), adjusting to the more nasal, penetrating soundscape of the Adler oboe has perhaps been more challenging than I initially expected at the outset of this study, and has driven me to reevaluate my own sound concept as a performer. Burgess observes that part of the ‘idealised’ sound we have collectively come to expect from the oboe is due to current practice’s penchant for German Romantic repertoire: “the French tradition of oboe playing has been corrupted by the predominantly German repertory performed by modern-instrument orchestras. The current preference for German-style oboes to play nineteenth-century music in early-instrument bands is another manifestation of this influence.”⁴³² Because the oboe’s range is somewhat stunted (just over two

⁴³⁰ Heinrich Neuhaus, *The Art of Piano Playing*, trans. K. A. Leibovitch. (New York: Praeger, 1973), 54-57.

⁴³¹ Geoffrey Burgess, “Piper at the Gates of Dawn. Bruce Haynes: Legendary Pioneer of the Hautboy,” *The Double Reed*. Vol. 35. No. 1. (July 2012), 65-108.

⁴³² Geoffrey Burgess, ‘The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature,’ *A Time of Questioning: Proceedings of the International Double-Reed Symposium*.

and a half octaves; the smallest, in fact, of the orchestral woodwinds) and, as Berlioz noted, its technique lends itself more to sustained *cantabile* lines than to rapid passagework, many of the solos written for it in canonical orchestral repertoire of the nineteenth century are highly lyrical in character. As such, oboists trained in the modern canon can easily become fixated with achieving a dark, covered timbre, and this is especially true of the North American school, where a warm, almost clarinet-like sound is cultivated and prized. Like many historical oboe players who were trained in this tradition, I have tried (and I assume always will be trying) to replicate the rich, creamy sound of the modern conservatoire oboe on whichever historical instruments I come across. As such, my ideal sound concept of the *hautboy* or simple-system oboe is seen through the prism of a modernist aesthetic, a sound concept that may appear ‘tainted’ to ‘Early Music’ purists. Indeed, even as I listen to recordings of myself from fifteen years ago, I notice that my sound has grown darker still, and that much like Haynes, my ideal hautboy soundscape has inevitably been shaped by my conservatoire oboe upbringing. On this, it may be interesting to compare, for example, the timbre from my own recording of *Jadin’s Nocturne in A minor* (1816) with that of my colleague and friend Lola Soulier (video [here](#)).

It is difficult to determine whether my concept of desirable, ‘professional’ timbre has changed as a result of this study. One thing I can be sure of, however, is that the performance techniques I experimented with when engaging with the Adler instrument (phrasing, vibrato, fingerings) were conditioned by my seeking a certain ‘idealised’ sound on this original model, and that that sound may very well be ahistorical. In particular, the techniques that I employed when creating reed models to be used with the Adler are certainly ahistorical (except when expressly copying Brod’s reed) and would have had a huge impact on the aural outcome, regardless of who was playing the instrument. Emerging from this study and listening back to the creative portfolio, I do however wish at times that I had allowed myself to introduce more ‘edge’ into my sound, especially at strategic points where the repertoire may have called for it.

In the following chapter on reeds, we will observe that, because of the direct impact they have on timbre, historical reed-making techniques are especially problematic for period oboists today. For example, many professionals (indeed, all of the participants in this study’s survey, myself included) turn a blind eye to historical hand gouging techniques in favour of machine gouging (a modern, ahistorical technique). This is hardly surprising considering the results obtained by following primary sources to the letter are often irreconcilable with professional standards. Taruskin likens the literal organological approach, that of simply replicating data found in sources, to museum culture, cautioning that Early Music practitioners who do so run the risk of

Utrecht 1994, ed. David Lasocki (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994), 112.

becoming “imbued with the mentality of curators and restorers,”⁴³³ likewise warning that the simple use of historical hardware (even if we could figure out what exactly that is) is insufficient.⁴³⁴ For let us not forget that, as opposed to the flute or the horn, reconstructing the nineteenth-century oboe’s timbre is further hindered because the very means of its sound production – the reed (or what Philip Bate calls the ‘*generator*’) – has nearly vanished.

⁴³³ Richard Taruskin, *Text and Act: Essays on Music and Performance* (Oxford: Oxford University Press, 1995), 299

⁴³⁴ John Rink, “Review Article’ on Wallace Berry, *Musical Structure and Performance*,’ *Music Analysis*, 9/3 (Cambridge: Cambridge University Press: 1990), 320. Rink likens the ‘historicising’ approach to “translating a book into another language word-for-word, without regard to the second language’s particular idioms, inflections, grammar and syntax [...] Capturing the meaning or ‘spirit’ of the original – surely the most important goal of any translation – would be virtually impossible in such an undertaking.”

7. REEDS

“A good reed to the artist is what good health is to man: namely, everything.”⁴³⁵

Oboists have long appreciated the truth of the preceding quote by Rosenthal. Indeed, for the oboist, reeds are a blessing in disguise. While the performer is constantly required to replenish their supply of functioning reeds (due to the short lifespan of *arundo donax*, the fibrous cane used to make double reeds), the process of constructing one’s own reeds, albeit a highly time-consuming activity, affords the oboist significant control over their tone quality, allowing for its personalisation to an extent uncommon in other instruments. Because the reed is, in itself, a miniature musical instrument, oboists are, by extension, forever ‘rebuilding’ their instrument.

In 1823, the German virtuoso Wilhelm Braun clearly states that for the oboist, securing access to a good reed was even more important than having a well-made instrument:

*The reed exerts such a strong influence on a beautiful tone and a secure performance that I would rather have a good reed than a good instrument. [...] How often have I envied other woodwind instrumentalists, for example flautists or horn players, who can pick up their instrument at any time and play with the same virtuosity today or tomorrow, without being hampered by such an external obstacle [i.e. the reed].*⁴³⁶

Compared to the scarcity of surviving eighteenth-century oboe reeds (none before c.1780 exist intact), extant specimens from the nineteenth century are rather abundant, and provide invaluable information for today’s historical oboist. And while a study of original French reeds would, in itself, be rich enough to fill an entire doctoral study, an examination of these specimens is of central importance to the current investigation, if only to provide insight into how the French early nineteenth-century oboe *might* have sounded, for as noted by Agrell, “simply copying the appearance of a reed scrape is not sufficient to judge its functionality.”⁴³⁷ Likewise, Burgess and Hedrick note that “Any oboist will agree that trying to describe a reed and hypothesise on its

⁴³⁵ Richard Rosenthal, *Theoretisch-praktische Oboe Schule von Joseph Sellner* (Mainz: Schott, 1901): “Für ihn als Künstler bedeutet das gute Rohr soviel wie für den Menschen die Gesundheit, nämlich Alles.”

⁴³⁶ Wilhelm Braun, “Bemerkungen über die richtige Behandlung und Blasart der Oboe,” *Allgemeine Musikalische Zeitung* (12 March 1823), 165. “Ein gutes Rohr hat so grossen Einfluss auf schönen Ton und sichern Vortrag, dass ich weniger gern dieses, als ein gutes Instrument entbehren will. [...] Wie oft habe ich schon Bläser anderer Instrumente, z. B. Flötisten oder Waldhornisten beneidet, die zu jeder Zeit ihr Instrument zu Hand nehmen, und heute wie morgen, ohne durch ein äusseres Hinderniss gestört zu seyn, mit gleicher Virtuosität blasen können.”

⁴³⁷ Donna Agrell, “Early Nineteenth-Century Bassoon Repertoire from Sweden: In Search Of The High Register,” *The Double Reed* (vol. 40, no. 4), 88.

performance without playing it is an impossible task. Reeds are made to be played and should be judged on this – not their appearance.”⁴³⁸

Many comprehensive studies of historical oboe reeds have been published, among them the works of Hedrick, Burgess, Haynes and Soulier,⁴³⁹ which have examined primary sources on reed making and scrutinised extant physical specimens (reeds and/or reed fragments). And while some of these publications have also explored the process of replicating original reeds based on source materials, most take an organological approach and have not investigated the practical use of these reeds in a contemporary professional setting. What I have set out to do in the following chapter is just that: to explore whether these historical reed models can be used as a tool for performance, and if so, how.

This chapter is structured in three sections. The first of these is a survey of primary didactic sources and of the techniques described therein. Close readings of several nineteenth-century French tutors (notably the treatises of Brod, Garnier and Barret) provide valuable data for reproducing different reed models used during the Romantic period, and because Brod’s tutor was written for an instrument similar to the Adler oboe, the reed prototype he describes in his 1830 *Méthode* is especially relevant to the present investigation. The literary review is then followed by a comparative analysis of surviving original nineteenth-century reed specimens, both from France and from abroad. Data collected during these quantitative examinations has been compiled on page 240. The chapter ends with an analysis of my own ‘optimal’ reed for the Adler oboe, which I have used in various professional contexts and on the adjacent recording portfolio.

⁴³⁸ Geoffrey Burgess and Peter Hedrick, “The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,” *The Galpin Society Journal*, Vol. 42 (August 1989), 32.

⁴³⁹ See bibliography for full references.

7. 1. SOURCES

7.1.1. Didactic Primary Sources

We will begin this chapter by examining nineteenth-century French didactic sources and iconography. While several tutors only refer to reeds sparingly (such as those by Sellner 1824 and Vény 1828), Garnier (1802), Brod (1826) and Barret (1850) are more explicit, as is Ozi (1803), who, although writing on the manufacture of bassoon reeds, describes certain practices shared with oboe reed making.

On reeds, Sellner simply states that “*so many treatises have been written on reed making, and the process is so well-known, that it strikes me as pointless to say anything further on the subject.*”⁴⁴⁰ Vény remains equally reticent, explaining only that students should start by using softer reeds made by their teacher and slowly get used to playing on harder reeds by practising long tones, which will result in obtaining a “*beautiful tone, without which all wind instruments, and especially the oboe, become intolerable.*”⁴⁴¹

In his *Méthode* (c.1816), Vogt apparently had the intention of providing a detailed chapter on reed making, observing that “*The reed should be neither too long nor too short, too wide nor too narrow, too hard, nor too soft. I indicate the correct length, breadth and strength in Table... [...] it is necessary to use a reed of moderate strength and width resembling what I indicate in the section describing how to make them.*”⁴⁴² Regrettably, as Burgess notes, no such table is to be found in Vogt’s manuscript. In a footnote, Vogt announces that “*I shall dedicate a separate section to the technique of making reeds, including a table showing the design of all the necessary tools and the quality of cane which must be used.*”⁴⁴³ Whether this section of Vogt’s tutor is now lost or was simply never written is unknown.

⁴⁴⁰ Joseph Sellner, *Méthode pour le hautbois, traduite de l’allemande par Heller et revue par Fouquier, 1er hautbois du Théâtre Royal de l’Opéra Italien* (Paris: Richault, 1827), ix: “*on a fait tant de traités sur la préparation de l’anche, et la matière dont on doit la choisir est si généralement connue qu’il me paraît inutile d’en dire davantage.*”

⁴⁴¹ Louis-Auguste Vény, *Méthode abrégée pour le hautbois* (Paris: Pleyel et Cie, 1828), 16: “*on finira par obtenir une qualité de son précieuse, sans la quelle tout instrument à bois et le hautbois plus que tout autre devient intolérable.*”

⁴⁴² Gustave Vogt, *Méthode de hautbois* (unpublished, c.1816). “*L’anche ne doit être ni trop longue, ni trop courte ; ni trop large, ni trop étroite ; ni trop forte ni trop faible ; sa longueur, sa largeur et sa force véritable sont comme je l’indique à la planche No... [...] il faut se servir d’une anche d’une force une d’une largeur raisonnables, tel que je l’indique dans l’article qui traite de la manière de la faire.*” Translation by Burgess in “*The Premier Oboist of Europe?: A Portrait of Gustave Vogt.* (Lanham: Scarecrow Press, 2003).

⁴⁴³ *Ibid.* “*Je consacrerai un article particulier à la manière de construire l’anche ; avec une tablature qui indiquera la forme de tous les outils nécessaires à cet effet et la qualité de roseau qu’on doit y employer.*”

Garnier opens his chapter on reed making by proclaiming that “*L’Anche est proprement l’organe du Haut-bois*”⁴⁴⁴ (“The reed is the living organ of the oboe”). Of special interest to our study is the fact that he provides illustrations ‘drawn to scale’ of a finished reed and of the tools used in the process.

Historical oboists today interested in recreating the sound of the French simple-system oboe are particularly fortunate in that Brod’s *Méthode* of 1830 contains an explicit chapter on reed-making. As mentioned in the preceding chapter on timbre, Brod considered that the ‘violin-like’ tone of the French oboe was attributed to the French manner of making reeds, which were lighter and more thinly scraped. Echoing Brod, Frédéric Berr in his 1836 *Méthode complète de basson* sings the praises of the French timbre while criticising that of the Germans:

*Reed proportions are not uniform. The Germans use exceedingly hard reeds that produce a strident tone. Those of the English are even more unruly, making it impossible for them to play piano – their reeds are so harsh that for lack of air pressure they are unable to articulate notes. While in France we use all kinds of reeds, good artists have nonetheless been able to find an ideal shape and proportion that now serve as a rule of thumb.*⁴⁴⁵

⁴⁴⁴ Francois-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, 1802), 5.

⁴⁴⁵ Frédéric Berr, *Méthode complète de basson* (Paris: J. Meissomnier, 1836), 4: “*Les proportions de l’anche ne sont point fixées. Les Allemands se servent d’anches très fortes et tirent des sons désagréables. Les Anglais dépassent encore cette âpreté et il leur est impossible de jouer piano parce que leurs anches sont tellement rudes qu’il faut une trop grande impulsion de l’air pour articuler les notes. En France on emploie des anches de toutes sortes, mais il est cependant une proportion désirable et une forme que l’expérience des bons artistes a reconnu comme devant servir de règles générales.*”

7.1.2. *Original specimens*

While scarce from an objective point of view, original nineteenth-century reeds are plentiful compared to those of the preceding century. When analysed in conjunction with written sources, these specimens allow today's historical oboist to reproduce many of the parameters found on reeds from the period of study.

The physical dimensions of a reed will determine how it plays, that is, they will have a direct impact on its timbre, intonation, response, stability, and dynamic range. And while Ledet observes that both “visual and dimensional [factors] contribute to perhaps the most important properties of reeds – the aural characteristics (timbre) and the playing qualities,”⁴⁴⁶ caution must be used when attempting to draw any conclusions as to the aural results that original reeds may yield. This is because the reed itself is only one component of the tripartite player-reed-oboe unit (discussed earlier): different oboists on different oboes will sound different using the same reed. That is to say, differences in instrument models, reeds, air pressure and embouchure will yield different results from one player to the next. Since we are unable to pair the vast majority of original reeds with the instruments they were designed for, two components of the unit (namely, the instrument and player) are missing. An additional hindrance is our difficulty in dating original reeds and ascertaining whether specimens are indeed from the nineteenth century, or rather of dubious, more recent, origins.

Let us now consider the physical parameters that will have an effect on a reed's playing characteristics. Through simple visual observation of original specimens, data can be collected for some of these, including:

- *Blade length and shape* (especially tip width)
- *Scraping style*
- *Staple length* (and conicity in some cases)

Because other less perceptible parameters such as *gouge thickness*, *gouging technique*, and *cane quality* cannot be accurately measured, our best recourse is to turn to primary sources, which are often eloquent on these topics. When analysing each of the above parameters, I have included

⁴⁴⁶ David A. Ledet, *Oboe Reed Style: Theory and Practice* (Indiana University Press, Bloomington, 1981), 57.

salient citations from original documentation whenever these help in elucidating specific techniques and/or measurements.

The following terminology is often used to describe the anatomy of a reed (sometimes called its ‘architecture’):

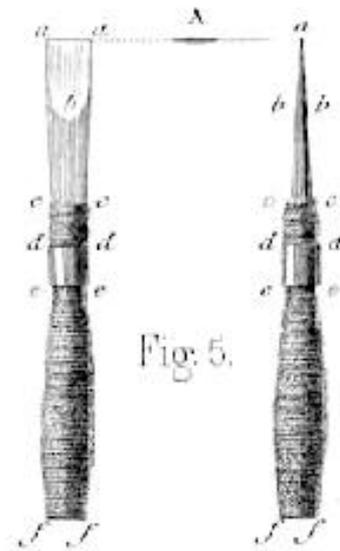


Fig 7.1. The anatomy of a reed ⁴⁴⁷

The letter ‘a’ describes the *tip* of the reed, (Fr: “*pointe*”), usually its thinnest part. The section of cane between letters ‘a’ and ‘b’ corresponds to the *lay*, or the part of the reed that is scraped with a knife (and/or file). Letter ‘c’ depicts what is known as the *tie*, where a thread binding joins the two blades of cane onto a metal *staple* (stretching from letter ‘c’ to ‘f’). The area between letters ‘b’ and ‘c’, covered in bark, is known as the *back* or *heel* (Fr: “*talon*”).

Before continuing any further, it is important to bear in mind that, because the physical dimensions of a reed are inherently intertwined and codependent on one another, adjusting one parameter will necessarily have consequences on all of the others.

⁴⁴⁷ *Dictionnaire de l'Académie des Beaux-Arts. Tome II: "Anche"* (Paris: Typographie de Firmin Didot Frères, Fils et Cie, 1868).

7.1.3. Blade length and shape

As a general rule, the narrower and shorter the reed, the higher its pitch. The reverse also holds true: a longer, broader reed will be flatter. In my experience, I have found that modifying the width (especially at the tip) of a reed by even the smallest increment (0.5 mm for example) will have a noticeable effect on timbre and intonation. On this, Sellner notes that: “*The finished reed should not be too wide because it will otherwise lose its inherent tone, and resemble that of the cor anglais*”⁴⁴⁸ whereas Garnier observes that “*A reed that is too wide alters the tone of the instrument and brings it closer to that of the bassoon.*”⁴⁴⁹

Quantz was equally aware of the delicate balance between the shape of a reed and its voicing:

*As to the tone on both of these instruments [the oboe and the bassoon], much depends upon a good reed, that is, whether it is made of good and seasoned wood, whether it has the proper concavity, whether it is neither too wide nor too narrow, neither too long nor too short, and whether, when shaved, it is made neither too thick nor too thin. If the front [tip] of the reed is too wide and [the reed] too long, the high notes become too low in relation to the low ones; but if it is too narrow and too short, they become too high.*⁴⁵⁰

Burgess & Hendrick note that in England, “a dark, resonant tone achieved by using a broad reed was favoured over the lighter French sound into the nineteenth century.”⁴⁵¹ The authors reveal that:

An article entitled ‘On the Oboe and Bassoon’ signed ‘I. P’, in *The Harmonicon* (1830, p. 192) includes an interesting comparison of reeds used by four oboists who had recently been heard in London. It states that J.C. Fischer (1733-1800) used a ‘rather small reed of a moderate strength’; Johann Friedrich Alexander Griesbach (d.1824) ‘made use of a very large, strong reed, almost the size of a Bassoon, hence the fine quality of his tone’. The Frenchman, Gustave Vogt (1781-1870) was known for playing on a ‘remarkably small, soft reed...’, while the younger [Grattan-] Cooke (1808-89), Griesbach’s successor, used reeds between Vogt’s and Griesbach’s. [...] The French had developed a preference for a lighter tone from a narrower reed.⁴⁵²

⁴⁴⁸ Joseph Sellner, *Méthode pour le hautbois, traduite de l’allemande par Heller et revue par Fouquier, 1er hautbois du Théâtre Royal de l’Opéra Italien*. (Paris: Richault, 1827), ix: “*L’anche finie ne doit pas être trop large car le son perd alors sa propriété particulière, et s’approche de celui du Cor Anglais.*”

⁴⁴⁹ Francois-Joseph Garnier, *Méthode raisonnée pour le hautbois* (Paris: Pleyel, 1802), 8. “*Une anche trop large altère la nature du son de l’instrument et le rapproche un peu de celui du Basson.*”

⁴⁵⁰ Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen*. (Berlin: Voss, 1752), trans. Edward R. Reilly as *On Playing the Flute* (Boston: Northeastern University Press, 1966), 85-86.

⁴⁵¹ Geoffrey Burgess and Peter Hedrick, “The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,” *The Galpin Society Journal*, Vol. 42 (August 1989), 36-37.

⁴⁵² *Ibid.*

Two similar English reviews from 1828 (both from *The Harmonicon*) reveal the impressions Vogt made during one of his visits to London, and again highlight the brighter, reedy timbre treasured by the French:

*His tone we did not like at first; we had been accustomed in our youthful days, to the elder Parke, and F. Griesbach, whose instruments, partaking of the nature of the clarinet, were remarkably full, rich and less reedy than Vogt's. But his is the true tone of the oboe, we admit, and, by use, loses what to many is its objectionable quality.*⁴⁵³

*Mr Vogt [...] performed charmingly himself, in spite of his tone, which, though the true one of the oboe, is not pleasing to English ears: we have been accustomed to a fuller, less reedy sound.*⁴⁵⁴

As we have seen in the chapter on timbre, two distinct national schools of oboe manufacture clearly emerged at the turn of the nineteenth century: one in France, which produced long, slender oboes with thinner walls and bores; and another in Germanophone lands, which favoured shorter, stockier instruments with thicker walls and heavier turning.⁴⁵⁵ To reflect these variations in instrument design and, more importantly, bore profile, two distinct schools of reed making emerged alongside. As French oboes tended to be longer and narrower, so, too did their reeds, producing a more penetrating, tangy tone. Likewise, German oboes, which were more stout, were paired with wider and shorter reeds, yielding a broader, fatter tone that blended better with the woodwind choir of an orchestra.

Cane was traditionally shaped by hand in the early nineteenth century, as the first shaper tip was invented by Brod in 1834.⁴⁵⁶ Today, most hautboists continue to shape cane manually, despite the commercial availability of various different shaper tips (this curiosity is addressed as a survey question in Appendix II). As observed by Burgess & Hedrick,

The shape is a highly idiosyncratic part of reed making, so it is no wonder that there is considerable variation to be found in surviving early reeds. The width of the cane along the edges from the binding to the tip affects primarily the pitch and tone of the reed but also its response and intonation and, to some extent, aperture. The wider the reed, the

⁴⁵³ *The Harmonicon, a Journal of Music* (London: Samuel Leigh, 31 May 1828), Vol. 6, 89.

⁴⁵⁴ *Ibid.*, 168.

⁴⁵⁵ German keys also tended to be mounted on wooden blocks, while French keys were screwed into the bore or mounted on saddles, rods or posts.

⁴⁵⁶ Shaper tips are metallic templates over which the cane is folded. Using a knife or razor blade, the oboist pares the cane down so that it is flush with the walls of the tip, reproducing the template's proportions. The tip is fixed to a handle by a screw that locks it into position. The shaper tip appears to have been quickly adopted by oboists, since Barret's tutor (1850) already depicts one. The tutors of Pietzsch (c.1885) and Rosenthal (1901) also depict shaper tips, with the former noting: "*It is also good to have a shaper tip made to achieve a uniformity in the reed's width and length.*" Sellner enthusiastically adopted Brod's new shaper tip in 1836, see: Carol Padgham Albrecht, "Joseph Sellner Praises Henri Brod's New Gouging Machine," *The Double Reed* (vol. 40, no. 1).

flatter its pitch and darker its sound. As pitch rose and a brighter tone came to be favoured, the width of reeds narrowed.⁴⁵⁷

Brod used a technique whereby the reed was tied on slightly wider (at 7.5 mm) and narrowed to 7 mm *after* the scraping process, a practice uncommon nowadays:

*Having chosen a piece of cane of good quality [...] one makes it 7.5 mm in width [...] [after scraping], it should already give a sort of squeal, so indistinct that one cannot distinguish any tone. In this state, the reed should be too long and too wide. First one makes it the width of 7 mm, removing the excess from each side by means of the knife, going from the middle of the reed towards the extremity [...] Then one passes the file [...] to round off the sides and give the reed a graceful form.*⁴⁵⁸

There appears to be a misprint in Brod, where he states that after scraping the reed and finishing the shape, “*one cuts it to the length of 14-16 millimetres, after which one scrapes it again using the small steel blade until it plays well.*”⁴⁵⁹ In measuring the proportions of Brod’s diagram, I have calculated that if his staple measures 46 mm (the actual measurement he provides), then the blades are 20 mm long instead.

The illustrations shown in Garnier’s *Méthode raisonnée* (1802) are drawn to scale, and reveal a tip width of 8 mm. Wider than Brod’s by one millimetre, Garnier’s reed corresponds to an earlier, lower pitch level of around 420 Hz. Iconography in Italian tutors by Fahrbach (1843), Salviani (1848), Cappelli (1853) and De Stefani (1888) portrays specimens that are proportionally wider, whereas Barret (1850) favoured a narrower reed (7 mm wide) much like Brod. Published exactly twenty years after Brod’s method, it is not surprising that Barret’s tutor should depict a narrower shape, corresponding to a gradual rise in pitch.⁴⁶⁰ Conversely, as late as 1901, German tutors such as that by Rosenthal still recommend a wider shape. Indeed, an early photograph

⁴⁵⁷ Geoffrey Burgess and Peter Hedrick, “The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,” *The Galpin Society Journal*, Vol. 42 (August 1989), 35.

⁴⁵⁸ Henri Brod, *Méthode pour le Hautbois* (Paris: Vve Dufaut et Dubois, 1830), 113-115. “*Ayant choisi un morceau de roseau [...] de bonne qualité [...] on le met à sept millimètres et demi de largeur. [...] on en amincié chaque côté en forme de biseau jusqu’à ce que le bout ne soit pas plus épais que du papier à lettres, en soufflant dedans elle doit déjà donner une espèce de cri roc et tellement confus qu’on n’y saurait distinguer aucun son. Dans cet état l’anche doit être trop longue et trop large ; on la met d’abord à la largeur de sept millimètres en enlevant de chaque côté l’excédant au moyen d’un couteau, en allant du milieu de l’anche vers l’extrémité [...] puis on passe la lime sur les endroits CC pour arrondir les côtés et donner à l’anche une forme gracieuse*”

⁴⁵⁹ *Ibid.*, “*Ensuite on la coupe à la longueur de 14 à 16 millimètres après quoi on la regrave sur la petite lame d’acier jusqu’à ce qu’elle soit bonne à jouer.*”

⁴⁶⁰ Intriguingly, an original French shaper tip dated 1850 and formerly owned by the horn player Pierre Turpin yields a tip width of 7.98 mm. I am grateful to Taka Kitazato for bringing the existence of this shaper tip, certainly one of the earliest surviving specimens, to my attention.

shows the author scraping a rather stout, swallow-tailed reed, followed by the mention: “Take a piece of cane [...] and make it about 8 mm wide or less, depending on the desired reed width.”⁴⁶¹



Fig. 7.2. Rosenthal: *Theoretisch-praktische Oboe Schule*, (Mainz: Schott, 1901).

⁴⁶¹ Richard Rosenthal, *Theoretisch-praktische Oboe Schule von Joseph Sellner* (Mainz: Schott, 1901). “So nehme man ein Stück Rohrholz in Stärke von ungefähr 11 mm. spalte es in drei gleiche Theile und gebe jedem Theil eine Länge von 8 cm. und eine Breite von ungefähr 8 mm. oder auch weniger, je nach gewünschter Breite des Rohres.”

7.1.4. Scraping style

Much like a reed's shape, its scrape or 'cut' will likewise have an impact on tone quality, intonation, stability, response and dynamic range. As Ledet observed, "the conclusion can be drawn that the cut of a player's reed is dependent upon the method of tone production (way of breathing, use of embouchure, etc.), the instrument, the teacher (or teachers), and the aural concept of the player."⁴⁶² As such, there are literally as many ways to scrape a reed as there are players, and it is perhaps this parameter more than any other that provides the oboist with the aforementioned 'signature stamp' on their tone quality. In general terms, the longer the lay (i.e. the more cane removed from the surface), the flatter the reed. Lays on nineteenth-century specimens vary between roughly 10 and 17 mm, although on some reeds by Ling, the scrape extends beyond 18 mm all the way to the tie.⁴⁶³ Salenson observed that:

the scrape, contrary to what is sometimes claimed, has little influence on voicing and intonation; it mainly influences tone quality, response and dynamic range. Of course, when a reed [whose dimensions have been successfully tested for voicing] works well, the scrape can be used to fine-tune intonation, but it should not be considered one of the main constituents for obtaining proper intonation.⁴⁶⁴

Haynes reached a similar conclusion:

A series of reeds will act consistently according to the dimensions of their staple and cane shape, regardless of details of scraping.⁴⁶⁵

Several primary sources provide instructions on how to scrape a reed. While Garnier provides useful exercises for testing the response of a reed, he remains vague on scraping technique, stating only that the tip should be thinned "*to make the reed respond easily and imitate the crow of a young rooster.*"⁴⁶⁶ Garnier's tests are particularly efficient, and include softly tonguing the A-flat² (a notoriously stuffy note), as well as tonguing a descending diatonic scale from C² to C¹. If the reed fails these inspections (i.e. is too stuffy), he suggests scraping the heel to deepen and/or lengthen

⁴⁶² David A. Ledet, *Oboe Reed Style: Theory and Practice*. (Bloomington: Indiana University Press, 1981), xi.

⁴⁶³ Geoffrey Burgess and Peter Hedrick, 'The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,' *The Galpin Society Journal*, Vol. 42 (August 1989), 63.

⁴⁶⁴ Bruno Salenson, *De l'art de faire les anches de hautbois populaires & anciens, élaboré sur base de la pratique des hautbois du Languedoc* (Nîmes: Rivatges, 2016), 41. "*Le grattage, contrairement à ce qui est affirmé parfois, n'a que très peu d'influence sur l'équilibre et la justesse ; il joue surtout sur le timbre, la facilité, le confort et la puissance. Bien sûr, quand l'anche testée marche bien, le grattage peut permettre une finesse sur l'accord, mais il n'est pas constitutif des paramètres principaux.*"

⁴⁶⁵ Bruce Haynes, *A Reconstruction of Talbot's Hautboy Reed* in *The Galpin Society Journal* (April 2000), 84.

⁴⁶⁶ François-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, 1802), 9: "*Avant d'adapter l'anche au Haut-bois, après l'avoir graté également sur la point que l'on coupe, on l'essayera, et si dans ce cas elle retentit avec facilité et qu'elle imite le cris d'un jeune coq, on pourra s'en servir aussitôt.*"

the scrape in the back (“*il faut alors la gratter sur le talon pour lui donner plus de flexibilité.*”⁴⁶⁷) Salviani (1848) provides another means of evaluating the reed’s response:

*In order to make sure the reed has been properly made, test both the third-line B-flat, fingering it without the key, and the two Gs (second line and last space [sic]). Both should speak clearly and spontaneously, and never sound guttural.*⁴⁶⁸

Rather than scraping with a knife, Fahrbach (1843) recommends the use of Dutch rush to file the reed down to an appropriate thickness:

*If the upper part of the reed [i.e. the tip] is too thick, which makes the timbre harsh, it can be scraped with a sprig of horsetail [Dutch rush]; if it is too thin, which makes the tone strident, it can be clipped half or even a whole linea.*⁴⁶⁹

Barret also advocates the use of a file, in conjunction with the knife, and provides an interesting observation on the length of the lay: although he initially guides the reedmaker to scrape only the upper half portion of the reed, he allows for scraping as far back as the tie if the reed is too shrill:

*Scrape slightly each side of the reed to make them even. File the upper surface about the 16th of an inch on each side, and with the knife cut off a very small portion of the tip of the reed on the block. In order to open it: introduce a piece of steel into the reed, between the blades [...] and with the same knife, scrape the surface about the middle of the reed on each side, until it becomes very thin and smooth at the top, sufficiently to allow it to vibrate; it must also be paired a little on each side. Now blow into the reed, and if it “crows,” it is a sign the reed will be a good one; if thought too weak, cut a small portion off the top, if too strong, scrape it until it suits the embouchure, taking care that there is no inequality in the scraping, and that it has the form of [figure 17]. Each corner must be taken off to prevent its breaking. [...] In case the reed should be found to have too little vibration, it must be scraped thinner at the top; if it vibrates too much, or the tone is too shrill, scrape from the bottom to the middle of the reed, and then cut a small piece off the top, as in finishing the reed. Scraping is the most difficult and delicate part in reed making.*⁴⁷⁰

Wilhelm Braun (1796-1867) was one of Germany’s leading oboists and a close contemporary of Vogt. In 1823, he provides the following advice for oboists:

⁴⁶⁷ *Ibid.*, 9.

⁴⁶⁸ Clemente Salviani, *Metodo completo per oboe* [...] (Milan: Lucca, 1848), preface. “*Per conoscere poi ed accertarsi che la Piva sia stata costruita perfettamente, conviene che il Si bemolle in terza riga in posizione senza chiave, ed i due Sol in seconda riga ed ultimo spazio, sieno di voce chiara, spontanea, giammai gutturale.*”

⁴⁶⁹ Giuseppe Fahrbach, *Nuovissimo Metodo per Oboe* [...], op. 27 (Milan: Ricordi, 1843), 9. “*Se l’ancia sarà troppo grossa nella estremità superiore, locchè rende più difficile la carata del suono, si potrà raschiare colla specie di paglia della rasperella: e se sarà viceversa troppo sottile, lo che rende rauco il suono, si potrà accorciare al caso di una mezza linea, od anche di una intera.*” The ‘linea’ was equivalent to 1/12 of an inch, or roughly 2 mm.

⁴⁷⁰ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 13.

The highest and lowest notes can be improved by extending the scrape of the lay downwards, or by clipping the tip.⁴⁷¹

Like Barret and Garnier, Brod recommends scraping the heel of the reed if it proves unresponsive, especially in articulating the lower register:

the tip of the reed must be tapered as much as possible on each side, and the scrape should not extend beyond 10 to 12 millimeters [...] If the lower register does not speak readily, scrape the reed at point A, called the heel, making sure to always guide the knife to the tip in order to avoid any unevenness. If you hear a high-pitched rattle when tonguing the low notes, especially low F and F-sharp, it may be that the reed has been overly scraped at point B, in which case it must be clipped a tiny bit.⁴⁷²

In effect, in Brod's illustrations, if we assume that the staple of his finished reed measures 46 mm (as he indicates), then proportionally the lay is 10 mm long.



Fig. 7.3. Detail of Brod's scrape (*Méthode*, 1830), where the length of the lay is roughly equivalent to half of the blade length.

⁴⁷¹ Wilhelm Braun, 'Bemerkungen über die richtige Behandlung und Blasart der Oboe,' *Allgemeine Musikalische Zeitung* (12 March 1823), 167. "Aeusserste Tiefe oder äusserste Höhe kann man dem Rohre eher durch Abnehmen des Holzes nach unten, oder Abkürzung von oben, geben."

⁴⁷² Henri Brod, *Grande méthode de hautbois*. (Paris: Schonenberger, 1830), 115-116. "Le bout de l'anche doit être effilé des deux côtés autant que possible, la gratture ne doit pas être plus longue que dix à douze millimètres" [...] "Lorsqu'en jouant on a de la peine à faire sortir les notes d'en bas il faut gratter l'anche à l'endroit A, appelé le talon, et toujours conduire le couteau jusqu'à l'extrémité afin de ne point faire d'inégalités ; lorsqu'en détachant fortement les notes, principalement le Fa et le Fa dièze du médium, on entend un petit sifflement très aigü, cela peut venir de ce que l'anche est trop grattée vers l'extrémité B, il faut alors la raccourcir de très peu de chose."

The bevelled scrape

It is significant that in their instructions on oboe and bassoon reed making, both Ozi (1803) and Brod (1826) describe a *bevelled scrape* (Fr: *biseau*). Brod guides the reed maker to “*thin each side in the form of a bevel until the tip is as thin as a sheet of paper*”⁴⁷³ whereas Ozi states that:

*Once the reed is removed from the mandrel, one must turn it upside-down, as one does with a quill one wishes to sharpen, and with a penknife remove the bark of the cane in a bevel cut [...] This must be done with caution and safety for a careless move of the penknife can result in losing all of the efforts one has deployed.*⁴⁷⁴

The bevelled scrape, where blade thickness continually tapers from back to tip (i.e., no part of the reed is thicker than what lies behind it) was used in France well into the twentieth century (c.1930, as shown in Ledet and Salter).⁴⁷⁵ In contrast to modern reed styles (both short European or long American scrapes, see Fig. 7.4. below), the bevelled scrape does not end in a distinguishable tip, but rather creates an uninterrupted incline or slope from back to tip. The result is a reed that vibrates freely, producing the bright, ‘silvery’ tone praised by Brod.⁴⁷⁶ The bevelled scrape is encountered on *all* of the surviving nineteenth-century specimens analysed in this study, and as such, it can be viewed as the *only* scrape used by oboists prior to the twentieth century.

As noted by Burgess and Hedrick, the bevel sometimes created sides that are *thicker* than the centre of the reed, as in certain surviving specimens by Thomas Ling.⁴⁷⁷ In support of this practice, a rarely consulted source, the *Dictionnaire de l’Académie des Beaux-Arts* of 1868, in fact explicitly instructs the reedmaker to leave the sides of the tip *thicker* than its centre:

Be sure to constantly scrape the tip of the lay [languette] so as to render it more or less flat; in doing so, one ensures that the softest part of the reed is in the middle of the lay, and that no matter how much bark has been removed, the sides of the lay always retain, as it were, a thin strip of bark that provides support and strength to keep the softest part

⁴⁷³ *Ibid*, 115. “*On en amincit chaque côté en forme de biseau jusqu’à ce que le bout ne soit pas plus épais que du papier à lettres.*”

⁴⁷⁴ Etienne Ozi, *Nouvelle Méthode de Basson par Ozi, Membre du Conservatoire de Musique, Adoptée par le Conservatoire pour servir à l’Étude dans cet Établissement* (Paris: L’Imprimerie du Conservatoire de Musique, ‘An XI’, 1802/3). “*L’anche retirée du mandrin, il faut la renverser et la tenir comme une plume que l’on veut tailler, et avec un canif enlever en biseau l’écorce du roseau [...] Ce que nous indiquons ici doit être fait avec précaution et sûreté car un faux coup de canif peut faire perdre le fruit des soins qu’on vient de se donner.*”

⁴⁷⁵ David A. Ledet, *Oboe Reed Styles: Theory and Practice* (Bloomington: Indiana University Press, 1981) and Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018).

⁴⁷⁶ As shown further on under the *cane thickness* heading, the lightness in scrape is compensated by a thicker gouge, giving the bevelled scrape structure and stability to support intonation in the upper octave.

⁴⁷⁷ Geoffrey Burgess and Peter Hedrick, ‘The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,’ *The Galpin Society Journal*, Vol. 42 (August 1989).

*well-balanced. It is therefore both the relative strength of the sides (despite their being thinned) and the gradual taper of the upper portion of the reed that enters in contact with the lips, which provide the lay with a sort of consistency and flexibility, without any stiffness that could tire the lips.*⁴⁷⁸

Nevertheless, Brod states that “*the end of the reed must be tapered from the two sides as much as possible,*”⁴⁷⁹ indicating that the sides of his reeds were indeed thinner than the centre of the tip, which has the effect of mellowing the timbre.

The bevelled scrape, still commonly used by bassoonists today, has now been abandoned by most oboists (indeed, none of the twenty-first century reed models depicted in Salter feature it).⁴⁸⁰ Instead, as shown in Fig. 7.4., both the short European and long American scraping styles used by oboists today remove cane on either side of a central *heart* and/or *spine*, thereby creating *channels* that help the reed vibrate.⁴⁸¹ The heavier fibres left intact in the centre create a certain amount of resistance, providing stability and structure and darkening the tone.

⁴⁷⁸ *Dictionnaire de l'Académie des Beaux-Arts. Tome II* (Paris: Typographie de Firmin Didot Frères, Fils et Cie, 1868), heading “*Anche*”: “*le grattage consistant toujours à diminuer la courbe du côté de l'émail, on gratte constamment le point le plus élevé de cette courbe, afin de rendre successivement la languette plus ou moins plate ; de cette manière, la partie la plus tendre du roseau se trouve nécessairement au milieu de la languette, et, quelque profond que soit l'enlevage de la partie dure, les bords latéraux de la languette conservent toujours, pour ainsi dire, un filet d'émail ayant assez de consistance et de dureté pour maintenir la partie tendre. C'est donc, à la fois, et cette dureté relative que conservent les bords malgré leur finesse et l'amincissement graduel de l'extrémité supérieure que doit toucher la lèvre, qui donnent à la languette une sorte de consistance en même temps qu'une souplesse tenant un peu de la qualité du ressort, sans offrir une roideur qui pourrait fatiguer les lèvres.*”

⁴⁷⁹ Henri Brod, *Grande méthode de hautbois*. (Paris: Schonenberger, 1830), 115. “*Le bout de l'anche doit être effilé des deux côtés autant que possible.*”

⁴⁸⁰ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018).

⁴⁸¹ In Vienna, the term *bahn* (train) is used to describe the lay, *kern* (pit) is used to describe the heart, *rahmen* (frames) to describe channels, and *mond* (moon) to describe the half-moon step that separates the tip from the heart.

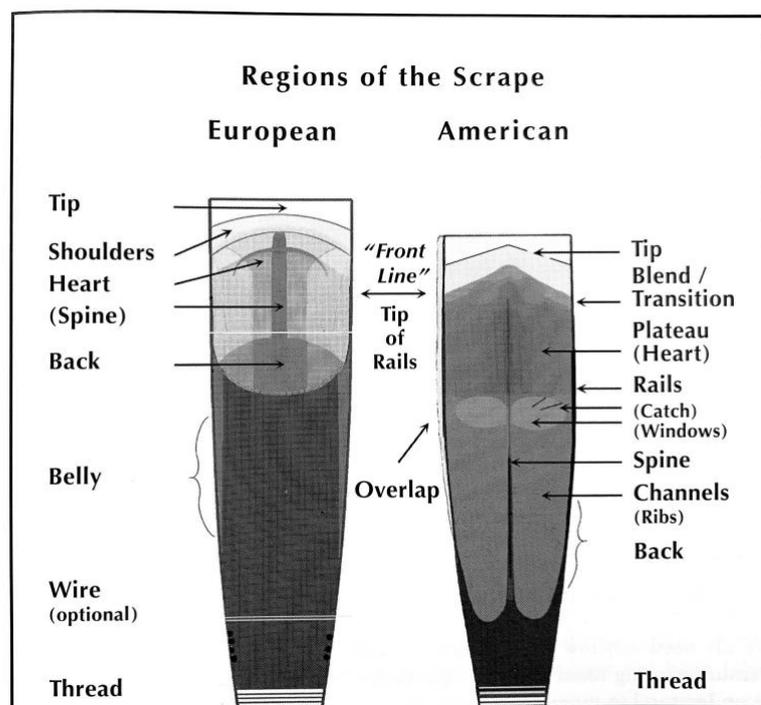


Fig. 7.4. Short European and long American scrapes used by oboists today.⁴⁸²

Because the nineteenth-century oboe reed was truly scraped like a V-shaped bevel, it does not contain any bumps, bulges or steps that create resistance or mellow the tone. Indeed, Weber has shown that on several original nineteenth-century fragments, “where the blade commences [that is, close to the binding], the deeper and less dense part of the cane was exposed. It was here, where today we would expect to find a central spine or heart, that by contrast the material is found to be weak.”⁴⁸³ As Salter notes, a change in aesthetics has produced a noticeable darkening in tone in the last few decades:

Styles are shifting across the borders of Europe [...] It is of some fascination to compare the changes that have overtaken the oboe world even in these last thirty years, for, on the whole, tone has strengthened, unified and darkened, not only because of advances in instrument construction, but to reflect changing tastes prompted largely by the demands and output of the recording industry.⁴⁸⁴

⁴⁸² Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), 57.

⁴⁸³ Rainer Weber, ‘Early Double Reeds,’ trans. William Waterhouse, *The Galpin Society Journal*, Vol. 54 (May, 2001), 237.

⁴⁸⁴ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), xiii.

Roland Lamorlette (1894-1960) also used a bevelled reed, which can be heard on the first recording of the Poulenc trio for oboe, bassoon and piano (composed in 1926). The trio is featured on a recording entitled “The French Accent” and can be heard at <https://www.youtube.com/watch?v=E-pq1h-bW8>, accessed on 10 October 2018.

In the photograph below, a reed made by Antonio Pasculli (1842-1924) and dated c.1880 features the traditional nineteenth-century bevelled scrape. As Salter notes, the specimen is “Very thinly scraped, without Heart, but flat and evenly across the Tip [...] Ideally responsive for the light instrument [Trieber *systeme 3*] and the music written for it.”⁴⁸⁵



Fig. 7.5. A reed by Antonio Pasculli (c.1880) depicting the traditional bevelled scrape (Photo: Salter)⁴⁸⁶

⁴⁸⁵ Graham Salter, *Understanding the Oboe Reed* (London: Bearsden, 2018), 333.

⁴⁸⁶ *Ibid.*

7.1.5. Staple length and conicity

In addition to the vibrating cane in contact with the player's lips, the dimensions of the staple, also known as the *bocal*, *tube* or *crook*, exert a strong influence on a reed's playing characteristics. Inserted into the well of the oboe, this conical tube becomes an extension of the instrument's bore. Historically made from unsoldered brass or copper,⁴⁸⁷ the staple is in fact a trapezoidal piece of sheet metal wrapped into a conical shape around a mandrel.

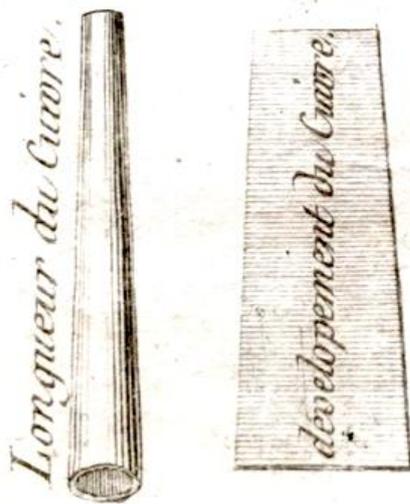


Fig. 7.6. Garnier's diagram of a staple (*Méthode*, 1802): folded (left) and laid flat (right).

Staple *conicity* (that is, the rate at which the opening flares) is determined by the dimensions of the trapezoid laid flat before being wrapped into a cone. The length of the staple, its conicity, and the proportion between these two variables all influence its acoustic properties, namely its intonation and voicing.⁴⁸⁸ Conicity is calculated by subtracting the diameter of the staple's top opening from the bottom opening and dividing this value by its length:

$$\text{Conicity} = [(top\ opening) - (bottom\ opening)] \div staple\ length$$

In sum, a staple that is shorter and more flared will yield wider octaves and a higher pitch, whereas a longer, more cylindrical staple will produce shorter octaves and a lower pitch. Joël Eymard has analysed the effects that adjusting these variables has on the relationship between octaves, and has demonstrated that the same principles that govern the acoustic properties of

⁴⁸⁷ Garnier states that the staple should be made of copper (rather than brass as is now used today).

⁴⁸⁸ I use this term to describe the relationship between intervals, especially octaves.

conical brass instruments such as the horn also apply to an oboe's staple. Because all oboes use *overblowing* to sound the octave, his findings provide key learnings for any historical oboist interested in making their own staples.⁴⁸⁹

Brod was acutely aware of the importance of matching the staple's proportions to those of the oboe and of the difficulty in striking an optimal balance between the two. In his *Méthode*, he specifies that his staples are 46 mm long, with a bottom diameter of 5 mm and a top diameter of 2 x 3 mm. He explains that "*the manufacture of these staples [cuiivrets] is the domain of instrument makers,*" and that:

*The making of this little tube can influence the tuning of the instrument. There must exist between its bore and that of the oboe a certain relationship of dimensions necessary for the intonation, the quality and the volume of sound. When it is too narrow at [the top] the high notes are too flat, the oboe has less sound, and one has less facility attacking notes above the upper D. The opposite happens if this end is too large. It is necessary to put much care into the choice of these tubes, and once one has matched them well to the instrument on which one uses them, it is necessary to preserve them carefully, in view of the difficulty one often suffers in finding them perfectly in tune.*⁴⁹⁰

Fahrbach (1843) also makes an interesting observation about staple construction:

The proper dimensions of the brass staple, onto which the two blades are bound, also require special mention. If the upper opening of this tube is too large, it will require [the oboist to exert] more pressure to make the high notes speak. Likewise, if the tube

⁴⁸⁹ <http://la.trompette.free.fr/Ninob/BOCALhautbois4.pdf>, accessed 20 March 2020. Eymard provides the following conclusions:

Lengthening the bocal: Lengthening a bocal with the same conicity by 3 mm will flatten the lower octave by 10 cents, while it will flatten the upper octave by 20 cents. The octaves are thereby narrowed by 10 cents.

Shortening the bocal: Shortening a bocal with the same conicity by 3 mm (removed off the bottom end) will sharpen the lower octave by 15 cents, while it will sharpen the upper octave by 10 cents. The octaves are thereby narrowed by 5 cents.

Adjusting the bottom opening: Reducing the bottom opening will result in narrower octaves. When the bottom opening is reduced by 0.3 mm, the lower octave is sharpened by 8 cents, yet the upper octave (especially the higher notes) is flattened, resulting in octaves narrowed by 15 cents. Conversely, enlarging the bottom opening will make for wider octaves.

Adjusting the top opening: Reducing the top opening will produce effects similar to reducing the bottom opening, except that the effect on the upper octave will be even more pronounced (i.e. the upper octave will be even flatter). Conversely, enlarging the top opening will yield wider octaves.

⁴⁹⁰ Translation by Peter Hedrick, 'Henri Brod on the Making of Oboe Reeds,' *The Journal of the International Double Reed Society*, Vol. 6 (1978), 8-9, quoting Brod *Méthode* 1830, 112: "*La figure 12, est un de ces cuiivrets sur lesquels on monte les anches. Sa longueur est de 46 millimètres, il est rond en A, et ovale en B, son diamètre intérieur en A, est de 5 millimètres, le petit diamètre de l'ovale B, est de deux millimètres et le grand de trois. [...] La confection de ce petit tube peut influencer beaucoup sur la justesse de l'instrument, il doit exister entre sa perce et celle du Hautbois certains rapports de dimensions nécessaires à la justesse, à la qualité et au volume du son ; lorsqu'il est trop étroit en B, les notes d'en haut sont trop basses, le Hautbois a moins de son et l'on a moins de facilité à faire sortir les notes qui sont au-dessus du Ré d'en haut, le contraire arrive lorsque ce bout est trop large. Il faut mettre beaucoup de soin dans le choix des cuiivrets et une fois qu'on en a qui sont bien assortis à l'instrument dont on se sert il faut les conserver avec soin, vu la difficulté qu'on éprouve souvent à en trouver de parfaitement juste.*"

*is too wide [conical], the high notes will be out of tune [...] The staple's dimensions must be proportionate to that of the oboe's bore.*⁴⁹¹

A challenge in determining original staple dimensions lies in the fact that on original reeds, where the cane and binding are intact, only the diameter of a staple's bottom opening can be measured. Traditionally, the staple's lower end was wrapped with thread made of silk, linen, hemp, cotton or wool, and the cane bound with the same string. And while it is easier to create an airtight seal with cork, this material was not used to cover the bottom end of staples until after 1850, corresponding to the shift from the *reverse cone* reed well to a *cylindrical metal sleeve*.⁴⁹² The reed wells on several original French oboes have been rereamed to accommodate the cylindrical fit, as is the case with Sallantin's oboe at Paris' *Musée de la Musique* that was 'updated' by Charles Triebert c.1850.⁴⁹³ The important difference between a 'reverse cone' reed well and the 'cylindrical sleeve' is that there was a definite 'bottom' to the well in the latter design, resulting in a constriction in the bore at that point (i.e. the diameter at the end of the staple is larger than the minimum bore). This feature, which created an additional point of resistance in the airstream on the newly-mechanised *système* models, greatly affected how the reed-oboe coupling worked, and was but one of Triebert's many departures from the simple-system hautboy.

Although Brod states the contrary, in the nineteenth century the art of reed making often also included fashioning one's own staples (Cappelli includes instructions in his 1853 *Metodo*), and as late as 1888 De Stefani illustrates the process of making them from a trapezoidal sheet of brass.⁴⁹⁴ Today, the art has been revived by historical oboists, and many craft their own staples for playing baroque-style instruments. Interestingly, only a few of these performers make staples for later

⁴⁹¹ Giuseppe Fahrbach, *Nuovissimo Metodo per Oboe di facile intelligenza e colla vista speciale che servir possa alla istruzione de principianti senza l'aiuto del maestro*, op. 27. (Milan: Ricordi, 1843), 9: "Non merita minore attenzione la giusta dimensione di quel tubetto d'ottone, sopra cui vengono legate le due linguette di canna. Chè se il foro superiore del tubetto sarà troppo Augusto, farà d'uopo di una pressione maggiore per cavare i toni acuti. Chè se altrimenti il tubetto sarà troppo largo, i toni acuti riesciranno [sic] alterati, ad onta che le labbra varino abbandonando l'apertura dell'ancia. La dimensione del tubetto d'ottone dev'essere proporzionata a quella del foro trasversale dell'Oboe. [...] Il signor Uhlmann di Vienna prepara le migliori ancie che io conosca, ed ha potuto raggiungere la regolarità nelle diverse parti delle medesime col mezzo di un'apposita macchina." The flute and guitar virtuoso Joseph (Giuseppe) Fahrbach (1804-1883) was employed at the Viennese court opera theatre but also owned a music school. In 1843, he published an oboe tutor, the *Nuovissimo Metodo*, which in all likelihood was intended as tuition material for the school he ran.

⁴⁹² At the time of writing, it would appear that no one really knows when corked staples were first introduced. Although Barret's *Complete Method* (1850) depicts a reed wound with thread on the bottom end, the models represented in the tutor (Barret model and Triebert *système* 4) were presumably equipped with cylindrical metallic sleeves rather than a conical well drilled directly into the bore (common on simple-system oboes). It is possible to create an airtight seal on a reed wound with thread that can then be inserted into the oboe, and modern Viennese oboes, which still feature a conical reed well, are still sometimes fitted with staples wrapped in thread.

⁴⁹³ Pers. commentary, Geoffrey Burgess.

⁴⁹⁴ Ricordano De Stefani, *Gran Metodo Pratico per Oboè e Corno Inglese* (Parma: unpublished, 1888). Georg Pietzsch, in his *Schule für Oboe mit 50 Etüden* (Leipzig: Friedrich Hofmeister, c.1885), also includes instructions on staple making.

classical and romantic models. This is surely due to the fact that a wide array of commercially available staples work well on classical copies, as well as on original Romantic oboes. On this, Haynes notes that:

Staple making from brass stock is time-consuming, especially if one is experimenting with designs and cannot re-use old staples, but the possibilities which it opens for control of intonation, response, and tone will repay the effort. The art of staple design has nearly been lost [...] Rediscovering this art is perhaps the longest and most complicated aspect of baroque reed making.⁴⁹⁵

It should be noted that many original Viennese-style oboes from roughly 1820-1860 (such as those by Koch or Wolfgang Küss) are equipped with a tuning slide to cope with varying pitch levels. Stefaan Verdegem, who has studied the acoustic properties of this model, has noted that changing staple lengths is akin to adjusting the tuning slide found on these specimens. Like the tuning slide, adjusting staple lengths cannot entirely resolve intonation issues, for as Verdegem observes, “no instrument can be lengthened or shortened within a given tuning margin and remain as perfectly in-tune in all lengths. Adjustment of the tuning slide [as in staple lengths, seen here as an extension of the bore] inevitably results in different proportions within the instrument’s bore, changing the intonation of the intervals.”⁴⁹⁶ Berlioz also commented on this phenomenon: “*But since lengthening the tube (particularly in a flute) disturbs its proportions, it also spoils the intonation.*”⁴⁹⁷

⁴⁹⁵ Bruce Haynes, ‘Making Reeds for the Baroque Oboe - 1,’ *Early Music*, Vol. 4, No. 1 (Oxford University Press: January 1976), 34. In part II of the same article, Haynes offers a complete explanation of the variables that influence staple design as well as a comprehensive guide to building them.

⁴⁹⁶ Stefaan Verdegem, ‘Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,’ *The Galpin Society Journal* (Volume 61, 2008), 208.

⁴⁹⁷ Hector Berlioz, *A travers chants*, trans. as *The Art of Music and Other Essays* by Elizabeth Csicsery-Ronay (Bloomington: Indiana University Press, 1994), 197.

7.1.6. Gouge thickness

Among all the oboe tutors published in the nineteenth century, Brod is the only author to give precise measurements for gouge thickness. Whereas Brod recommends what at first glance appears to be a remarkably thick gouge of 0.75 mm (“*on le réduit à l’épaisseur de $\frac{3}{4}$ de millimètre dans tout le milieu de son épaisseur*”)⁴⁹⁸ – thicker even than the 0.68 mm gouge used by hautboists today for eighteenth-century models playing at 415 Hz – a relatively thin gouge of between 0.58 mm and 0.62 mm is used today for modern conservatoire reeds. It will be seen below that because Brod’s cane was hand gouged, what at first glance appears to be a rather large discrepancy is in fact compensated by a completely different gouging technique. Brod notes that “[The cane] *must have a thickness suitable to its quality, elasticity and hardness. Softer, spongier cane must be left thicker than if it is hard and tight*”⁴⁹⁹ suggesting that he may have gouged harder cane considerably thinner.

⁴⁹⁸ Henri Brod, *Grande méthode de hautbois*. (Paris: Schonenberger, 1830), 113.

⁴⁹⁹ *Ibid.* “*Il faut encore que le roseau ait une épaisseur convenable à sa qualité, son élasticité, ou sa dureté. S’il est mou et spongieux il lui faut plus d’épaisseur que s’il était d’r et serré.*”

7.1.7. Gouging technique

Hand gouging vs. machine gouging, or inside vs. outside scrape

A factor that would have greatly influenced the timbre, intonation, response, and longevity of original nineteenth-century reeds is their use of cane produced by *manual* or *hand gouging*. Also called a *tapered gouge* (Fr: *contrepenle*), the process uses a handheld gouger (*outil courbe*) and a ‘scraping’ tool (*grattoir*) to vary the gouge thickness manually by creating an *inside scrape* (also called *internal profiling*). This artisanal technique, mastered by oboists well into the twentieth century (see Fig. 7.7.) despite the advent of the gouging machine,⁵⁰⁰ has incidentally been rehabilitated by many of today’s historical bassoonists though, to my knowledge, no historical oboists have incorporated the craft in their reed making practice (for example, few of the performers interviewed in Appendix II have experimented with the technique).

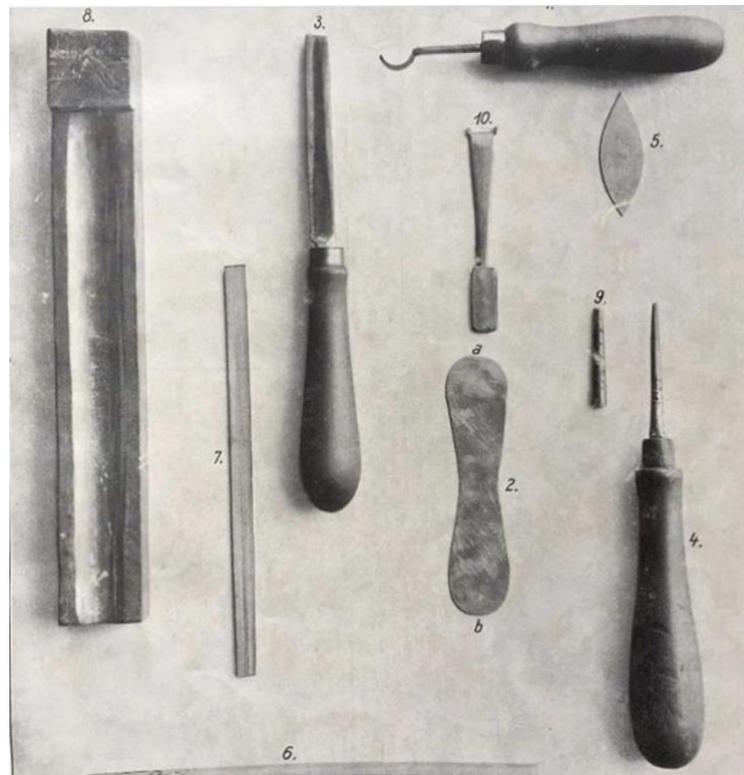


Fig. 7.7. Reed making tools as shown in Rosenthal’s *Schule* (1901), showing manual gouging tools⁵⁰¹

The complexity of this process, now somewhat of a lost tradition formerly handed down from teacher to student, is hinted at by Brod when he states “*it is necessary to gain the knack of*

⁵⁰⁰ Richard Rosenthal, *Theoretisch-praktische Oboe Schule von Joseph Sellner*, (Mainz: Schott, 1901). Rosenthal depicts handheld gouging tools in a photograph included in his tutor, as does Georg Pietzsch in his *Schule für Oboe mit 50 Etüden* (Leipzig: Friedrich Hofmeister, c.1885).

⁵⁰¹ *Ibid.*

knowing the degree of force to give it”,⁵⁰² suggesting it is something that must be felt viscerally rather than read about in a book.⁵⁰³ It will be seen in the following section that performers widely regarded manual gouging to be particularly delicate and cumbersome process, and Brod himself states that:

*If, when one has begun to scrape the inside of the cane, one left the sides too thick, the reed will have a hard sound, very difficult to control and make softer. If on the contrary, one has made them too thin, [...] the reed will probably be too weak. Much practice and long experience are necessary to get the thickness which one must give the cane.*⁵⁰⁴

The gouging machine was invented by Brod in 1834 and exhibited for the first time at Paris’ *Exposition Industrielle* in 1839, only several weeks after his death.⁵⁰⁵ This machine, which as seen below remains virtually unchanged to this day, gouges cane with a predetermined thickness consistent from one piece to another. The product of an increasingly industrialised age, the tool would have been unknown to Garnier or to Brod at the time of publication of their *Méthodes* (in 1802 and 1826/30 respectively). Cane processed by machine gouging produces a uniform thickness; as a result, in order to thin the reed so that it vibrates, the reedmaker must ‘scrape’ cane from the exterior surface, using a knife and/or file to create an *external* or *outside scrape*.

In the 13 July 1834 edition of *Revue Musicale*, Fétis announces Brod’s new gouging machine:

Monsieur Brod has invented a very ingenious machine by which an artist who is less expert, less skilled, still a child, can make reeds for the oboe and the bassoon as perfectly as the most skilled instrument maker [luthier], and further, at a speed which cannot be equaled by any other manner of construction. All it takes to put this machine into action is to turn a handle. The rotational movement produces the following results: The reed cane is cut into lengths; Then it is hollowed out with a precision that would be impossible to obtain by the ordinary process, and which leaves nothing to be desired. Whatever the diameter of tube cane that is used, it is compelled to take that of the machine; A tool similar to a quill cutter [taille-plume] serves to give the reeds a shape which is always the same, and is uniformly set to the same dimensions; One

⁵⁰² Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 113. Brod also recommends to check for asperities by “quickly and gently skimming the surface of the scraped area with the tip of your finger,” further evidence that it was important to develop an instinctive ‘feel.’ – “on s’assure en passant légèrement et assez vite le bout du doigt dans l’endroit gratté [...] il faut prendre un peu habitude, un tact particulier pour connaître le degré de force qu’il faut lui donner.”

⁵⁰³ For a detailed description of the manual gouging method, see: Paul White, ‘Early Bassoon Reeds: A Survey of Some Important Examples,’ *Journal of the American Musical Instrument Society*, vol. 10 (1984), 69-96.

⁵⁰⁴ Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 116. Translation by Peter Hedrick in ‘Henri Brod on the making of oboe reeds,’ *Journal of the International Double Reed Society*, No. 6, (1974), 11. Original Fr: “Si, lorsqu’on a primitivement gratté l’intérieure du roseau on a laissé les bords trop épais, l’anche aura un son dût et très difficile à maîtriser et à adoucir; si, au contraire on les a faits trop minces l’anche [...] sera probablement trop faible, il faut une grande habitude et une longue pratique pour être à peu près sûr de l’épaisseur qu’on doit donner au roseau.”

⁵⁰⁵ Brod, who died on 6 April 1839, did not live to display his wares at the trade fair, which began on 1 May.

*places a tube on a mandrel, turned by the same handle; the prepared cane is placed there, so that by tightening a screw which fastens it onto the same tube, and which on the other side taking the end of a silk cord, one only has to turn to tighten the ligature; the reed cannot fail to be formed equally on each side. We have before our eyes some reeds which have been made according to this process and which in regard to neatness and consistency prevail over all those we have seen before. M. Brod can provide all artists who play the oboe or the bassoon with these machines which will save them much trial and error and fruitless labor.*⁵⁰⁶

As Padgham Albrecht notes, Brod encountered Joseph Sellner while touring Vienna in December 1835,⁵⁰⁷ and the Viennese oboist, who was twelve years Brod's senior, showed keen enthusiasm for Brod's new invention. In a periodical published six months after Brod's departure from Austrian capital, Sellner eagerly writes:

*Herr Brod, an outstanding mechanician, as well as first oboist of the Royal Academy of Music in Paris, has invented a machine by which one can produce oboe reeds from the familiar reed cane perfectly, in an extremely easy manner, and which heretofore has been impossible to do freehand. [...] If one knows, when gouging the reed cane freehand, how difficult and yet how important it is to achieve the proper uniformity and thickness in order to produce a suitable reed, then it is truly gratifying to see with what security, how easily and how simply the machine accomplishes this important task. It is unerring and incapable of gouging two reeds unequally, though one can generate reeds of various strengths or weaknesses as desired. [...] the scraping of the reed presents no difficulty, since the cane is gouged with perfect consistency, and it will be quite obvious to any oboist what an advantage this would be, for one of the instrument's greatest difficulties will be eliminated. There is no doubt that the inventor of the machine, Hr. Brod, will receive the proper recognition, and the machine subsequently will come into universal use.*⁵⁰⁸

Barret was equally enthusiastic, noting:

*Difficult as reed making may be, it is simple compared with what it was previous to the introduction of the new machine and tools (a recent invention), by which the thickness and size of the reed can be regulated as precisely as possible.*⁵⁰⁹

By 1843, the gouging machine was being used to make commercially sold reeds by Uhlmann of Vienna, as Fahrbach reveals in his *Nuovissimo Metodo*:

⁵⁰⁶ François-Joseph Fétis, 'Variétés : Machine à faire les anches de hautbois et de basson,' *Revue musicale*, Vol. 8, No. 28 (13 July 1834), 221. Translation by Carol Padgham Albrecht in "Joseph Sellner Praises Henri Brod's New Gouging Machine," *The Double Reed* (vol. 40, no. 1), 89-90.

⁵⁰⁷ During the tour, Brod appeared as soloist in two of his own compositions (*La Savoyarde*, op. 7 and *Fantaisie avec variations sur un thème de Winter*, op. 8). A critic of the performance commented: "A melting tone in soft passages and the sustained singing of the instrument is the prevailing side of this soloist."

⁵⁰⁸ Carol Padgham Albrecht, 'Joseph Sellner Praises Henri Brod's New Gouging Machine,' *The Double Reed* (vol. 40, no. 1), 93.

⁵⁰⁹ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 10.

*Mr. Uhlmann of Vienna makes the best reeds I am aware of, who with the aid of a special machine has been able to obtain uniformity in all their parts.*⁵¹⁰

These accounts demonstrate that manual gouging was viewed by oboists at the time as a rather laborious ‘necessary evil,’ and that an even gouge was considered desirable. Even so, while Barret viewed machine gouging as preferable to hand gouging, he continued using a handheld scraper in conjunction with the machine:

*Take the cane out of the groove [of the gouging machine] and if the inside be found too thick on account of its roundness, and the knife of the gouge have no effect on it, scrape the middle with part (7) [the grattoir] until the cane is of a proper flexibility, which is proved by taking the cane between the thumb and first finger of each hand and bending it contrary ways.*⁵¹¹

In my own experience, I, too, have found it useful to use the *grattoir* in conjunction with machine-gouged cane, especially when making a short-scrape reed, which I find requires a slightly thinner gouge with thinner sides. As mentioned below under the ‘personal findings’ heading, I now often use a *grattoir* to thin the centre of pre-gouged cane, especially in the centre area where I will place the tip. Evidence that this technique was used historically has been found by Weber, who, while analysing fragments of surviving early nineteenth-century bassoon reeds, observed that “it becomes clear straight away that the reed-blade was worked far closer below the bark. [...] [The cane] was gouged far thinner on the inside - especially in the central area which, after being folded over, forms the tip aperture.”⁵¹²

One of Brod’s gouging machines, made of brass and iron and stored in a mahogany box, has survived, and is housed at the MIM in Brussels. Surprisingly, Verdegem reports that the diameter of its bed is c.13.5 mm,⁵¹³ that is, considerably wider than the 10-11 mm cane diameter Brod recommends in his *Méthode*. (It should be noted that Brod himself is inconsistent on this topic, since several pages later, he specifies a diameter of 11-12 mm.) Verdegem also notes that in 1850, Barret depicts an identical gouging machine in his *Complete Method for the Oboe*, suggesting that the machine was rapidly and widely adopted. While modern-day gouging machines remain virtually unchanged from Brod’s prototype, today’s models do not incorporate the shaping device described by Fétis, which appears to have been the first shaper tip ever invented.

⁵¹⁰ Giuseppe Fahrbach, *Nuovissimo Metodo per Oboe*, op. 27. (Milan, Ricordi, 1843). “*Il signor Uhlmann di Vienna prepara le migliori ancie che io conosca, ed ha potuto raggiungere la regolarità nelle diverse parti delle medesime col mezzo di un’apposita macchina.*”

⁵¹¹ *Ibid.*, 12. Brod incidentally recommends a similar procedure to test for cane hardness, see below under *Cane quality*.

⁵¹² Rainer Weber, ‘Early Double-Reeds,’ *The Galpin Society Journal*, Vol. 54 (May, 2001), 236. Translated by William Waterhouse.

⁵¹³ <http://brusselsmimoboeollection.kcb.be/instrument-checklist/1674/>, accessed 20 March 2020.



Fig. 7.8. Brod's gouger, MIM Brussels
(photo: Stefaan Verdegem)

In short, whereas hand gouging allows the reedmaker to control cane thickness *internally*, adjusting cane thickness after machine gouging can only be achieved *externally* by scraping the blades with a knife or filing them once the reed is already tied to a staple. Hand-gouged reeds tend to last longer because much of the bark and superficial strata of cane, which are harder and more resilient to the corrosive effects of salivary glucose, are left intact. Instead, the reed is thinned by removing the softer, more porous interior layers of cane. Conversely, reeds produced by a machine gouge eliminate the outer strata of harder cane, leaving the softer, spongier layers underneath exposed to bacterial corrosion.⁵¹⁴

⁵¹⁴ Weber notes that reed cane “is extremely non-homogeneous. The ‘bark’ area is very hard, thanks to its content of amorphous silicic acid, and the density directly under the rind (epidermis) is considerably higher than further towards the interior of the cane.” Rainer Weber, ‘Early Double-Reeds,’ trans. William Waterhouse, *The Galpin Society Journal*, Vol. 54 (May, 2001), 234.

It would appear that even before inventing his gouging machine in c.1834, Brod strived for an even and consistent gouge throughout the reed's length (i.e. no internal profiling): “*When holding the gouged reed to the light, one should see a perfectly opaque line in the middle from one end to the other, gradually becoming more transparent towards the sides.*”⁵¹⁵ On this, Haynes notes that “It seems clear he expected the longitudinal thickness to be uniform from one end of the piece of cane to the other.”⁵¹⁶ In contradiction to this, in his *Nouvelle méthode de basson* of 1803 (published one year after Garnier's *Méthode raisonnée*, but based on an earlier version from 1787), Etienne Ozi indicates:

*The gouge having thinned the cane to the point where only a quarter of a ligne [1/12 of an inch] remains, we use, to thin and smooth out the imperfections that may have been caused by the gouge, which cannot always be controlled, a round ‘scraper’ which one uses to weaken the middle of the piece [of cane] that will then be folded to bring the two ends of the reed together; one must leave more strength at the cane's two extremities so that they can support the ligature.*⁵¹⁷

Ozi therefore expected the reedmaker to vary cane thickness internally using the scraper tool (*grattoir*). Burgess and Hedrick confirm that this practice was used on original English reeds by Thomas Ling, noting: “When gouging by hand, it is easy to vary the thickness of different areas of the cane. From the exposed dermis and bark at the edges of the scrape on some old reeds, it seems the gouge was tapered from the back towards the tip, and from the centre to the sides.”⁵¹⁸

As Agrell notes, “it would be clearly simplistic not to consider the evolution of instrument making, changing tastes and musical demands in a discussion of reed construction and history”,⁵¹⁹ and it is likely that by the time of Brod (a generation after Ozi and Garnier), oboe reed designs – much like instrument designs – was changing rapidly, and that the practice of manual gouging was slowly being discarded, or at least had come to be seen as cumbersome. This may explain why Brod's gouging machine was hailed as somewhat of a ‘miracle cure’ to a problem that plagued oboists, who found achieving a uniform, even gouge one of the greatest challenges in reed making

⁵¹⁵ Henri Brod, *Grande méthode de hautbois*. (Paris: Schonenberger, 1830): “*En regardant le grand jour à travers le roseau ainsi gratté, on doit voir dans le milieu et d'un bout à l'autre une ligne également opaque se fondant en demi transparent vers les bords.*”

⁵¹⁶ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy, 1640-1760* (London: Oxford University Press, 2001), 117.

⁵¹⁷ Etienne Ozi, *Nouvelle Méthode de Basson* (Paris: L'Imprimerie du Conservatoire de Musique, 'An XI', 1802/3): “*La gouge ayant diminué le roseau jusqu'à ce qu'il ne lui reste qu'un quart de ligne d'épaisseur on employera, pour achever de l'amincir et réparer les inégalités qu'auront pu faire la gouge, qu'on ne peut pas toujours maîtriser, un grattoir rond dont on se servira aussi pour affaiblir le milieu du morceau destiné à être ployé pour rapprocher les deux parties de l'anche; on doit laisser plus de force aux deux extrémités du roseau afin qu'elles puissent supporter la ligature.*”

⁵¹⁸ Geoffrey Burgess and Peter Hedrick, ‘The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,’ *The Galpin Society Journal*, Vol. 42 (August 1989), 39.

⁵¹⁹ Donna Agrell, ‘Early Nineteenth-Century Bassoon Repertoire from Sweden: In Search Of The High Register,’ *The Double Reed* (vol. 40, no. 4), 89.

(*q.v.* Sellner citation above). Indeed, in their treatises, Sellner, Fahrbach, Cappelli, and Barret all praised the utility of the machine gouger.

Nonetheless, it appears that the machine was slow to gain popularity in Germany: in their comparatively late tutors, both Pietzsch (c.1885) and Rosenthal (1901) depict handheld gouges, gouging beds and *grattoirs* ('*Ausschaber*') and provide detailed instructions on manual gouging. Around the same time, Ricordano Di Stefano also devoted an entire chapter to hand gouging in his *Gran Metodo Pratico per Oboè e Corno Inglese* (Parma, 1888). That these eminent oboists continued to gouge manually over fifty years after the invention of the machine poses several questions: were machines not readily available outside of France until the twentieth century? Or did certain musicians simply prefer the freedom that manual gouging provided in creating a tapered gouge?

The nineteenth-century tutors that do provide instructions on how to gouge manually describe similar procedures,⁵²⁰ and many contain illustrations of the tools required. Garnier's *Méthode raisonnée* is particularly valuable in this respect, as the drawings of his tools are shown to scale. In collaboration with the Cologne-based goldsmith Micha Peteler, Lola Soulier replicated four of Garnier's gouging tools in June 2019. These include Garnier's gouging bed, mandrel, *grattoir*, and handheld gouge as shown below:



⁵²⁰ These include oboe tutors by Brod, Garnier, Pietzsch, Cappelli, Rosenthal, Di Stefano, etc., but also bassoon methods by Ozi, Jancourt and others.

Fig. 7.9. Hand hougging tools made by Micha Peteler according to Garnier's *Méthode* (1802)
Left to right: Gouging bed, mandrel, scraping tool (*grattoir*), and handheld gouge (*outil courbe*)

The handheld gouge was used in conjunction with a small bed. As Brod indicates, the gouge “serves to hollow out the cane [...] its curve is a portion of a circle nearly the same diameter as the cane which one uses for oboe reeds, that is to say, 10-11 millimetres.”⁵²¹ Garnier indicates that the gouge is “curved in a crescent shape throughout its width [...] its curvature is proportionate to that of a piece of cane split in two lengthwise. Sharp on both sides, it is used to remove the pulp inside the cane.”⁵²² The two-sided *grattoir* has twin rounded, razor-sharp blades on either end that are the same diameter as the handheld gouger. Garnier describes the tool as a “flat steel blade whose two round and sharp extremities are used to scrape and polish the cane’s interior.”⁵²³ Brod observes that “it has a blade on either end, which are both very thin and rounded, and follow the same curve as the gouger; it is used to polish and smoothen the cane that has already been hollowed by the gouger.”⁵²⁴ Only two original *grattoirs* survive today, found in a set of reed tools made by Frédéric Triebert.⁵²⁵ Although it is missing a *grattoir*, a set of reed-making tools currently in the possession of Alfredo Bernardini and attributed to Pietro Antonio Piana (1785-1858) includes a manual gouge along with an original staple and mandrel. Piana, a woodwind maker survived by numerous originals including several clarinets d’amour in G and F, opened a workshop in Milan in 1811.

⁵²¹ Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 110: “La figure 2, représente la gouge. Elle sert à évider le roseau, on voit en A, que sa courbure est une portion de cercle à peu près de même diamètre que le roseau qu’on emploie pour les anches de hautbois ; c’est-à-dire 10 à 11 millimètres.”

⁵²² François-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, 1802), 7. “Le [...] gouge est [...] recourbé en forme de croissant dans toute sa largeur [et] proportionnée à celle d’un morceau de roseau fendu en deux dans sa longueur. Il est tranchant des deux côtés de sa largeur ; il sert à enlever la partie ligneuse de l’intérieur du roseau.”

⁵²³ *Ibid.*, 6: “une lame d’acier plate, dont les deux extrémités rondes et tranchantes servent à grater et à polir l’intérieur du roseau.”

⁵²⁴ Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 110. “La figure 3, est le grattoir, il a une lame à chaque bout, elles sont très minces et arrondies suivant la même courbure que la gouge ; et servent à polir et unir le roseau déjà évidé par la gouge.”

⁵²⁵ One of these sets (c.1840) is currently in the possession of Mark Baigent.



Fig. 7.10. Reed making tools attributed to Piana
(photo: Alfredo Bernardini)

7.1.8. Cane quality

Numerous authors have drawn attention to the temperamental nature of reed cane. In 1836, Sellner decried its inconsistency:

*The universal complaint by oboists over the lack of good cane is well known, and surely has been around as long as the instrument has been in use. [...] And the inconvenience of their [the reeds'] short life span, as well as the cane's inconsistency in regard to strength or weakness, easier or harder response, etc., along with the prevailing procedure of making them, never will be eliminated.*⁵²⁶

He was echoed by Barret in 1850, who underlined the inherently personal nature of reeds while lamenting their unpredictability:

*It is of paramount importance that performers should be able to make their own reeds. As they must be formed to suit the lips and teeth, none can judge so well as the player the description of reed he requires [,] for a reed adapted for one performer will be totally unfit for another. There are three things necessary to constitute a good reed, justness, certainty, and quality of tone, but it is almost impossible to have all these requisites combined. [...] It will sometimes happen, notwithstanding the great care and attention, that the reed turns out badly: this may not arise from any fault in the making, but be attributable to the quality of cane.*⁵²⁷

Secondary sources are equally eloquent on the subject, with Baines noting that “Oboists, clarinetists and bassoonists are entirely dependent upon a short-lived vegetable matter of merciless capriciousness, with which, however, when it behaves, are wrought perhaps the most tender and expressive sounds in all wind music”.⁵²⁸ Likewise, Salter observes that “no two pieces of our natural material [cane], that is forever changing with humidity and the environment, are ever identical. [...] One very tiresome thing about reeds [is that] they are very inconsistent, varying remarkably from one to the other, and even changing their characteristics during use.”⁵²⁹

As a general rule, the density or hardness of cane (also called the *vascular bundle*) influences the thickness of the gouge. Brod indicates that harder, denser cane will require a thinner gouge and/or scrape to cause it to vibrate, whereas softer cane will call for a thicker gouge and/or less

⁵²⁶ Joseph Sellner, ‘Aus der Musikwelt,’ in *Allgemeine Theaterzeitung und Originalblatt für Kunst, Literatur, Musik und gefelliges Leben*, ed. Adolf Bäuer, Vol. 29, No. 90 (4 May 1836), 359-60. Translated by Carol Padgham Albrecht in ‘Joseph Sellner Praises Henri Brod’s New Gouging Machine,’ *The Double Reed*, vol. 40, no. 1 (Baltimore: 2017), 92.

⁵²⁷ Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 10.

⁵²⁸ Anthony Baines, *Woodwind Instruments and Their History* (London: Faber & Faber, 1957), 76.

⁵²⁹ Graham Salter, *Understanding the Oboe Reed* (Bearsden, 2018), 11.

scraping. As posited by Soulier,⁵³⁰ the cane used by oboists in the nineteenth century may have been softer and less dense than the raw material used nowadays. Rachor also provides evidence that in the early nineteenth-century, “climate was much cooler than today” and that “modern research shows that the period from 1805 to 1820 was one of the coldest in Europe,” which led to an overall softer cane texture.⁵³¹ Weber adds that “we might also ask to what extent matters have been affected by such environmental influences as climatic change, fertilizers and modern agricultural methods etc. The question can hardly be answered as to how, and to what extent, such differences might play a role today.”⁵³²

Garnier and Sellner both mention that cane must be harvested before the first frost, i.e. before the sap rises into the stalk and hardens the fibres. Whereas Garnier states that: “*The cane one uses must come from southern climes. It will be noted that the best cane comes from ventilated areas. It must be harvested on the full moon of December [i.e. before the first frost]. The tube must be healthy and robust, and about the diameter of a little finger,*”⁵³³ Sellner observes that: “*Marsh cane that is ripe yet not old nor dried out must be used. The best are those that have been ripened by a hot summer and which are harvested before autumn in a well-ventilated area.*”⁵³⁴ Brod is more explicit, stating: “*Cane must be harvested when fruit ripens, and can only be used for two to three years. After that time, the sap will have dried out and the reeds made from it will have a much less beautiful sound than from younger cane.*”⁵³⁵ Indeed, the cane used by oboists nowadays is aged at least two years, and often more than three. As noted by Agrell, “It is feasible that with today’s harder material, the densest layer of cane must be removed to obtain an end product that functions well with a nineteenth-century instrument.”⁵³⁶ While current study has not yet measured the cane density and hardness of original nineteenth-century reeds, cane

⁵³⁰ Lola Soulier, “Le hautbois en France à la fin du XVIIIe siècle. Étude et mise en pratique de la Méthode Raisonnée pour le Haut-bois de Joseph-François Garnier,” (Master’s thesis, Sorbonne Université, 2019), 69-70.

⁵³¹ David Rachor, ‘The Importance of Cane Selection in Historical Bassoon Reed-Making,’ *The Galpin Society Journal*, Vol. 57 (May 2004), 146-149.

⁵³² Rainer Weber, ‘Early Double-Reeds,’ trans. William Waterhouse, *The Galpin Society Journal*, Vol. 54 (May 2001), 234.

⁵³³ François-Joseph Garnier, *Méthode raisonnée pour le Haut-bois* (Paris: Pleyel, 1802), 5: “*Le roseau dont on se servira, doit être tiré des pays méridionaux; on observe que le meilleur est celui qui est venu dans un endroit aéré. Il doit être coupé à la pleine lune de décembre. [sic] Le canon doit être sain et vif, de la grosseur d’un petit doigt ordinaire.*”

⁵³⁴ Joseph Sellner, *Méthode pour le hautbois, traduite de l’allemande par Heller et revue par Fouquier, 1er hautbois du Théâtre Royal de l’Opéra Italien*. (Paris: Richault, 1827), ix: “*On se sert pour cet usage d’un roseau de marais bien mûr, mais non pas vieux ou desséché, le meilleur est celui qui a mûri par un été brûlant et que l’on recueille avant l’automne dans un endroit bien aéré.*”

⁵³⁵ Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 111. “*Le roseau doit-être coupé à l’époque de la maturité des fruits, on ne peut s’en servir que pendant deux ou trois années passé ce temps, la sève étant desséchée les anches qu’on en ferait seraient loin d’avoir un aussi beau son que celles qui seraient d’un roseau plus récent.*”

⁵³⁶ Donna Agrell, ‘Early Nineteenth-Century Bassoon Repertoire from Sweden: In Search Of The High Register,’ *The Double Reed* (vol. 40, no. 4), 88.

that is softer vibrates easier and therefore allows for a thicker gouge, making the relatively heavy gouge described by Brod (0.75 mm) coherent. Brod himself provides an efficient test with which to evaluate the hardness and elasticity of a given piece of cane:

*The means of assessing [cane hardness] is to take both ends of the piece of cane and to twist them. If one can twist them without any resistance then the cane is too weak, and yet if it resists over a quarter turn it will be too hard, but using the scraper it can be weakened and brought to medium strength, at which point it will bend a half turn without too much resistance nor flabbiness.*⁵³⁷

In his 1836 clarinet tutor, Frédéric Berr provides another means of evaluating cane quality, and states that it should neither be:

*too green nor too dry. One can assess its quality by the sound made by dropping a tube of reed cane on a table. One can also tell if it is too spongy by making an impression on the bark with a thumbnail.*⁵³⁸

While it is tempting to attribute the ubiquity of the nineteenth-century's bevelled scrape to the hypothetical softer, greener and more porous cane preferred by oboists at the time, we see evidence of the contrary in a letter penned by Johann Christian Fischer (c.1733-1800), in all likelihood dating from the 1780s. In the manuscript, dated "*Hampstead, Febr. 13*", Fischer is seen ordering cane from a supplier. The text reads:

*Mr. Fischer should be very glad to get some sound ripe cane for Hautboy reeds, the older and harder the better. [...] One of the Hautboists who plays the Hautboy and makes the reeds himself is the most proper person to choose the cane - and the more of it the better.*⁵³⁹

⁵³⁷ Henri Brod, *Grande méthode de hautbois* (Paris: Schonenberger, 1830), 113: "*Le moyen de mieux l'apprécier est de prendre chaque bout du roseau entre deux doigts et de les tourner en sens contraires si l'on peut les tourner sans trouver de résistance c'est qu'il est trop foible il ne faut pas non plus qu'il résiste à faire un quart de tour il sera alors trop fort mais on peut par le moyen du grattoir l'amener à une force moyenne et capable de supporter un demi tour sans trop de difficulté ni trop de mollesse.*"

⁵³⁸ Frédéric Berr, *Traité complet de la clarinette* (Paris: Duverger, 1836), 5: "*il ne doit pas avoir été coupé trop vert ni trop sec. On apprécie son état par le son que rend un morceau qu'on laisse tomber sur une table, et l'on voit s'il est spongieux par l'impression que l'ongle du pouce peut faire sur l'écorce.*"

⁵³⁹ The provenance of this manuscript letter has unfortunately not been made available to me at the time of writing, but I am indebted to Giuseppe Nalin for bringing it to my attention. Italics are mine.

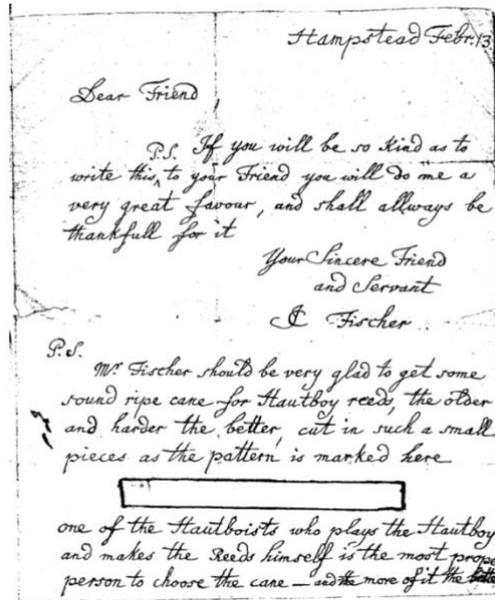


Fig. 7.11. Manuscript letter by Johann Christian Fischer

In any event, by mid-century, Italian tutors were recommending the use of cane that was well-aged and consequently harder. Salviani (1848) simply states simply that: “*The reed should be made with cane that is at least three years old*”,⁵⁴⁰ whereas Cappelli (1853) remarks: “*The best cane comes from southern climes; it must be cut in the fall, that is, in October, and must be aged for at least five years.*”⁵⁴¹

In 1850, Barret summarises the fickle nature of reed cane by simply stating that it should not be too hard nor too soft:

*In choosing, the appearance is the only guide, though this is not always to be relied on. Experiments have been tried (but without success) to discover why one sort of cane is preferable to another. Experience has proved that that which is most likely to be the best is of a brilliant yellow color, the bark bright and shining, the interior mellow, gouging out smoothly. The cane which is too pale, is bad and should be rejected, as well as that which is too hard, or too soft: the first produces an unpleasant, shrill tone, and is deficient in flexibility; the other, a woolly tone, devoid of vibration.*⁵⁴²

⁵⁴⁰ Clemente Salviani, *Metodo completo per oboe* [...] (Milan: Lucca, 1848), preface: “*La Piva o Ancia, vuol essere costruita con canna ch’abbia almeno tre anni*”.

⁵⁴¹ Giuseppe Cappelli, *Metodo teoretico-pratico* (Milan: Lucca, 1853), 7: “*Canna reputata la migliore è quella dei paesi meridionali; deve essere tagliata in autunno, cioè nel mese di ottobre; bisogna che sia stagionata almeno di cinque anni.*”

⁵⁴² Apollon-Marie-Rose Barret, *Complete Method for the Oboe* (London: Jullien, 1850), 11.

7.2. COMPARATIVE ANALYSIS

Now that we have surveyed instructions on reed making from primary sources, we can proceed to an analysis of extant reed specimens. While it is nigh impossible to date surviving reeds with any accuracy, and several of their parameters can only be hypothesised (such as the type of cane and gouging technique used), original specimens are valuable to this study for comparative purposes when reconstructing reeds described in didactic sources. Because no original reeds by Garnier, Brod, or Barret have survived, a study of their reed styles involves creating facsimiles based on written descriptions and comparing the results with original models that date from the period. An analytical comparison on page 240 contains data collected from thirteen reeds that are relevant to our study (nine of which are original nineteenth-century specimens). These include:

1. The Brod reed
2. The Garnier reed
3. The Barret reed
4. The Fahrbach reed
5. The Fornari reed
6. The Ling reeds
7. The Wildenberg reeds
8. The Palanca reeds
9. The Schultz reeds
10. The *Rijksmuseum* reeds
11. The Koch reeds
12. The Grenser reed
13. The Parma reeds
14. The author's own 'optimal' reed for the Adler oboe

The salient features of these specimens are described below. At this stage, it would be important to note that several other original nineteenth-century reeds are known to exist. Unfortunately, time constraints made access to them impossible before the end of this study. For example, two specimens in Leipzig's Grassi museum and a box of reeds in Munich's Stadtmuseum are known to date from the Romantic era. I am indebted to Joel Raymond for bringing these specimens to my attention.⁵⁴³

⁵⁴³ Joel Raymond was able to measure one of the Grassi reeds (no. 1323) in 2014, and has kindly reported the following dimensions: 46.5 mm staple length, 8 mm tip width, 26.5 mm blade length, 73 mm total length, 5.0 mm staple bottom diameter, and a 16.5 mm lay.

7.2.1. The Brod reed (1830)

As the Adler oboe nearly exactly corresponds to the eight-keyed instrument shown in Brod's *Méthode* of 1830, it is logical to use the oboist's reed as a starting point for experimentation in this case study. Data collected from the second folio of Brod's *Méthode*⁵⁴⁴ is provided below:

Staple length	46 mm
Blade length	20 mm
Total reed length	66 mm
Length of lay	10-12 mm
Tip width	7.0 mm
Staple top opening	2.5 mm ⁵⁴⁵
Staple bottom opening	5 mm
Staple conicity	0.054
Gouge thickness	0.75
Tube cane diameter	11-12 mm ⁵⁴⁶

Table 7.1. The Brod reed

Additional data provided by Brod indicates that the reed aperture (or opening at tip) should not exceed 1 mm. As stated earlier, although Brod indicates a blade length of 14-16 mm, this is obviously a mistake, since if measurements are proportionate in his illustrations (where the staple measures 46 mm), then blade length is closer to 20 mm, with a lay of roughly 10 mm. It is worth noting that these parameters are strikingly similar to those of a modern French conservatoire oboe reed, as shown in the photographs below.

⁵⁴⁴ Henri Brod, *Méthode pour le Hautbois* (Paris: Schonenberger, 1830), 113-115.

⁵⁴⁵ oval measuring 2 mm x 3 mm.

⁵⁴⁶ 10-11 mm also given elsewhere in the same text.

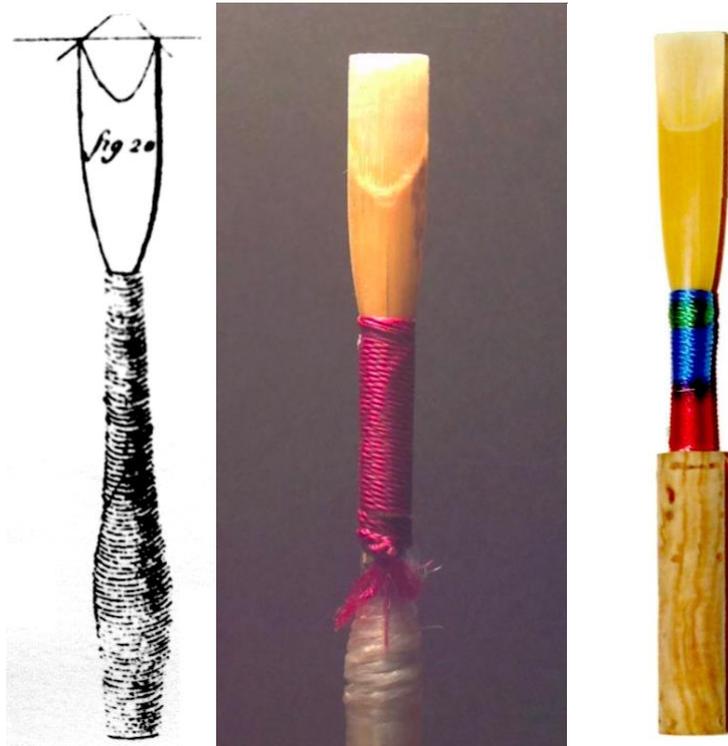


Fig. 7.12. The Brod reed

(Left): Brod reed (*Méthode*, 1830);
 (middle) Brod reed reconstruction by the author;
 (right) modern French reed

Indeed, Brod’s 46 mm staple is only 1 mm shorter than the standard 47 mm staple used by modern oboists today, and both top and bottom openings (along with the resulting conicity) are also nearly identical. Likewise, Brod’s tip width of 7 mm wide is comparable to that used by oboists today (modern shaper tips vary between 6.7 mm and 7.6 mm). Burgess points to the fact that, “as French instruments had the narrowest bores, it is not surprising that French reeds were also the narrowest.”⁵⁴⁷ The major discrepancies between the Brod reed and a modern conservatoire reed therefore lie in *gouge thickness* (Brod’s gouge of 0.75 mm vs. 0.60 mm modern gouge); *gouging technique* (manual vs. machine); *scraping style* (Brod’s scrape would have been bevelled); and *cane quality* (Brod’s potentially softer, spongier cane vs. the harder, ripened material used today).

⁵⁴⁷ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 159.

Personal experimentation with the Brod reed

As mentioned previously, my initial hypothesis was that because both the Adler oboe and Brod's tutor were contemporaneous, the Brod reed should work optimally on the Adler. I was surprised to discover that, due to its bevelled scrape and total absence of tip and heart, the points of resistance on the Brod reed were noticeably different than what I was used to with my standard scrape. I also found that Brod's thick 0.75 mm gouge produced a rather inflexible, unresponsive reed that compromised both tone quality and physical comfort. Whether or not eighteenth- and early nineteenth-century cane was indeed softer and spongier than the raw material used by reed makers today (as advanced by Rachor⁵⁴⁸) cannot fully be ascertained, but I do suspect that the heaviness of Brod's gouge may have been compensated by cane that was much more flexible and porous. Much like Agrell, who observed that while copying early-nineteenth century bassoon reeds "reeds constructed from harder [modern] cane required alterations in the [original] blade scrape and tube dimensions", I found that experiments using a thinner gouge of 0.64 mm produced more satisfying results. Again, it is possible that because Brod constructed his reeds using a hand gouger, his reeds were internally tapered toward the tip and that the 0.75 mm gouge was not maintained throughout the entire length of the blades.

Despite having spent many hours experimenting with the Brod reed (including performances as shown in the following [video](#) excerpt from Berlioz's *Benvenuto Cellini*, 1837), I found myself more comfortable on more modern-style reeds with a clearly defined 'tip' and 'heart.' That said, recreating Brod's model has nevertheless been enlightening and I have found that the longer I played on the Adler, the more my own reed measurements evolved towards Brod's specifications. For example, my scrape (length of lay) became shorter over time (from 20 mm down to 15 mm) and my reeds became narrower (initially with a tip width of 8.0 mm and evolving towards 7.6 mm).

During this time, I also experimented with hand gouging. And while at the time of writing I am still somewhat uncomfortable with the technique, I have grown accustomed to using a *grattoir* in conjunction with cane that has been machine gouged, and now use the scraping tool regularly to thin the centre of cane pre-gouged to 0.64 mm down to 0.60 mm, which is where I will place the tip (a technique described by Barret in 1850). In this way, I produce a sort of hybrid hand- and machine-gouge, incorporating elements from both historical and modern techniques.

⁵⁴⁸ David Rachor, 'The Importance of Cane Selection in Historical Bassoon Reed-Making,' *The Galpin Society Journal*, Vol. 57 (May 2004), 146-149.



Fig. 7.13. Four different views of a Brod reed made by the author
(with and without backlighting)

During the course of this study, I also had the great fortune to try several original reeds belonging to Alain Girard (Bienne, CH) that were found with a cor anglais by Georg Berthold & Sohne (Speyer-am-Rhein, c.1880). I paired these reeds with an original cor anglais I own by Vincent Kohlert (Graslitz, c.1890). The aural results from playing on these specimens was revelatory on two counts. The first was their ‘lemony’ or bright, slightly nasal tone. The second was their effortless response and their extreme ease in playing *pianissimo*, even in the low register: *piano* attacks on a low D were remarkably secure, as was tapering held notes to *niente*. Their scrape was the traditional bevel, and measurements with a micrometre revealed a tip thickness of 0.2 mm.



Fig. 7.14. Original reed found with a cor anglais by Berthold & Sohne, c.1880

7.2.2. The Garnier reed (1802)

Published a generation earlier than Brod's treatise, Garnier's *Méthode raisonnée* of 1802 provides instruction for building a more classical-style reed that would have been used with a two-keyed Delusse-type oboe as depicted in the same tutor. Soulier has shown that, although a number of key measurements such as tip width and staple and blade length are not explicitly provided by Garnier, their values can be deduced since illustrations in the *Méthode* are shown to scale ("exact pour la longueur"). Garnier states that "Tube cane must be healthy and vigorous, about the size of a little finger." ("Le canon doit être sain et vif, de la grosseur d'un petit doigt ordinaire"). Soulier has suggested that this corresponds to a diameter of 12.5-13 mm.⁵⁴⁹ Data collected has provided the following measurements:

Staple length	43.5 mm
Blade length	23.5 mm
Total reed length	67 mm
Length of lay	-
Tip width	8 mm
Staple top opening	-
Staple bottom opening	-
Staple conicity	-
Gouge thickness	-
Tube cane diameter	12.5 - 13 mm

Table 7.2. The Garnier reed

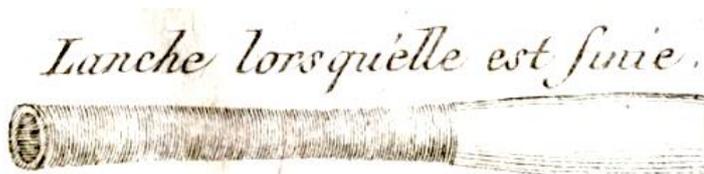


Fig. 7.15. Diagram of Garnier reed

⁵⁴⁹ Lola Soulier, "Le hautbois en France à la fin du XVIIIe siècle. Étude et mise en pratique de la Méthode Raisonnée pour le Haut-bois de Joseph-François Garnier," (Master's thesis, Sorbonne Université, 2019), 70.

7.2.3. The Barret reed (1850)

The type of reed described in Apollon Marie-Rose Barret's *Complete Method for the Oboe* of 1850 would have been conceived for a later, mechanised Triebert *ystème* oboe (3, 4, or 5 – all had appeared by 1850). While these instruments noticeably differ in their acoustic properties from simple-system oboes such as the Adler, the reed Barret describes shares several attributes with those described by Brod and Garnier: Barret's tip is the same width as Brod's (7 mm), and his staple is approximately the same length as Garnier's (43.5 vs. 42 mm). Barret (1804-1879), who obtained his *premier prix* in Vogt's class in 1824, would have learnt to play on a simple system oboe, and would have brought the model to London where he began performing regularly as of 1829.⁵⁵⁰ Because Barret does not provide any measurements for the reed shown in his *Complete Method*, I have had to make the somewhat precarious assumption that it is drawn to scale. At the very least, his drawing provides valuable information on the proportions between staple and blade length, tip width, and length of lay.

Staple length	42 mm
Blade length	21 mm
Total reed length	63 mm
Length of lay	10 mm
Tip width	7 mm
Staple top opening	--
Staple bottom opening	--
Staple conicity	--
Gouge thickness	--
Tube cane diameter	--

Table 7.3. The Barret reed



Fig. 7.16. Barret's reed

⁵⁵⁰ Barret began performing at the King's Theatre in London in 1829 at the age of 25 and was appointed to Covent Garden in 1847. Adam Carse, *The Orchestra from Beethoven to Berlioz: A History of the Orchestra in the first half of the Nineteenth Century*. (New York: Broude, 1949), 175.

7.2.4. *The Fahrbach reed (1843)*

The flute and guitar virtuoso Joseph (Giuseppe) Fahrbach (1804-1883) was employed at the Viennese court opera theatre but also owned a music school. In 1843, he published an oboe tutor, the *Nuovissimo Metodo*,⁵⁵¹ which in all likelihood was intended as tuition material for the school he directed. In it, Fahrbach depicts a reed shown to scale (“*figura di un’ancia al naturale*”). All of Fahrbach’s measurements are slightly ‘taken in’ from Garnier’s: the shorter staple, blades and lay point to a higher pitch, as does the narrower tip. This is consistent with the fact that his tutor was published some forty years later, and reflects a rise in pitch. An additional detail is Fahrbach’s recommendation to use wires to control the reed’s aperture,⁵⁵² a practice he shared with Cappelli (1853). Because Fahrbach’s tutor was published in Milan, then part of the Habsburg Empire where Viennese-style Sellner-Koch oboes were played, his tutor was likely designed for one such model. It therefore comes as no surprise that the acoustic profiles of late classical Italian oboes display a decidedly German influence, and as Burgess & Haynes note, “Woodwinds by the Dresden makers were known in most of Europe, and they had a certain following in the Habsburg lands.”⁵⁵³

Measurements taken from the *Nuovissimo Metodo* provide the following approximate values:

⁵⁵¹ Giuseppe Fahrbach, *Nuovissimo Metodo per Oboe*, op. 27. (Milan, Ricordi, 1843).

⁵⁵² *Ibid.* “The lack of wires places the player in grave danger, that is to say: if the reed’s two blades join together for a long time; or if, due to poor cane quality the opening stretches or shrinks too greatly, the player can no longer cope and must therefore take a new reed.” - “*La mancanza del filo metallico pone il suonatore in grave pericolo, vale a dire; se le due linguette della canna, per lungo suonare si uniscono; oppure se, per la qualità della canna stessa, troppo variabilmente l’apertura si allungasse o si restringesse, il suonatore non sa più come all’istante ripiegare; e quindi è forzato a prendere una nuova ancia. Con lutto ciò alcuni opinano, che l’ancia senza legatura di metallo faciliti la cavata della voce.*”

⁵⁵³ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 92. The same authors also note that the earliest oboes made by Dresden builders Grenser and Grundmann “closely resemble the instruments of Carlo Palanca of Turin, who probably supplied instruments to the Besozzis [a dynasty of oboe virtuosos]. It may have been with the active collaboration of the important players at Dresden, Antonio Besozzi, his son Carlo, and Fischer, that Grenser and Grundmann developed the Type D2, an outgrowth of Palanca’s design and a model that eventually became the prototypical European Classical hautboy.”

Staple length	42 mm
Blade length	22 mm
Total reed length	64 mm
Length of lay	9.5 mm
Tip width	7.5 mm
Staple top opening	--
Staple bottom opening	--
Staple conicity	--
Gouge thickness	--
Tube cane diameter	--

Table 7.4. The Fahrbach reed



Fig. 7.17. Fahrbach's reed, 1843

7.2.5. The Fornari reed (c.1814)

This original specimen, housed in the *Bernisches Historisches Museum* (Bern, Switzerland), was found with a two-keyed Italian oboe by Fornari dated 1814. Andrea Fornari (1753-1841) was a Venetian woodwind builder, and is survived by a rather large collection of 44 instruments.⁵⁵⁴ His oboes, all two-keyed and classical in style, were used by Giuseppe Ferlendis (1755-1810), the Bergamo-born oboist for whom Mozart wrote his oboe concerto in 1777. Bernardini notes that Fornari continued to produce two-keyed oboes until 1832, at a time when the instrument could have up to thirteen keys in France.⁵⁵⁵ Detailed measurements taken by Mary Kirkpatrick reveal the following values:⁵⁵⁶

Staple length	42.4 mm
Blade length	23.8 mm
Total reed length	66.2 mm
Length of lay	13.5 mm
Tip width	8.6 mm
Staple top opening	2.3 mm
Staple bottom opening	4.9 mm
Staple conicity	0.061
Gouge thickness	--
Tube cane diameter	--

Table 7.5. The Fornari reed



Fig. 7.18. The Fornari reed⁵⁵⁷

⁵⁵⁴ Alfredo Bernardini, 'Andrea Fornari (1753-1841) « fabricator di strumenti » a Venezia,' *Il Flauto dolce*, No. 14/15 (April - October 1986), 31.

⁵⁵⁵ *Ibid.*, 19

⁵⁵⁶ Measurements retrieved from: Geoffrey Burgess and Peter Hedrick, 'The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,' *The Galpin Society Journal*, Vol. 42 (August 1989), 63.

⁵⁵⁷ *Ibid*

7.2.6. *The Ling reed (first quarter of the nineteenth century)*

Eight original English reeds by the Thomas Ling (1787-1851) survive and were analysed by Burgess and Hedrick in an article published in the *Galpin Journal* in 1989.⁵⁵⁸ Six of these specimens are housed at the University of Edinburgh's Musical Instrument Museum, while two belong to the Bate Collection in Oxford.⁵⁵⁹ Ling was a London-based oboist, composer⁵⁶⁰ and professional reed maker. Below, I have taken the mean measurements of these eight specimens to create a hypothetical 'average' reed by Ling. In 1823, William Bainbridge, an oboist and instrument builder active in London from 1803-1830, praised Ling's reeds:

*I cannot help observing, that I have seen very good Oboe Reeds made by Mr. Ling. I give his name, because those amateurs who may attempt the Oboe on an improper Reed, may labour in vain and endanger their health; whereas, on good Reeds, no inconvenience will arise. I believe there are one or two other respectable makers of Oboe Reeds in London; but not having played on their Reeds, I cannot speak of their merits. I know the great reputation which Mr. Ling's Reeds bear among professors.*⁵⁶¹

Ling's reeds would have been used in conjunction with oboes by William Milhouse, late eighteenth-century two-keyed models very similar to those by the Parisian maker Christophe Delusse (for which Garnier wrote his 1802 *Méthode*). According to Burgess & Hedrick,

The two Ling reeds in the Bate Collection were bought by Reginald Morley-Pegge in Norwich, probably with the W. Milhouse oboe no. 203. The instrument can be dated from the address 337 Oxford Street which appears on the bell and where Milhouse is known to have lived from 1799 to 1828. The pairing of these reeds with the oboe is more certain [...] because they fit well into the top of the oboe.⁵⁶²

We can therefore deduce that the hypothetical Ling reed we have reconstructed was to be paired with an oboe dating from the first quarter of the nineteenth century.

⁵⁵⁸ Geoffrey Burgess and Peter Hedrick, 'The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,' *The Galpin Society Journal*, Vol. 42 (August 1989)

⁵⁵⁹ I am indebted to Lola Soulier for suggesting to reconstruct a reed based on average values.

⁵⁶⁰ Ling is survived by six concertos for oboe and a double concerto for oboe and bassoon.

⁵⁶¹ William Bainbridge, *Observations on the cause of imperfections in wind instruments, particularly in German flutes: with remarks on the embouchure, or mouth-hole, and other parts of the instrument, which are frequently made out of proportion, and consequently the cause of many amateurs playing imperfectly: also, remarks on oboe, clarionet, and bassoon reeds: with directions how to select them, and keep them in order: thereby rendering those instruments not so difficult to learn, as they have often been considered.* (London: the author, 1823), 14.

⁵⁶² Geoffrey Burgess and Peter Hedrick, 'The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,' *The Galpin Society Journal*, Vol. 42 (August 1989)

Though Ling’s reeds display the traditional bevel scrape (with no visible heart, blend or tip), all eight specimens are considerably wider than the other reeds analysed in this study. Bainbridge hinted at the differences between English and Continental reed styles:

*On the size of the cane, for making Oboe Reeds, there are different opinions. The French Oboe players use a small sized cane [...] In England the Reeds are generally made, for professors, of a larger sized cane. The English professors have certainly the fullest tone, and it is accounted for by their Reeds being larger than the French Reeds.*⁵⁶³

Indeed, with an average tip width of 9.3 mm, Ling’s reeds are a full 2 mm wider than Brod’s, made only ten years later. Burgess observes that Ling’s reeds “do not have a ‘spine’ like most modern reeds, and in some cases are thicker at the edges than at the centre. How typical this was of reeds of the time is hard to say.”⁵⁶⁴

Staple length	42.3 mm
Blade length	22.0 mm
Total reed length	63.1 mm
Length of lay	13.8 mm
Tip width	9.3 mm
Staple top opening	2.3 mm
Staple bottom opening	4.6 mm
Staple conicity	0.053
Gouge thickness	--
Tube cane diameter	--

Table 7.6. The Ling reed (mean values)



Fig. 7.19. A reed by Thomas Ling, with visible maker’s stamp (Bate Collection, Oxford)⁵⁶⁵

⁵⁶³ William Bainbridge, *Observations on the cause of imperfections in wind instruments, particularly in German flutes: with remarks on the embouchure, or mouth-hole, and other parts of the instrument, which are frequently made out of proportion, and consequently the cause of many amateurs playing imperfectly : also, remarks on oboe, clarionet, and bassoon reeds : with directions how to select them, and keep them in order : thereby rendering those instruments not so difficult to learn, as they have often been considered.* (London: the author, 1823), 17-18.

⁵⁶⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 160.

⁵⁶⁵ Photo from Geoffrey Burgess and Peter Hedrick, ‘The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,’ *The Galpin Society Journal*, Vol. 42 (August 1989).

MEASUREMENTS OF EIGHT REEDS BY THOMAS LING

Measurements below are by Geoffrey Burgess and Peter Hedrick, extracted from their article *The Oldest English Oboe Reeds: An Examination of Nineteen Surviving Examples*. The Galpin Society Journal, Vol. 42 (August 1989). The specimen numbering system is that given in the aforementioned article.

	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>14</i>	<i>15</i>	<i>18</i>	<i>Mean</i>
Staple length	42.65	40.1	43	41.5	42.4	42.8	43.3	43	42.34
Cane blade length	21.5	22	20.5	24	21.5	21.5	23.3		22.04
Total reed length	63.5	61.4 5	62.8	63.6	62.3	63.5	65		63.16
Scrape length (average)	12.5	12	17	12.5	12.7 5	15	14.6 5		13.77
Tip width	9.8	10	9.4	9.5	9.25	9	9	8.2	9.27
Staple top opening horizontal (max)	2.5	2.8	2.8	3	2.75	2.8	2.6	2.8	
Staple top opening vertical (min)	1.3	1.3	2.7	2.3	1.9	1.9	1.9	1.9	
Staple top opening (average)	1.9	2.05	2.75	2.65	2	2.35	2.25	2.35	2.33
Staple bottom opening (max)	4.8	4.6	4.8	4.8	4.7	4.5	4.5	4.6	
Staple bottom opening (min)	4.7	4.4	4.65	4.5	4.65	4.4	4.4	4.4	
Staple bottom opening (average)	4.75	4.5	5	4.65	5	4.45	4.45	4.5	4.59
Staple conicity	0.067	0.061	0.046	0.048	0.055	0.049	0.051	0.050	0.053

Table 7.7. The Ling reeds (detailed values)

7.2.7. The Wildenberg reeds (various dates)

I am indebted to the late historical oboe builder Marc Ecochard for bringing to my attention the existence of three reeds and a staple that were found in a box made of tree bark and addressed to a certain ‘*Mr. Le Planta de Wildenberg à Montélimar.*’ The box apparently originally contained bassoon reeds, as it is labelled “*hanches [sic] de basson.*” The Planta de Wildenberg family formed a long lineage of noble landowners in the Drôme, several of which held the title of *Baron de Montélimar*.⁵⁶⁶

Though they cannot be linked with certainty to any given oboe, the Wildenberg reeds appear to be of French design. Due to their dimensions and binding, two of the reeds (Wildenberg 1 and 2) appear to be older than a presumably later, third specimen. The dimensions of the former are similar to the reed described in Garnier (1802) and may have been made for a classical French instrument such as those by Delusse or Prudent. The box contains several Brod-style reeds, which are narrower and use longer 46 mm staples (Wildenberg 3), pointing to a more recent, mid-nineteenth century construction. A staple labelled below as ‘Wildenberg 4’ is strikingly similar to Brod’s: their conicity (0.054) and length (46 mm) are identical. Dimensions of these four specimens are given below:

	Wildenberg 1	Wildenberg 2	Wildenberg 3	Wildenberg 4
Staple length	43.7 mm	43.3 mm	46.0 mm	46.0 mm
Blade length	21.5 mm	19.9 mm	23.0 mm	--
Total reed length	65.2 mm	63.2 mm	69.0 mm	--
Length of lay	13.0 mm	--	14.0 mm	--
Tip width	8.6 mm	7.5 mm	6.5 mm	--
Staple top opening	--	--	--	2.3 mm
Staple bottom opening	5.2 mm	4.5 mm	--	4.8 mm
Staple conicity	--	--	--	0.054
Gouge thickness	--	--	--	--
Tube cane diameter	--	--	--	--

Table 7.8. The Wildenberg reeds

⁵⁶⁶ <http://www.cths.fr/an/savant.php?id=110750>, accessed 26 June 2021.

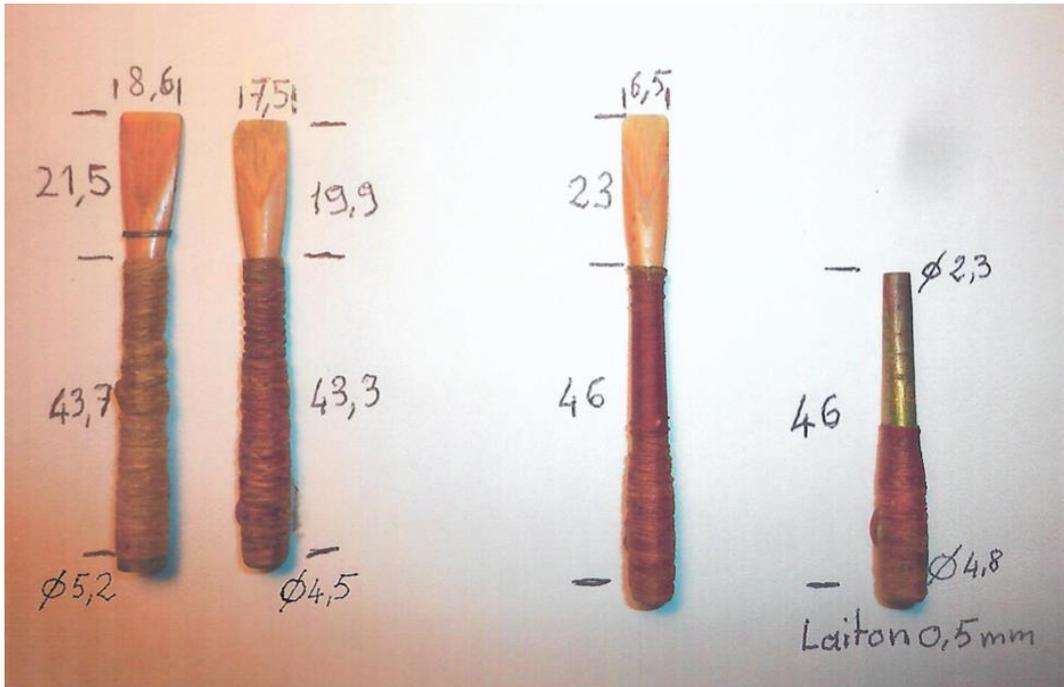


Fig. 7.20. The Wildenberg reeds

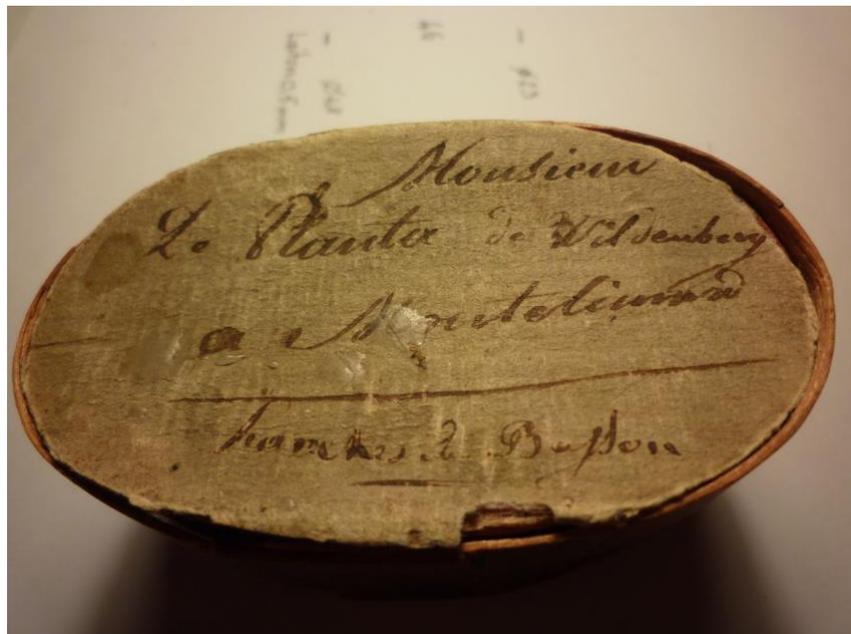


Fig. 7.21. The Wildenberg reed box

7.2.8. *The Palanca reeds (c.1780?)*

Carlo Palanca (1691-1783) was a bassoonist and woodwind builder based in Turin, and is survived by an impressive 27 oboes. His instruments, all two- or three-keyed models, are closely associated with the Besozzi family, a dynasty of oboe virtuosi who travelled widely across Europe and whose members were heard in Paris at the *Concerts spirituels* and in London by Charles Burney. Palanca's output spans a remarkably long period of activity (1719-1783) and his oboes show clear signs of evolution in instrument design. Because of this, their pitch levels vary greatly, allegedly from 400 Hz to above 440 Hz.

A set of six original reeds, now housed at the Musashino Academia Musicae in Japan, were found with two of Palanca's oboes. Dating the reeds is problematic, although if they were indeed fashioned by Palanca, they were made prior to 1783, making them some of the oldest surviving fully intact specimens. It has been suggested that the reeds may have been crafted by one of the Besozzis, which could place them slightly later in the eighteenth century, and while this places them outside the scope of the present study, I have nonetheless included them here because of the many traits they share in common with later models.⁵⁶⁷

While the six reeds exhibit significant variance in staple length (probably because they were intended for varying pitch levels), the ensemble does display a certain coherence in terms of blade length, tip width and scraping style. As with the eight surviving reeds by Thomas Ling, I have created mean values in the table below by averaging the six specimens sampled (measurements courtesy of Noburo Morishige). While it is impossible to ascertain at which pitch the six reeds in Japan were initially meant to play (the two Palanca oboes in Tokyo are among his longest), we can safely assume this was below 430 Hz, perhaps closer to 420 Hz, a common pitch standard around 1780.

⁵⁶⁷ For an in-depth study of Palanca's oboes, see Giacomo Silvestri, 'Carlo Palanca and the Oboe: A Study of His Surviving Instruments,' *The Double Reed* (no.43, 2020), 69-89.

Staple length	49.5 mm
Blade length	20.0 mm
Total reed length	69.3 mm
Length of lay	15.0 mm
Tip width	7.5 mm
Staple top opening	--
Staple bottom opening	4.7 mm
Staple conicity	--
Gouge thickness	--
Tube cane diameter	--

Table 7.9. The Palanca reeds (mean values)

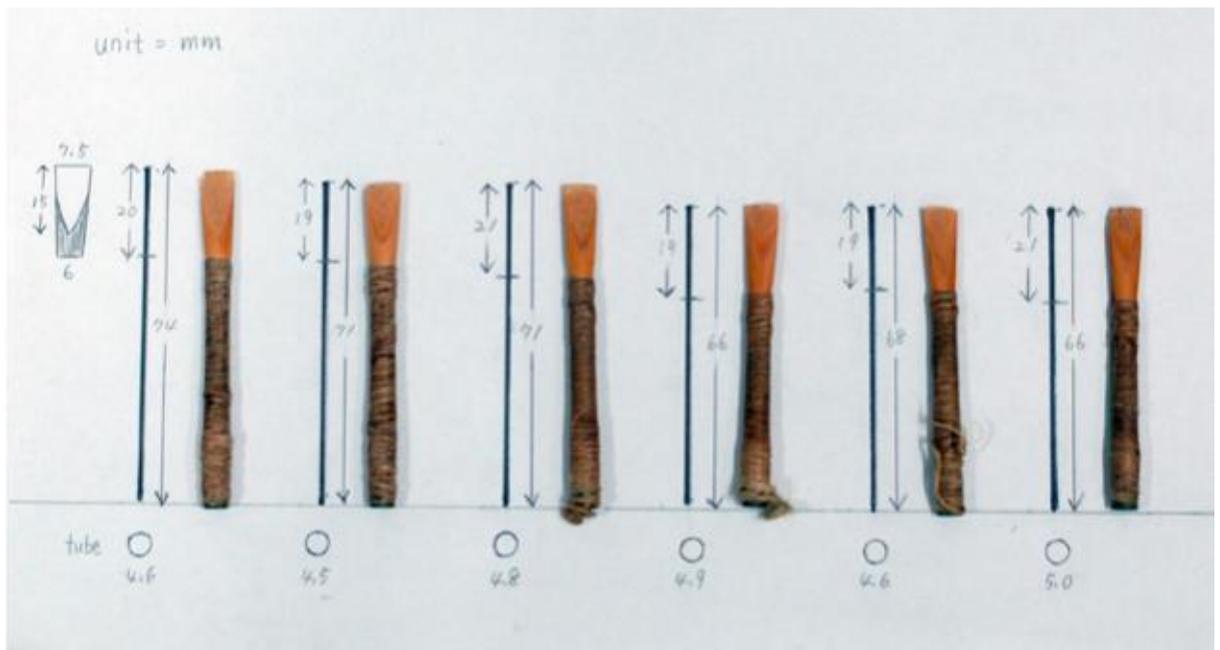


Fig. 7.22. Six reeds found with an oboe by Palanca (Musashino Academia Musicae, Tokyo)

Photo: Noburo Morishige

7.2.9. *The Schultz reeds (c.1830)*

An intriguing two-keyed oboe dated ca.1830 by the Neapolitan builder Vincenzo Schultz (1798 - after 1842) was found with three original reeds. The instrument, formerly owned by Randall Cook (Basel) and now in the possession of Alfredo Bernardini, is remarkable on account of its rudimentary keywork (by 1830, the vast majority of oboes contained at least four keys, with some up to thirteen). Burgess notes that “In Italy, two-keyed oboes were used for perhaps longer than in other countries.”⁵⁶⁸ I am indebted to Cook and Bernardini for bringing these specimens to my attention.

Although the reeds are not French nor are they dateable with any accuracy, they are included in the present study for comparative purposes. Data collected by Bernardini (Salzburg, July 2021) reveals that the three reeds are apparently made by the same hand and are generally consistent in their measurements and style. In the photograph below, one can see that only the shape varies slightly from one reed to another, specimen A being more U-shaped while B and C are more V-shaped (or ‘fish-tailed’). Their uniform scrape is bevelled, gradually thinning to the tip, and the lay on all three specimens exceeds 15 mm. Reed A has an intact tip but has a fine crack on one of the blades, whereas reeds B and C have slightly damaged tips. The brass staples are unsoldered with a brass thickness of 0.4 mm. Gouge thickness remarkably appears to be above 1 mm.

	Schultz A	Schultz B	Schultz C	Schultz mean
Staple length	34.2 mm	33.8 mm	34.0 mm	34.0 mm
Blade length	27.7 mm	27.8 mm	28.0 mm	27.8 mm
Total reed length	61.9 mm	61.6 mm	62.0 mm	61.8 mm
Length of lay	15.6 mm	15.1 mm	15.6 mm	15.4 mm
Tip width	7.7 mm	7.8 mm	8.0 mm	7.8 mm
Staple top opening	-	-	-	-
Staple bottom opening	4.8 mm	4.7 mm	4.8 mm	4.8 mm
Staple conicity	-	-	-	-
Gouge thickness	> 1 mm	> 1 mm	> 1 mm	> 1 mm
Tube cane diameter	-	-	-	-

Table 7.10. The Schultz reeds

⁵⁶⁸ Geoffrey Burgess, ‘On Writing a History of the Oboe in the Nineteenth Century,’ *FOMRHI Quarterly*, vol. 76 (1994), 34.

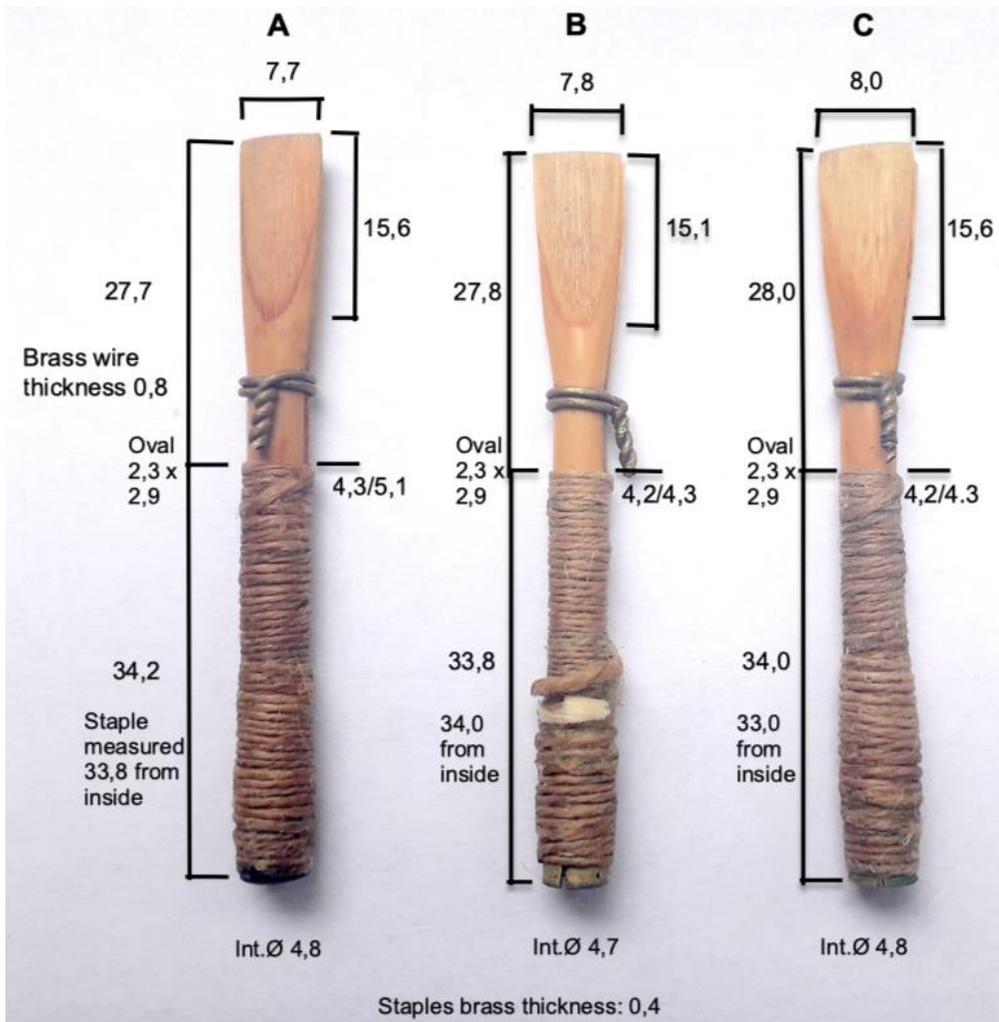


Fig. 7.23. The Schultz reeds (c.1830)

Photograph and measurements by Alfredo Bernardini

7.2.10. *The Rijksmuseum reeds (c.1840)*

Seven French reeds from the first half of the nineteenth century have recently surfaced at the Rijksmuseum in Amsterdam. I am indebted to Giovanni Paolo Di Stefano, the music curator at that institution, for bringing them to my attention and for allowing me access to measure them in March 2022.

All seven of these specimens are corkless and wound with thread. Five of them (Rijksmuseum reference BK-2018-140) are bound in red thread and seem to be made by the same hand, each bearing an illegible maker's stamp at their base (only the word '*Paris*' can be clearly discerned). The reeds display very little wear and tear, making it plausible they were never used, and have remarkably similar dimensions. Their unsoldered staples all measure 47 mm, made of remarkably thin brass between 0.1 and 0.2 mm thick.

The remaining two reeds (Rijksmuseum reference BK-2018-31), bound in grey thread, provide a remarkable boon for this study, in that they can both be paired with an 11-keyed oboe in ebony by Guillaume Triebert, c.1840. These specimens were found in a green leather reed box in the instrument's original veneered rosewood case (see photo [here](#)), which is inscribed in brass with what would appear to be the player's initials ('X.R.'). The oboe, formerly owned by Han de Vries, was bequeathed to the Rijksmuseum in 2018 and has keywork identical to the Adler, with the exception that the former possesses an additional half-hole plate over the first tone hole.⁵⁶⁹ The reeds show signs of heavy usage, and the second of these bears a striking resemblance to Brod's reeds in that all of their key dimensions are identical. In fact, all seven of the Rijksmuseum specimens are similar in construction to Brod's reed, and display the same bevelled scrape, narrow shape, and tip width of 7 mm. Brod is known to have owned an oboe by Guillaume Triebert, ordering one of his instruments in 1828 while employed at the *Opéra* (he did so without the administration's authorisation, earning him a warning from the institution's officials).⁵⁷⁰ Of interest is the particularly long lay (17 mm) on one of these reeds, and the fact that both grey reeds appear to have sides that are *thicker* at the tip than the centre.

⁵⁶⁹ The instrument can be viewed here: <https://www.rijksmuseum.nl/nl/collectie/BK-2018-31> or <http://hdl.handle.net/10934/RM0001.COLLECT.703265>, accessed 22 Sept. 2022.

⁵⁷⁰ Geoffrey Burgess, *"The Premier Oboist of Europe": A Portrait of Gustave Vogt*. (Lanham: Scarecrow Press, 2003), 51, 172.

Measuring the physical dimensions of these specimens has allowed me to compile the mean statistics shown below.

	Rijks' red (5 reeds)	Rijks' grey 1	Rijks' grey 2
Staple length	47.0 mm	46.0 mm	47.0 mm
Blade length	26.0 - 26.5 mm	22.0 mm	22.0 mm
Total reed length	73.0 - 73.5 mm	68.0 mm	69.0 mm
Length of lay	9.0 - 10.0 mm	17.0 mm	11.0 mm
Tip width	7.0 mm	7.0 mm	7.0 mm
Staple top opening	-	-	-
Staple bottom opening	4.9 mm	4.9 mm	4.8 mm
Staple conicity	-	-	-
Gouge thickness	-	-	-
Tube cane diameter	-	-	-

Table 7.11. The Rijksmuseum reeds



Fig. 7.24. 'The 'grey' Rijksmuseum reeds in their green leather case
(photograph: G. P. Di Stefano)



Fig. 7.25. The 'red' Rijksmuseum reeds in their box (photograph: G. P. Di Stefano)



Fig. 7.26. The 'red' Rijksmuseum reeds



Fig. 7.27. The 'grey' Rijksmuseum reeds



Fig. 7.28. The Rijksmuseum museum oboe by Guillaume Triebert

7.2.11. *The Koch reeds (second quarter of the nineteenth century?)*

I am again indebted to Alfredo Bernardini for calling to my attention a set of three original nineteenth-century reeds found with an oboe by Stephan Koch of Vienna.⁵⁷¹ Like the Schultz specimens, although these reeds are not French nor are they dateable with any accuracy, they are included here for comparative purposes. The Sellner-Koch model flourished in Vienna between roughly 1820 and 1865, as detailed by Verdegem.⁵⁷² A simple system oboe, it was designed with thicker walls and a wider bore that produced a darker, more robust tone compared to lighter French models.

With their remarkably wide tips and short staples, the three reed specimens clearly reflect the Viennese tradition, which even today continues to preserve these distinctive features.⁵⁷³ The reeds display a relatively long ‘W’ bevelled scrape (≈15 mm lay) and are bound with two thick wires onto an unsoldered staple. Much like on modern bassoon reeds, the portion of cane in between both wires presumably cannot vibrate with the same facility as the section above the top wire, and can therefore be seen as an extension of the staple.

Data harvested by Bernardini has revealed the following measurements:

Staple length	30.3 mm
Blade length	28.6 mm
Total reed length	58.9 mm
Length of lay	15.0 mm
Tip width	9.3 mm
Staple top opening	--
Staple bottom opening	4.0 mm
Staple conicity	--
Gouge thickness	--
Tube cane diameter	--

Table 7.12. The Koch reeds

⁵⁷¹ This oboe is owned by Stefano Rava (Modigliana, Italy).

⁵⁷² Stefaan Verdegem, ‘Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century,’ *The Galpin Society Journal*, Volume 61, 2008.

⁵⁷³ The standard staple used by Viennese oboists today is 36 mm long, compared to standard 47 mm commonly used elsewhere.



Fig. 7.29. The Koch reed
(photographs by Alfredo Bernardini)

7.2.12. The Grenser reeds (c.1800?)

Two reeds were found with a ten-keyed oboe by Heinrich Grenser (1764-1813) belonging to the Dr. Josef Zimmermann collection in Düren (DE). Measurements of these reeds were collected by Paul Hailperin c.1988, and included in a letter addressed to Bruce Haynes.⁵⁷⁴ Hailperin notes that “The cane was about 0.6 [mm] at the sides, the scrape flat across.” On the instrument, he writes that it has “10 keys, of which in my opinion only 2 were on the oboe as it first left the shop.” Grenser was a renowned woodwind builder based in Dresden.

Staple length	39 mm
Blade length	23 mm
Total reed length	62 mm
Length of lay	16 mm
Tip width	8 mm
Staple top opening	?
Staple bottom opening	4.3 mm
Staple conicity	?
Gouge thickness	--
Tube cane diameter	--

Table 7.13. The Grenser reed

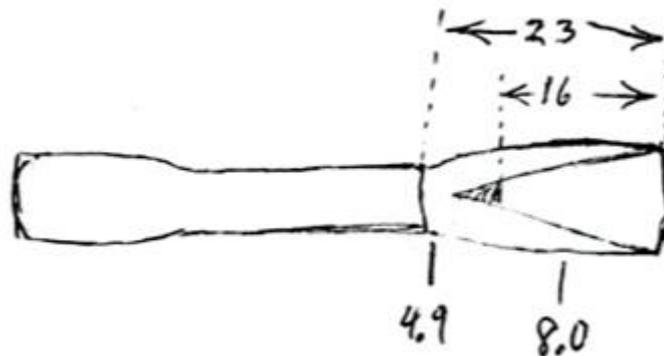


Fig. 7.30. The Grenser reed
(drawing by P. Hailperin)

⁵⁷⁴ I am grateful to Geoffrey Burgess for sharing this personal correspondence.

7.2.13. *The Parma reeds (second quarter of the nineteenth century)*

Three reeds (two for oboe and one for cor anglais) were found in the Parma Conservatory and were measured by Paolo Grazi. The reeds were found in a clarinet case which had the words ‘*custodia oboe MORI*’ inscribed on it. This is likely a reference to Giacomo Mori (Parma, 1810-1861), who was an oboist, clarinettist, and composer survived by several fantasias for oboe and piano. In 1845, he was appointed principal oboe in the *Ducale Orchestra di Parma* and would have performed on a simple-system instrument. A recent discovery has shown that Mori hired Giuseppe Verdi in the late 1830s to compose the orchestral accompaniment to the oboist’s *Theme and Variations on “Canto di Virginia”* for oboe and piano.

The two oboe reeds differ on two counts. ‘Parma A’ is mounted onto a considerably longer staple (which may indicate a later date of construction) and has a very short scrape of what would appear to be less than 10 mm. ‘Parma B’, with a longer lay, is mounted onto a substantially shorter staple in the Viennese tradition.

	Parma A	Parma B
Staple length	46 mm	33 mm
Blade length	22 mm	22 mm
Total reed length	68 mm	55 mm
Length of lay	? mm	15 mm
Tip width	6.7 - 7.0 mm	6.7 - 7.0 mm
Staple top opening	-	-
Staple bottom opening	5.0 mm	4.5 mm
Staple conicity	-	-
Gouge thickness	-	-
Tube cane diameter	-	-

Table 7.14. The Parma reeds



Fig. 7.31. The Parma reeds
(photograph: Paolo Grazzi)

7.2.14. Conclusions

During the first half of the nineteenth century (prior to the Industrial Revolution that coincided with the apparition of Triebert's *systèmes*), instrument building in France was still very much an artisanal process; oboe manufacture was not standardised and instruments were handcrafted by experienced makers, often customised for a specific performer who had their own set of artistic requirements and physical constraints. As a result, the reeds made to perform on these models were likewise highly varied, and as the data collected above indicates, those made in the nineteenth century came in a wide array of shapes and sizes much as they do today. Some were short and wide, like those made for Viennese oboes by Koch, whereas the French school after Brod eventually moved towards longer, narrower reeds, to be paired with their equally svelte, narrow-bored instruments. These national styles persist to this day. Tip widths range from 6.5 to 9.3 mm, and an equally large discrepancy can be found in staple lengths (30.3 to 49.5 mm), blade lengths (19.9 and 28.6 mm), and lay lengths, which vary from roughly 10 mm (Brod) to 17 mm (Rijksmuseum models). One feature that these reeds do have in common is their bevelled scrape, which we can conclude was the *only* scraping style used in the nineteenth century.

Pairing reeds with oboes is a daunting task since there are no clear starting points for making any connections between the two. In this regard, we are fortunate to be able to associate:

1. two reeds from the Rijksmuseum with a Triebert oboe in the same museum (c.1840);
2. a reed found with an Italian oboe by Fornari (1814);
3. the Ling specimens with English oboes by Milhouse (roughly 1800-1820);
4. six reeds now conserved in Japan with with an oboe by Palanca (pre-1780);
5. three reeds with an oboe by Vincenzo Schultz (Naples, c.1830);
6. three reeds with a Viennese oboe by Koch (pre-1865);
7. two reeds found with an oboe by Heinrich Grenser (c.1800).

By extension, we are also able to pair together the Garnier reed with two-keyed instruments by Delusse (roughly 1760-1790); Brod's reed with instruments of his own design; and the Barret reed with early mechanised models by Triebert.

Oboes by Fornari, Palanca, Milhouse and Delusse, which predate the Adler by roughly two generations, are late classical instruments dating from the last quarter of the eighteenth century, and possess slightly wider bores, thicker walls, and larger tone holes than the Adler. These acoustic differences call for reeds with a slightly wider shape and shorter staples.

The shape of Brod's reed, which was narrower and shorter than Garnier's (tip width: 7.0 mm vs. 8 mm; blade length: 20 mm vs. 23.5 mm) had an impact on timbre and intonation. Designed for a higher pitch standard (roughly 440 Hz vs. 420 Hz),⁵⁷⁵ Brod's reeds conceivably yielded a more penetrating tone that suited a more soloistic, Berliozian treatment of the oboe, as opposed to blending in with *colla parte* string writing still common in the works of Gluck and Grétry. It is noteworthy that less than thirty years separate the publication of Garnier's and Brod's *méthodes* (1802 vs. 1830), and would suggest that as time progressed timbre was becoming more focused.

The thirteen historical specimens analysed here can loosely be grouped into three separate schools: (a) one that represents an earlier classical 'pan-European' style reed before the emergence of pronounced national schools (which includes Italian, English, Austro-German and French models by Palanca, Fornari, Ling, Fahrbach, Garnier and Grenser);⁵⁷⁶ (b) another that represents the Viennese school (Koch and Schultz); and (c) a third tradition that evolved after 1830 in France (with examples by Brod, Barret, Wildenberg, and the Rijksmuseum Triebert reeds). It is to this last school that the Adler oboe belongs.

⁵⁷⁵ Despite having a longer staple than the Garnier reed, Brod's reed is in fact shorter overall, due to the latter's small blades (Brod 66 mm total length vs. Garnier 67 mm total length).

⁵⁷⁶ Indeed, the classical-style reeds of Garnier, Ling and Fornari are similar on many counts: comparable staple length (which vary between 42.4 and 43.5 mm); blade length (between 21.1 and 23.8 mm); total reed length (between 63.7 and 67 mm); and staple bottom opening (between 4.7 and 4.9 mm). The reeds of Palanca also share similar traits with the three aforementioned specimens, with similar blade lengths (20 mm) and staple bottom openings (4.7 mm). These findings would suggest that differences in national styles were noticeably less pronounced at the turn of the nineteenth century than a generation or two later, which saw the emergence of distinct national reed making schools.

Table 7.15.

Comparative analysis of original nineteenth-century oboe reeds

	Brood 1830	Gartner 1802	Barret 1850	Fornari c.1814	Fahrbach 1843	Ling c.1820	W'berg 1	W'berg 2	W'berg 3	W'berg 4	Palanca c.1780	Schulz 1	Schulz 2	Schulz 3	Rijks' 1	Rijks' 2	Rijks' 3	Koch c.1860	Grenser	Parma A	Parma B	Palanca 'optimal'
Staple length	46	43.5	42	42.4	42	42.3	43.7	43.3	46	46	49.5	34.2	33.8	34.0	47.0	46.0	47.0	30.3	39	46	33	42
Blade length	20	23.5	21	23.8	22	22	21.5	19.9	--	--	20	27.7	27.8	28.0	26.0	22.0	22.0	28.6	23	22	22	23
Total reed length	66	67	63	66.2	64	63.1	65.2	63.2	69	--	69.3	61.9	61.6	62.0	73.0	68.0	69.0	58.9	62	68	55	65
Length of lay	10-12	--	12	13.5	9.5	13.8	13	--	14	--	15	15.6	15.1	16.6	9.0	17.0	11.0	15	16	--	15	15
Tip width	7	8	7	8.6	7.5	9.3	8.6	7.5	6.5	--	7.5	7.7	7.8	8.0	7.0	7.0	7.0	9.3	8	6.7/7.0	6.7/7.0	7.8
Staple top opening (2 x 3)	2.5	--	--	2.3 (1.75x2.9)	--	2.3	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--	2.5
Staple bottom opening	5	5	--	4.9	--	4.6	5.2	4.5	--	4.8	4.7	4.8	4.7	4.8	4.9	4.9	4.8	4	4.3	5.0	4.5	4.7
Staple conicity	0.054	--	--	0.061	--	0.053	--	--	--	0.054	--	--	--	--	--	--	--	--	--	--	--	0.054
Gouge thickness	0.75	--	--	--	--	--	--	--	--	--	--	>1.0	>1.0	>1.0	--	--	--	--	--	--	--	0.64
Tube cane diameter	11-12	12.5-13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14

7.3. AN OPTIMAL REED FOR THE ADLER OBOE: PERSONAL FINDINGS

The French language has a verb, “*ancher*,” which signifies “finding the appropriate reed for an instrument,”⁵⁷⁷ and since obtaining the Adler oboe in 2013, this has been a constant preoccupation of mine. Despite the scientific approach I have taken in analysing extant reeds, the long process of finding reeds well-adapted to this 185-year-old model has been a highly personal and complex journey, guided primarily by empirical observation. Through repeated trial-and-error I have been able to reach a conclusion of what ‘feels’ and ‘sounds’ best to me, although I feel that the process is still evolving. As observed by Burgess & Hedrick,

the paucity of original specimens has meant that modern [historical] oboists have relied more on empirical investigation in their search for reeds for historical oboes than on copying original specimens. While this has certainly yielded positive results, the extent to which authenticity has been compromised remains a moot point.⁵⁷⁸

In the same vein, Ledet has noted that

Reed styles have evolved in conjunction with the dimensions of the oboe in order to achieve a certain timbre and musical facility, which have been dictated by personal preference and musical demand.⁵⁷⁹

My approach to reed making has always been intuitive and pragmatic, my methodology practical, and my search for an optimal reed for the Adler oboe has been no different. In my definition of the term ‘optimal’, my primary criteria have been (a) *stability*, by which I mean achieving even intonation in all registers with minimal physical effort or discomfort, where voicing feels stable and in tune; (b) adequate *response*, by which I mean I can easily get the sound to start and stop when I want it to; and (c) what I consider to be a beautiful *tone quality*. While also important, I have come to view (d) *pitch level* as secondary, and, as explained in *Chapter IV: Pitch*, have settled on an ideal pitch level of 425-428 Hz for the Adler oboe/reed pairing. And while I am able to get the Adler oboe to play at 430 Hz, as required in most professional settings,⁵⁸⁰ voicing

⁵⁷⁷ <https://www.littre.org/definition/ancher#:~:text=%C2%AB%20ancher%20%C2%BB%2C%20d%C3%A9finition%20dans%20le%20dictionnaire%20Litt%C3%A9&text=Mettre%20une%20anche%20%C3%A0%20un%20instrument>, accessed 15 January 2021.

⁵⁷⁸ Geoffrey Burgess and Peter Hedrick, ‘The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples,’ *The Galpin Society Journal*, Vol. 42 (August 1989), 32.

⁵⁷⁹ David A. Ledet, *Oboe Reed Styles: Theory and Practice* (Bloomington: Indiana University Press, 1981), 44.

⁵⁸⁰ I do this by using a shorter, ahistorical 36 mm Viennese staple. I have found that the higher pitch disrupts the relationship between larger intervals, much as Verdegem observed the limited efficacy of tuning slides.

(i.e., the relationship between intervals, especially octaves) is optimal at a slightly lower pitch. Because this poses a challenge in using the oboe in a professional context, I have chosen to use it for chamber music primarily. The oboe's fragile condition has further influenced my decision to use it sparingly for live performance.

Since the Adler oboe so closely resembles the models by Brod, my experiments began by attempting to copy the reed described in his 1830 *Méthode*. I repeatedly tried changing dimensions one at a time (blade shape, blade length, scraping style, staple dimensions, gouge thickness, gouging style). To eliminate variables and isolate results, I only changed one of the parameters at a time and then observed the results. I consciously tried to move outside of my 'comfort zone' and of what felt familiar, and to move away from 'modern' practices by experimenting with measurements that at first seemed shocking: Brod's remarkably thick gouge, his very narrow tip, his comparatively long staple and short bevelled scrape: all of these parameters were novel to me. And while I feel that I have come close to replicating Brod's reed, I have found the end result challenging to reconcile with contemporary use. This conclusion led me to intensive experimentation, which included making dozens, if not hundreds, of reeds over the past nine years. I tried many different styles of staples (short 36 mm Viennese; 47 mm modern; 42 mm Garnier-type staples now commercially available for classical oboe; and many others in between); scrapes (long American, short European, bevelled); shapes (both by hand and using shaper tips); gouging techniques (manual and machine); gouge thicknesses (0.58 - 0.75 mm); and cane diameters (ranging from 10 - 15 mm). On occasion I intentionally went beyond what I thought was necessary or appropriate in order to get a better sense of the effect the change had, and to know if I was headed in the right direction.

One of my conclusions has been that, while I have an understanding of the source materials available, if something 'feels' right, I'll use it. Or perhaps, by extension, I'll only use something if it feels right. And while this may be construed as yet another example of Butt's 'selective use of historical evidence,' reeds are intrinsically personal by nature, with Light observing, "The fact is, there is no right or wrong way to make oboe reeds. If what you are doing gets you and keeps you the position you want, you are doing it right."⁵⁸¹ Indeed, although during the course of this investigation I experimented using replicas of historical reed making tools, studied historical scraping techniques, and carried out experiments with hand gouging, I have chosen to revert to my own reed style, inevitably inspired by modern practices, to pragmatically find a reed that 'feels' and 'sounds' right. The measurements for my optimal reed for the Adler oboe are the following:

⁵⁸¹ Jay Light, *The Oboe Reed Book*. (Des Moines: Drake University Press, 1983), preface.

Staple length	42 mm
Blade length	23 mm
Total reed length	65 mm
Length of lay	14 mm
Tip width	7.8 mm
Staple top opening	2.5 mm
Staple bottom opening	4.7 mm
Staple conicity	0.054
Gouge thickness	0.64 mm
Tube cane diameter	14 mm

Table 7.16. An optimal reed for the Adler oboe

As seen in the table above, externally, the measurements of my ‘optimal’ Adler reed are very similar to the Garnier and Ling reeds.⁵⁸² I have found that the 46 mm staple recommended by Brod, even with a short scrape, produces a reed that is too flat in pitch (c.420 Hz), which is why I have chosen to use shorter 42 mm staples (like both Garnier and Ling) with a bottom opening of 4.7 mm (Ling: 4.6) and a top opening of 2.5 (conicity: 0.054, almost identical to Ling 0.053. Incidentally, the conicity of my staple is identical to that of Brod’s staple as well to that of the Wildenberg 3 specimen). The cane is evenly gouged to 0.64 using a gouging machine, and is shaped by hand, to a tip width of 7.8 mm (wider than Brod’s recommendation of 7.0 mm, yet slightly narrower than Garnier’s 8 mm tip). I prefer hand shaping which gives me control over the width at the throat, and I have found that a broader throat allows for a clearer, more focused timbre on cross fingerings. Brod’s slightly narrower reed would have been ideal for using keyed fingerings and for attacking the third octave reliably (there are numerous high E’s and F’s in Brod’s compositions, as there are in those by his teacher Vogt). Brod’s narrower shape would incidentally produce slightly stiffer and sharper cross fingerings, which is why I believe Brod recommended keyed fingerings for notes such as B-flat¹ and F¹. Nevertheless, some similarities do exist between Brod’s reed and my own optimal reed for the Adler: in addition to their staples sharing the same conicity, both staple top opening (2.5 mm) and total reed length (66 vs. 65 mm) are nearly identical.

My scrape is a sort of hybrid that incorporates elements from both the American school (‘W’ scrape with marked ‘windows’; heavy heart) and the European tradition (short tip, thin rails). The lay of 15 mm places it between the longer American scrape of 20+ mm and the short French style

⁵⁸² That Garnier’s reed should work on the Adler is hardly surprising: early in his career Brod is likely to have played on Delusse’s instruments (later on he would switch to those by Triebert and to oboes of his own manufacture) to which keys had subsequently been added (much like Sallantin’s oboe). The bores of Brod’s early oboes (those from around 1825, at which time his *Méthode* was written, for example, the Bate boxwood model) must therefore closely resemble Delusse, since Brod is known to have inherited Delusse’s reamers. Garnier’s reeds should therefore technically also work well on Brod’s instruments.

that is often around 10 mm long. As Brod and Barret instruct, I have found it useful to adjust the length of the scrape depending on the hardness of the cane (and also the repertoire for which the reed is intended). Over the course of this study, I experimented with, and consequently grew accustomed to, the shorter European scrape, finding it yielded better response on ‘third octave’ notes above D³. I was surprised to be able to adapt to this scrape without having to make any significant changes to my embouchure, although whether this shift is conscious, subconscious, or both, is complicated to assess. As Salter indicates, “the oboist need not hold to any one inherited tradition but may, with understanding, incorporate the best elements from diverse techniques.”⁵⁸³

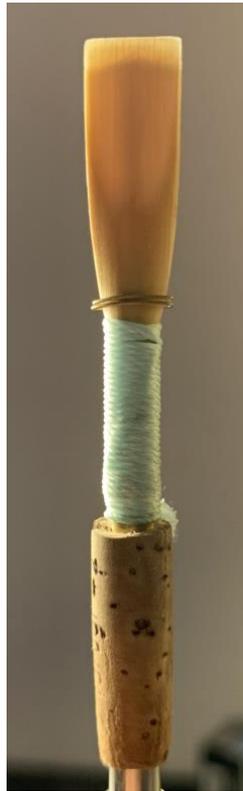


Fig. 7.32. An optimal reed for the Adler oboe, 425-428 Hz.

⁵⁸³ Graham Salter, *Understanding the Oboe Reed* (Bearsden, 2018), xiii.

8. REPERTOIRE

*“It is simply a badge of historical injustice that oboists must wear.”*⁵⁸⁴

Such was the lament of Leon Goossens, echoing the commonly-held view that the nineteenth century was a time of crisis in the history of the oboe, an “unforgivable oversight” shared by musicians, scholars and music-lovers alike.⁵⁸⁵ Like a snowball effect, the *idée reçue* that the oboe fell into disuse because “it was considered unequal on its own to the aspirations of Romantic expression”⁵⁸⁶ has been handed down across generations by oboists themselves, with Holliger declaring in his typically bombastic fashion “that there was no tradition of oboe playing during the nineteenth century. There was very little solo playing and the instrument nearly disappeared.”⁵⁸⁷

Seeing as how one of the ancillary case studies of this investigation provided me with access to a panel of eminent historical oboists who specialise in the period under study, it seemed relevant to explore their own impressions of the oboe’s Romantic repertoire. In response to the questions: *How do you view nineteenth-century solo repertoire for oboe? Do you feel that we, as oboists, have a good knowledge or awareness of Romantic repertoire for our instrument? If not, why do you think that is?*, almost all of the respondents felt that there was a growing awareness about the music itself, but that further excavation was required, and that our collective perception that views the repertoire as meagre is the inculcated result of “being told for too long that there is none,” or “being fed that there is a dearth.”⁵⁸⁸ The detailed reactions of my colleagues are available for consultation in Appendix II.

1. **Hélène Mourot (Les Siècles)**

I’ve researched it quite a bit, moreover because I had to give workshops on the French romantic oboe. I have students who came to see me in Saintes [FR] who wanted to learn to play the French romantic oboe, so I did a lot of preparation. But, for example, the works of Vogt are not easy, so to start off on these instruments, his music is not very accessible. It’s quite virtuosic, it requires real technical mastery. In terms of fingerings, there is always this cohabitation of old and modern fingerings, it’s not easy. To begin with, I find that [the works of Vogt and Brod] are not ideal. Part of it must be the fact that we don’t play these works on period instruments very often. Also, I believe they may not fit in well with current taste. They’re a bit old-fashioned, which I personally

⁵⁸⁴ Leon Goossens and Edwin Roxburgh, *Oboe* (London: MacDonald and Janes, 1977), 158.

⁵⁸⁵ Gunther Joppig, *Oboe & Fagott: ihre Gechicht, ihre Nebeninstrumente und ihre Musik* (Bern: Hallwag, 1981), trans. Alfred Clayton as *The Oboe and the Bassoon* (London: Batsford Ltd., 1988), 151: “Unfortunately only a few works for the oboe were composed in the Romantic period.”

⁵⁸⁶ Page et al. “Oboe,” in Sadie, Stanley, ed. *The New Grove Dictionary of Music and Musicians* (London: Macmillan, 2002).

⁵⁸⁷ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 129, quoting Frederic Palmer, ‘A Conversation with Heinz Holliger,’ *The Double Reed*, vol. 6 (1983), 49.

⁵⁸⁸ Geoffrey Burgess and Mark Baigent, personal commentaries.

*find quite charming. I don't find them at all unpleasant. Afterwards, there is always a comparison made with all of the 19th century repertoire for the violin or the piano, which undermines our own [repertoire] and I find that a bit of a shame. Selling Vogt recordings isn't child's play!*⁵⁸⁹

2. **Stefaan Verdegem** (Anima Eterna Brugge)

Compared to flute or clarinet the solo repertoire is small, and I think I know most pieces. The chamber music combination pieces are often more interesting than the solo pieces.

3. **Leo Duarte** (Academy of Ancient Music)

If I'm honest, I don't view the solo repertoire with any great fondness (with five or six notable exceptions). I have a horrible suspicion that it lacks the profundity and depth which I want to engage with. I hope that this is something to be proved wrong! The other difficulty is finding the right keyboard instrument to perform with. I find that the blend between the oboe and the piano in any era is problematic, but if you try to play oboes and pianos from different periods then things become very unsatisfying very quickly.

4. **Geoffrey Burgess** (USA)

No, we do not. We have been told for too long that there is none! It's music that takes finesse. Even where students are raised on a strict diet of Barret études, the stylistic parameters of 19th-c. interpretation remain very rigid.

5. **Paolo Grazi** (IT)

Late C19 solo repertory for oboe is almost nonexistent! I think the most interesting repertoire is the orchestral one. It would be nice to know more about tempo interventions in the performance of romantic music. I think that in our time we are very focused on the precision of performing together (I mean the verticality of the ensemble) that it doesn't seem like it was in post-romantic performance and maybe as it was before.

⁵⁸⁹ *Je me suis pas mal renseigné là-dessus, en outre parce que j'ai dû enseigner, j'ai fait des stages, j'enseigne régulièrement le hautbois romantique français. J'ai des étudiants qui sont venus me voir de Saintes, qui voulaient apprendre à jouer du hautbois romantique français, donc j'ai quand même beaucoup cherché. Mais, par exemple, les œuvres de Vogt ne sont pas faciles, donc pour commencer ces instruments-là, ce n'est pas très accessible. C'est assez virtuose, ça demande une vraie maîtrise technique, au niveau des doigtés, il y a toujours cette co-habitation de doigtés anciens et modernes, ce n'est pas simple. Pour commencer, je trouve [ces œuvres de Vogt et Brod] pas idéales. Ça doit participer au fait qu'on ne joue pas très souvent ces œuvres sur instruments d'époque. Aussi, il y a un effet de mode je crois. C'est un peu démodé, après, moi je trouve ça assez mignon. Je trouve ça pas désagréable. Après, il y a toujours la comparaison avec tout le répertoire XIXème pour le violon ou le piano, ce qui crée un côté dévalorisé et délaissé mais je trouve ça un peu dommage en fait. Vendre des disques avec du Vogt, ça se mérite !*

6. **Mark Baigent (UK)**

Yes, a growing awareness of what's out there but considering we were fed that there is a dearth of 19th century repertoire, there is actually a LOT out there. Not always the best quality music, but it is of its era.

7. **Masamitsu San'nomiya (Bach Collegium Japan)**

We don't know a lot of this repertoire. I definitely want you to excavate! We should play more of Vogt's works, for example.

8. **Taka Kitazato (Orchestre des Champs Elysées)**

Why don't we have nineteenth-century repertoire as oboists? Because of keywork. Also, modulation challenges. A conical bore with ten fingers?...modulations become a challenge. Then we have to find the right reeds, staples... The oboe is not well-adapted to this music. The flute and clarinet were much better suited to the nineteenth century.

James Brown captured the Romantic oboist's 'feeling of injustice' poignantly when he complained:

'If the Great Composers of the Nineteenth Century were writing beautiful, sensitive and demanding solos for the Oboe in their orchestral compositions, why is it that they so badly neglected the possibility of increasing the solo repertoire of the instrument?' This is a question that we Oboists must have asked ourselves many times, yet we seem to be little nearer the answer. Can there perhaps be some overlooked nineteenth century pearl of the Oboe Repertoire lying out there, yet to be discovered?⁵⁹⁰

The task of cataloguing the oboe's nineteenth-century repertoire far exceeds the scope of this study, and has already been well inventoried by several authors.⁵⁹¹ Most notably, the Italian oboist Sandro Caldini has recently published a bibliography of music for oboe from 1800-1950 as a scholarly equivalent to Bruce Haynes' *Music for the Oboe, 1650-1800: A Bibliography*, the most comprehensive inventory of eighteenth-century solo and chamber repertoire for oboe. Nonetheless, because this thesis is concerned with a specific model of oboe, I will take the opportunity here to provide a brief overview of the solo and chamber works composed for it during this period. And while it is true that larger works with orchestral accompaniment such as the *symphonie concertante* continued to be a popular genre during our period of study,⁵⁹² the task of surveying works with orchestral accompaniment would require a far more detailed study than I

⁵⁹⁰ James Brown, *Our Oboist Ancestors: A Guide to Who Was Who in the Nineteenth Century Oboe World*, (Malmesbury: Abbey Printing, 2006), Introduction.

⁵⁹¹ Florence Badol-Bertrand, for example, contributed greatly to cataloguing the oboe's classical repertoire in France (from the end of the baroque until the fall of Napoleon), and as part of her master's thesis compiled a census of 300 works composed for oboe in France between 1750 and 1815, as she states, "*un corpus très cosmopolite*." See: Florence Badol-Bertrand, "Évolution de la pratique du hautbois à Paris de la fin du règne de Louis XV à la fin du Premier Empire," (doctoral dissertation, Université François-Rabelais, Tours, 1996).

⁵⁹² Thanks to the *Concerts spirituels*, the *symphonie concertante* was hugely popular in Paris around 1800, with works involving solo oboe by Jadin, Widerkehr, Devienne, Cambini, Brod, Reicha and many others.

have undertaken here, and I have therefore concentrated my efforts on chamber music forms primarily intended for private or domestic use. Likewise, for the sake of brevity, I have not given consideration to the non-soloistic use of the oboe within orchestral textures in this study.

In the twentieth and twenty-first centuries, German and Viennese Romantic music has attracted far more attention than nineteenth-century repertoire composed in France. Whereas Beethoven, Brahms, Bruckner, Mendelssohn, Mahler, Schubert, Schumann, and Wagner are all household names, one would be hard pressed to name any of their French contemporaries other than Berlioz.⁵⁹³ In fact, one can even read that “Berlioz, a contemporary of Hugo and Delacroix, is the only great French Romantic composer”⁵⁹⁴ in the *Larousse Encyclopedia of Music* (itself a French source). It is hardly surprising, then, that exceedingly few modern editions of French instrumental works from the Romantic period have been published. Consequently, live performances and recordings of this repertoire are likewise few and far between. Why this is so has to do with *canonism*. As Haynes notes, Romantic composers became ‘heroes’,

promoted to the status of geniuses. Musical pantheons were erected, and plaster factories geared up to create busts of composers, like so many ancient Roman emperors [...] A Canon of Classical works began to be built up, with Beethoven’s symphonies at its base. [...] The Classical Canon is the repertoire we all know from the nineteenth century, undeniably beautiful music to which most musicians of the present day still dedicate their talents. [...] And Canonism is selective; admission to the god-like domain of great composers has been virtually impossible since about the time of the First World War. [...] Modern HIP musicians are under the Canonic spell too. [...] They tend to ignore 90% of the historical repertoires of their instruments, gathering dust on library shelves, while listening and playing over again and again the same works (like Messiahs and Christmas Oratorios) much more often than they were ever meant to be heard.⁵⁹⁵

Over time, a *received* way of interpreting these canonic works has evolved and been defined through repeated and ritualised performance; their style is ‘conserved’ by conservatories. And so despite their musical achievements and the popularity they enjoyed during their own lifetimes, composers such as Le Sueur, Méhul, Boïeldieu, Dalayrac, Meyerbeer, Halévy, Hérold, Auber, Adam, Onslow, Ambroise Thomas and Félicien David have not been admitted to this ‘Canonic pantheon,’ and their memory has faded from our collective consciousness. The result is a dearth of documented recordings, live performances and accessible modern editions of their works. Nonetheless, examining their now-forgotten music and the role the oboe played in their lyrical and symphonic works is key to this study, since it was in the orchestral arena that the simple-

⁵⁹³ Here I am deliberately avoiding French composers after 1850, such as Gounod and Bizet but especially Impressionists like Ravel, Debussy, Fauré, and Saint-Saens.

⁵⁹⁴ Norbert Dufourcq, ed. *The Larousse Encyclopedia of Music* (Paris: Larousse, 1965), 288.

⁵⁹⁵ Bruce Haynes, *The End of Early Music: A Period Performer’s History of Music for the 21st Century* (Oxford: Oxford University Press, 2007), 5-6.

system oboe was given free reign to fully express, as Berlioz noted, its ‘tender and innocent’ voice. Burgess and Haynes remark that while the oboe “was not a central player in nineteenth-century chamber and solo music, a special role was reserved for it in orchestral music. [...] In Paris alone there were over fifty venues used regularly for concerts and theatrical performances, each with its own orchestral ensemble. The oboe’s place in art music has largely been guaranteed by the continuing status of the Romantic orchestral repertoire.”⁵⁹⁶ Before reviewing the instrument’s solo literature then, let us take a moment to revisit some of these now-forgotten orchestral solos.

⁵⁹⁶ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 130.

8.1. THE OBOE IN THE ORCHESTRAL ARENA

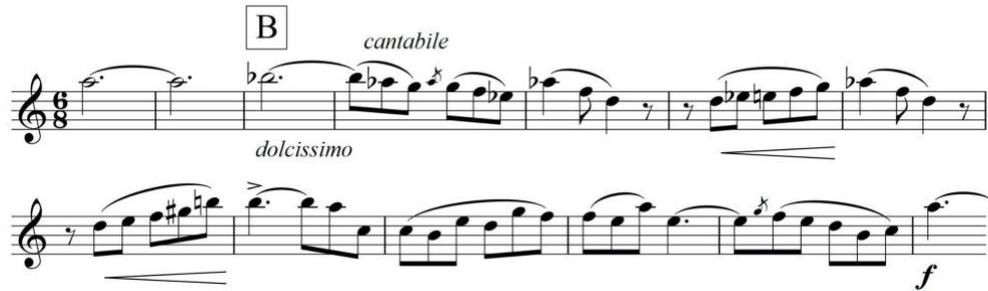
Contemporary accounts often viewed the oboe as being incompatible with soloistic treatment and best suited to the orchestral sphere. Gevaert holds the instrument's 'monochrome' timbre and limited technique accountable for this relegation:

*First and foremost an instrument of character, the oboe's timbre does not possess enough variety, nor does it boast sufficient technical resources, to keep the listener's attention for an extended period. Likewise, none of the great composers have written any solos for it with orchestral accompaniment [grands solos de concert]. The same flaws have caused the oboe to rarely partake in chamber music. [...] The true domain of the oboe is the orchestra, where it has staked its claim since the time of Lully.*⁵⁹⁷

The first platform on which the oboe could "stake its claim" was in the pit of Grand Opera, which between 1830 and 1850 enjoyed a heyday in the French capital, as exemplified in the lyrical works of Meyerbeer, Halévy, and Auber. Though rarely staged today, these large scale operas enraptured Parisian audiences with their opulent synthesis of "stagecraft, drama and music into one colossal whole [...] If the plots of Grand Opera had something for everyone, so did the music, mixing folk song, full-throated hymns en masse, romances, *bel canto*, beer-hall songs, and church music."⁵⁹⁸ In the hands of Brod, Vény, Verroust or Vogt, the simple-system oboe would have been heard in the premières of operas by Berlioz (*Benvenuto Cellini*, 1838; *La Damnation de Faust*, 1846); Meyerbeer (*Robert le diable*, 1831; *Les Huguenots*, 1836); Halévy (*La Juive*, 1835); and Auber (*La muette de Portici*, 1828; *L'Enfant prodigue*, 1850). These thickly orchestrated works contain substantial solos for the oboe, where composers often used the instrument's pungent, overtone-rich timbre to cut through dense orchestral textures. In Meyerbeer's *Les Huguenots* (1836), for example, which recounts the 1572 St. Bartholomew's Day massacre of Parisian Protestants, the following [lilting oboe melody](#), like a ray of hope for the fleeing Huguenots, emerges unexpectedly amidst a flurry of *stringendo* scales in the strings.

⁵⁹⁷ F.-A. Gevaert, *Nouveau traité d'instrumentation* (Paris: Lemoine, 1885), 141-145. "Instrument de caractère avant tout, le hautbois ne possède ni assez de variété dans le timbre, ni des ressources techniques suffisantes pour accaparer longtemps l'attention de l'auditeur; aussi les compositeurs n'ont pas écrit pour lui de grands solos de concert. Les mêmes causes font que le hautbois prend rarement part à la musique de chambre; [...] Le vrai domaine du hautbois est l'orchestre, où il a sa place depuis Lulli."

⁵⁹⁸ James H. Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995) 250-253.



Ex. 8.1. Meyerbeer: *Les Huguenots* (1836), Act V, Scene III – oboe solo

Halévy’s unconventional use of the oboe’s third octave in *La Juive* (1835) has already been mentioned, but the opera contains an even rarer scoring for two cors anglais, in the fourth act introduction to Éléazar’s air ‘*Rachel, quand du Seigneur*’, in what has been called “the only truly Jewish melody in the opera.”⁵⁹⁹ The solo was performed by Brod and Vény during the première. The opera, central to the nineteenth-century lyrical repertoire, was hugely successful and “continued to bring in solid audiences for decades following its première.”⁶⁰⁰ Staged more than 600 times, it was finally retired from the institution’s repertoire in 1933.

⁵⁹⁹ Diana R. Hallman, *The grand operas of Fromental Halévy* in *The Cambridge Companion to Grand Opera*, ed. David Charlton (Cambridge: Cambridge University Press, 2003), 239. The air was incidentally first recorded in 1920 by Caruso.

⁶⁰⁰ *Ibid.*, 256.

Andantino

The musical score consists of four systems of two staves each. The first system (measures 1-4) is marked **p espressivo** and features triplet patterns in both staves. The second system (measures 5-8) continues the triplet patterns. The third system (measures 9-12) is marked **pp** and includes a triplet in the upper staff. The fourth system (measures 13-15) is also marked **pp** and features a triplet in the lower staff.

Ex. 8.2. Halévy - *La Juive* (1835) - solo for two cors anglais
 Act IV: Introduction to Éléazar's air 'Rachel, quand du Seigneur'

In the same vein, *L'Enfant prodigue* (1850) by Daniel Auber (1782-1871) features an extensive solo for oboe in the ballet of Act II. Berlioz reviewed the première, praising Verroust's "delicious" playing.⁶⁰¹

18 HAUTBOIS

rit. 40.

Solo.

1^o Solo.

All. moderato. 5

Ex. 8.3. Daniel Auber - *L'Enfant prodigue* (1850), oboe solo from ballet scene

In the 1820s, when "Rossinimania swept Paris"⁶⁰², audiences in the French capital heard the premières of Italian *opera seria*, which enjoyed great success both at the *Théâtre-Italien* and in French adaptations at the *Opéra* (where Rossini began directing in 1824). And while it is true that the solo voice of the oboe in Italian opera was losing ground to the clarinet⁶⁰³, prominent solos are

⁶⁰¹ Hector Berlioz, *Feuilleton du journal des débats* (9 décembre 1850), 1-2. "Dans le ballet, M. Auber a donné carrière à son inépuisable verve mélodique. Le premier air de danse commence par un délicieux solo de hautbois que M. Verroust a joué en virtuose accompli."

⁶⁰² M. Elizabeth C. Bartlet, *From Rossini to Verdi* in *The Cambridge Companion to Grand Opera*, ed. David Charlton (Cambridge: Cambridge University Press, 2003), 274.

⁶⁰³ As noted by Berr in his 1836 clarinet *Méthode*: "Composers such as Rossini and Carafa were the first to demonstrate the benefits of frequently using the clarinet in their lyrical works. From then on, the

nonetheless featured in many of Rossini's works, including *L'Italienne à Alger* (1817), *Le Barbier de Séville* (1819), and *Guillaume Tell* (1829). This period also saw the premières of Bellini's *Norma* (1830) and *La Pirata* (1832); and Donizetti's *Anna Bolena* (1831), *Lucia di Lammermoor* (1839) and *Lucrezia Borgia* (1840). As was fashionable at the time, all of these works were reprised in *airs variés* composed by oboists themselves. Rossini's *Le siège de Corinthe* (première at the *Opéra de Paris* in 1826 but in fact a revised version of his earlier *Maometto II* composed for Naples in 1820) contained a particularly luxuriant solo for the oboe that Brod reprised in a *nocturne* the following year. Rossini modified this solo, originally for clarinet in *Maometto II*, giving half of it to Vogt when it premiered in Paris as *Le siège*.

Ex. 8.4. Rossini: *Le siège de Corinthe* (1826) - oboe solo
Act III: *Prière*: “*Avançons - Ô toi que je révère*”

instrument came to occupy the first place among the wind instruments; it has rightfully claimed all the ground the oboe has lost, which is hardly surprising since in his *Méthode*, Brod himself states that this last instrument is only suited for graceful, charming and simple melodies, whereas at present the clarinet can perform nearly all the same technical feats as a violin.” Frédéric Berr, *Traité complet de la clarinette à quatorze clefs* (Paris: Meissonnier, 1836), 3.

“*Les Rossini et les Carafa ont les premiers montré tout le parti que l'on pouvait tirer de la clarinette en l'employant très fréquemment dans leurs œuvres lyriques. Dès lors elle est venue occuper la première place parmi les instruments à vent ; elle s'est enrichie de tout le terrain que le hautbois a dû perdre, avec d'autant plus de raison que ce dernier instrument n'est propre par sa nature qu'à l'exécution d'une musique gracieuse, charmante et peu travaillée, ainsi que M. Brod le déclare dans sa Méthode, tandis que maintenant la clarinette se rapproche du violon pour l'exécution des difficultés.*”



Ex. 8.5. Henri Brod: *Nocturne sur Le siège de Corinthe*, op.16 (c.1827)⁶⁰⁴

The choreographed and purely instrumental dance suite that came to be known as *ballet* (from *ballet-pantomime*) was an offshoot of the five-act Grand opera. Initially this interlude was known as a *divertissement*, and performed within the confines of a three-act opera. But as staged lyrical works grew in breadth in the 1830s to include up to five acts, they could no longer be paired with ballet due to timing constraints.⁶⁰⁵ The stand-alone ballet (in one or two acts and often billed with a smaller-scale opera) made its first appearance in Paris during this period, with enduring works such as *Giselle* by Adolphe Adam; *La Sylphide* by Jean-Madeleine Schneitzhoeffter; *La sonnambule* and *La fille mal gardée*, both by Ferdinand Hérold; and *Nina* by Nicolas Dalayrac. *La Sylphide* (1832) contains several exposed passages for both oboe and cor anglais, as does Adam's *Giselle* (1841). In the latter, a quintessential 'ballet blanc', a haunting four-minute oboe solo underpins the scene where Prince Albrecht kneels in front of Giselle's tomb, places flowers on her grave and begins to weep in a wrack of guilt.

⁶⁰⁴ Offenbach: Johann André, n.d. [1849]. Plate 5287. Reissue (new engraving) - n.d. [1901] - Public domain.

⁶⁰⁵ Mark Everist, 'Grand Opéra – Petit Opéra: Parisian Opera and Ballet from the Restoration to the Second Empire,' *19th-Century Music*, Spring 2010, Vol. 33, No. 3 (University of California Press), 199.

The musical score is written for oboe in G major, 2/4 time. It begins with a 'Solo' marking and a dynamic of *f*. The tempo is 'Andante'. The first section features a series of eighth and sixteenth notes with slurs. The second section is marked 'Allegro' and *ff*, consisting of a rhythmic pattern of eighth notes. The third section returns to 'Andante' and 'rall.', with a dynamic of *p* (piano) and a fingering '5' indicated. The fourth section is marked 'animato 2' and *ff*, with a dynamic of *pp* (pianissimo) at the start. The fifth section is marked 'Andante 1o Tempo' and 'rall.', with a dynamic of *pp*. The sixth section is marked 'rall.' and ends with a fermata.

Ex. 8.6. Adolphe Adam: *Giselle* (1841)

The extensive oboe solo from Act II (*Entrée d'Albrecht*)

The *Société de concerts du Conservatoire* gave the Parisian premières of symphonic works by Beethoven and Mendelssohn. Subsidised by the state and directed from the violin by Habeneck, the *Société* presented its inaugural concert with resounding success in 1828, opening the programme with the Parisian première of Beethoven's Third Symphony, the *Eroica*. Elwart lists the first-rate oboe section, which included Brod, Vény and Vogt.⁶⁰⁶ Between 1828 and 1832, all

⁶⁰⁶ Antoine Elwart, *Histoire de la Société des concerts du Conservatoire impérial de musique, 2ème édition* (Paris: Castel, 1864), 61. Elwart also lists Brod and Vogt as founding members of the *Société*.

nine of Beethoven's symphonies were premièred by the *Société*, with two and occasionally three of his symphonies often heard on the same programme. Carse notes that in the first ten years of the *Société's* existence (1828-1838), a remarkable 68 separate performances of Beethoven's symphonies were given, dwarfing those by Mozart (5 performances) and Haydn (7).⁶⁰⁷ Performances were unconventional by modern standards – works were often dissected, with the first two movements presented at the opening of the concert, followed by four or five lighter chamber works; the final two movements brought up the rear of the performance. Entire movements were often repeated, applause from the audience in between movements was frequent, and composers often felt obliged to 'correct' Beethoven's harmonies.⁶⁰⁸ In the 1840s, Mendelssohn's orchestral works were also premièred by the *Société* and were equally well received, with Berlioz enthusiastically reviewing the 1844 première of the Scottish symphony.⁶⁰⁹ Because Verroust replaced Brod as *hautbois solo* after the latter's death, this means that all of Mendelssohn's symphonic works (premièred between 1842 and 1852) would have first been performed on a simple-system oboe by Tulou.

Burgess nonetheless notes that Vogt was in fact "absent for the Société's first public performances in 1828 due to engagements in London. [...] In the six regular concerts of the first season, the oboe section comprised Brod and Vény." See Burgess: *"The Premier Oboist of Europe": A Portrait of Gustave Vogt*. (Lanham, MD: Scarecrow Press, 2003), 11. Brod was therefore *hautbois solo* for the Parisian premières of Beethoven's third and fifth symphonies.

⁶⁰⁷ Adam Carse, *The Orchestra from Beethoven to Berlioz: A History of the Orchestra in the first half of the Nineteenth Century* (New York: Broude, 1949), 92.

⁶⁰⁸ Hector Berlioz, *Mémoires* (Paris: Michel Lévy frères, 1870), re-edition by Garnier-Flammarion (Paris, 1969), 288-290. Berlioz makes scathing remarks of Fétis "correcting" certain harmonies in the slow movement of Beethoven's Fifth Symphony for an 1832 performance at the *Société*. Scrupulous adherence to the composer's written instructions ("*Werktreue*") was a late nineteenth-century development.

⁶⁰⁹ Nicole Grimes & Angela R. Mace, *Mendelssohn Perspectives* (Routledge. Abingdon & New York, 2016), 321. Premières of Mendelssohn's works in Paris include: *The Hebrides*, 1842; *Paulus*, 1842; *Symphony no. 1 in C major*, 1843; 'Scottish' *Symphony no. 3 in A minor*, 1844; 'Italian' *Symphony no. 4 in A major*, 1852.

Vivace non troppo.

Ex. 8.7. Mendelssohn - Third Symphony (1842)

First movement - oboe solo

The *Société* furthermore acted as a platform for the performance of purely instrumental, ‘absolute’ music, a first in Paris at the time. The genre finally

had a solid core of listeners to support it. Instrumentalists throughout Paris seized their chance – they had a public. [...] In the 1830 chamber music moved out of the salon and into the great performance spaces of piano makers [for example, the Salle Pleyel and Salle Erard, which both still stand today]. [...] In 1838, *La France musicale* counted six hundred-odd concerts of one kind or another in Paris, a stunning growth from just ten years before.⁶¹⁰

Brod certainly did seize this opportunity, appearing as soloist twelve times between 1828 and 1838 exclusively in works of his own composition. Verroust was also prominently featured, and is listed as soloist eleven times between 1843 and 1852. Their teacher Vogt was somewhat less involved, appearing only seven times during his years of membership. Lardrot notes that during the first few seasons after the *Société*’s inauguration, it was common to hear fantasies composed by Brod, the horn virtuoso Gallay, or the flautist Tulou alongside concertos by Beethoven, Weber, Chopin or Liszt. After 1850, however, the situation had changed, and opportunities for wind instrumentalists to perform in a soloistic context were dwindling.⁶¹¹

⁶¹⁰ James H Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995) 263-264.

⁶¹¹ André Lardrot, ‘Henri Brod : Hautboïste, luthier, inventeur, compositeur,’ *La lettre du hautboïste*, (Vol. 8, 2001), 35

A final platform from which the simple-system oboe could express its distinctive voice were the symphonic works of Berlioz, all premièred by the *Société* during the 1830s. These included the *Symphonie fantastique* (December 1830), *Le roi Lear* (written 1831, première: December 1834), *Rob Roy* (April 1833), *Harold en Italie* (November 1834) and *Roméo et Juliette* (November 1839). The following [excerpt](#) from the overture to *Le roi Lear* exemplifies Berlioz’s perception of the oboe, of its innate “pure innocence” and its capacity to depict the “pain of a tender soul.” The oboe’s cantilena, underpinned by a throbbing *pizzicato* triplet figure in the strings, is a lucid portrayal of the “humility and tenderness” of Cordelia, the tragic figure in Shakespeare’s play on which this symphonic poem is based, who is banished after refusing to return her father, King Lear’s, incestuous advances.⁶¹² In his *Mémoires* (1870), Berlioz recalls the praise he received from the King of Hanover who, upon hearing the symphonic poem in 1854, cried: “*The lament of Cordelia! Oh this Cordelia! How you have portrayed her - her humility and tenderness! It is heartrending, and so beautiful!*”⁶¹³

Poco ritenuto
solo

ppp dolce assai

p

Ex. 8.8. Berlioz: *Le roi Lear* (1831) - oboe solo, mm 38 - 45

Berlioz’s perception of the oboe’s expressive capabilities is further exemplified in the following two excerpts. The first is the iconic solo from the opening movement of the composer’s *Symphonie fantastique*.

⁶¹² Michel Austin, “*Overture: King Lear (H.53)*,” <http://www.hberlioz.com/Scores/skinglear.htm>, accessed 2 June 2019. As Austin observes, “Berlioz provided no elucidation of the contents of the work, but clearly expected his listeners to be familiar with the play and to be able to interpret the overture accordingly. It is not difficult to imagine that [...] the two oboe melodies, in the introduction (bars 38 and following) and in the main allegro (bars 151 and following), stand for Cordelia.”

⁶¹³ *Ibid.*, “*les plaintes de Cordelia! Oh! cette Cordelia! Comme vous l’avez peinte! comme elle est timide et tendre! C’est déchirant, et si beau!*”

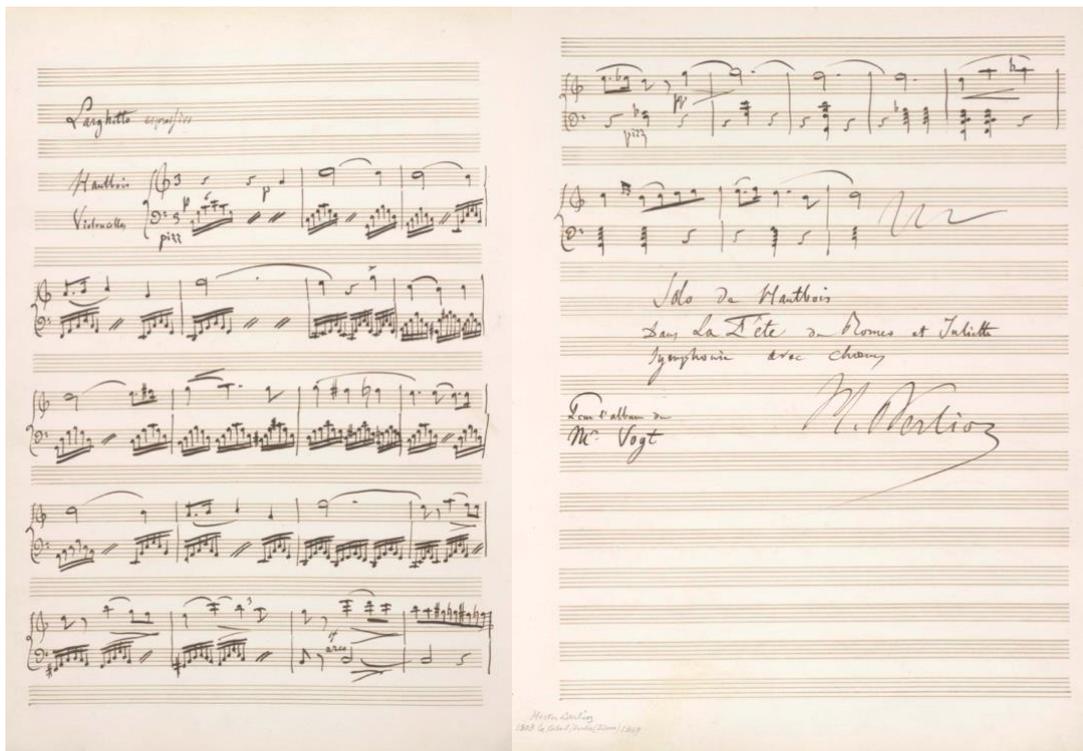
Ex. 8.9. Berlioz: *Symphonie fantastique*, (1830) - i. 'Rêveries - Passions' - oboe solo, bb 358 - 400

The second excerpt, which I have [filmed here](#), is from the second movement of *Roméo et Juliette*, op. 17 (1839):

Ex. 8.10. Berlioz: *Roméo et Juliette*, op. 17 (1839) - ii. 'Roméo seul' - oboe solo

This last solo manifestly held special significance for the composer, since in Vogt's recently discovered 'musical album of autographs,' Berlioz dedicates an arrangement to him of the above excerpt, here scored for oboe and cello:⁶¹⁴

⁶¹⁴ Vogt's musical album of autographs (unpublished; Morgan Library, New York City: undated, c.1843)



Ex. 8.11. Berlioz: *Solo de hautbois dans la fête de Romeo et Juliette, Larghetto espressivo*
from Gustave Vogt's Musical Album of Autographs (c.1843)

In addition to the iconic *Scène aux champs* solo from from the *Symphonie Fantastique* (1830) already reviewed in Chapter 4, another memorable solo by Berlioz is featured in the *Sérénade d'un montagnard des Abruzzes à sa maîtresse* from *Harold en Italie* (1834):



Ex. 8.12. Berlioz: *Harold en Italie* (1834) - *Sérénade d'un montagnard des Abruzzes à sa maîtresse* - oboe solo

This introduction is immediately followed by a luxurious cor anglais solo that, contrary to modern practice, would have been performed by the *first* oboist doubling. Indeed, the orchestral score's first publication (Paris: Maurice Schlesinger, Brandus et Cie., 1848) does not call for two oboes *and* cor anglais, but rather for two oboes, the first doubling on cor anglais. The three-bar transition between sections, for strings only, would have allowed the first oboist to quickly swap instruments.

The image shows a musical score for the English Horn (Corno inglese) solo. The title is "Corno inglese. Allegretto. (♩ = 68) (♩ = 72) Solo." The music is in G major and 6/8 time. It begins with a two-measure rest, followed by a melodic line starting on G4. The dynamics range from *mf* to *p*. A box containing the number "32" is placed above the fourth measure of the solo. The score consists of five staves of music.

Ex. 8.13. Berlioz: *Harold en Italie* (1834) – *Sérénade d'un montagnard des Abruzzes à sa maîtresse*
cor anglais solo

The practice of doubling was rather common in the nineteenth century, the same scenario appearing for example in the overture to Rossini's *Guillaume Tell* (1829).⁶¹⁵ Badol-Bertrand reveals that as *hautbois-solo* at the *Opéra*, Vogt was required to perform both oboe and cor anglais solos. In a letter dated 30 October 1819 and addressed to the opera's administration, Vogt is seen requesting a pay rise for having to double:

Since joining the Orchestra of the Royal Academy of Music, solos for obligato cor anglais have been added to several new works. The administration has entrusted me to perform these solos and I was only too eager to provide them with a renewed expression of my commitment by carrying out this task without any added compensation or increase to my salary. In doing so, Sir, I believed that the additional cor anglais solos, which at the time were only sporadic, would only slightly increase my workload. But because the instrument is now featured in every new composition, and

⁶¹⁵ Alain Girard (pers. commentary) notes that in the first edition orchestral material housed at the Bibliothèque de l'Opéra, the first and second oboe parts in *Guillaume Tell* are printed on the same page, and the cor anglais solo is written into the first oboe part, untransposed and in bass clef.

*in an increasingly exposed manner, I have no choice but to solicit the administration's consideration as to the particular care that this instrument requires.*⁶¹⁶

A close inspection of the first publication of the work's score (1848) makes it clear that Berlioz intended for the *hautbois-solo* to play the cor anglais solo instead of the second oboe – further on, the second doubles the cor anglais at the octave, placing it in a high tessitura usually reserved for the principal chair:



Ex. 8.14. Berlioz: *Harold en Italie* (1834)

Sérénade d'un montagnard des Abruzzes à sa maîtresse

Oboe and cor anglais doubling at the octave (first publication, 1848)

The vast majority of modern-day performances of this work, however, have the *second* oboe double on cor anglais for the *Sérénade* (as it is the only movement in the work that calls for the instrument). In practical terms, the second oboe part is often transposed up a fifth and played on cor anglais which avoids having to hastily switch instruments. In some modern performances, two oboes *and* a cor anglais are used, the first oboe playing the part Berlioz intended for the second oboe, the second oboe tacet, and a third oboist performing the cor anglais solo Berlioz intended for the principal chair.⁶¹⁷

Other orchestral works, unfamiliar to current audiences but phenomenally successful in their own time, also gave the oboe ample opportunity to showcase its soloistic capabilities. A prime example is *Le Désert*, an 'ode-symphonique' composed by Félicien David and premièrered at the Paris Conservatoire in December 1844. Scored for speaker, tenor solo, male chorus and orchestra, the exotic-sounding work was extraordinarily popular for decades and was later reprised at the

⁶¹⁶ Florence Badol-Bertrand, 'L'adoption du cor anglais à Paris au tournant du XIXe siècle,' *Revue musicale de Suisse Romande*, March 2016 (Lausanne: Nouvelle Société de la Revue Musicale de Suisse Romande, 2016), 37. "Depuis mon admission dans l'Orchestre de l'Académie Royale de musique, on a introduit dans plusieurs ouvrages nouveaux une partie obligée de cor-anglais. Pour l'exécution de cette partie, l'administration a compté sur moi et je me suis empressé de lui donner un nouveau témoignage de mon zèle en m'en chargeant sans augmentation de traitement ni indemnité. En agissant ainsi, Monsieur, je croyais que la partie du cor-anglais qui n'était alors qu'accidentelle n'augmenterait que faiblement mes travaux obligés, mais aujourd'hui qu'elle entre dans toutes les compositions et qu'elle acquiert chaque jour plus d'importance, je ne puis répondre à la confiance de l'administration qu'en me livrant à des soins particuliers que cet instrument exige sur lequel je ne puis plus me dispenser d'appeler la sollicitude."

⁶¹⁷ Carse notes that when Berlioz toured Germany in 1843, "he was obliged to rewrite his cor anglais parts for the clarinet at Leipzig, Weimar, and other German towns", underlining the fact that the instrument remained quintessentially French until the time of Wagner. See: Adam Carse, *The Orchestra from Beethoven to Berlioz: A History of the Orchestra in the first half of the Nineteenth Century* (New York: Broude, 1949), 30.

Théâtre-Italien and by Berlioz. Telltale signs of its far-reaching success include it being quoted by Jules Verne in his novel *Robur-le-Conquérant* (1886) and by André Gide in *Si le grain ne meurt* (1924). The work spurred many transcriptions including an arrangement of the tenor aria *Hymne à la nuit* for viola and piano by Henri Vieuxtemps. Offenbach even parodied the work with his burlesque *Le Citrouillard au désert* ('Pumpkinhead in the desert') which premiered at the *Opéra-Comique* in March 1846. Alternating vocal and orchestral movements are introduced by a spoken recitation and track the journey of a caravan as it moves across the desert. Before the caravan departs, the muezzin invokes a song of praise to Allah which Verdi recycled in the ballet scene of *Otello* (1894). Exoticism was particularly in vogue, and in the wake of Napoleon's colonial exploits, France had become especially intoxicated with the Middle East. As an adept of the Saint-Simonien brotherhood, David had travelled to Egypt and the Holy Land, and the oboe solos in this work plausibly recall the sounds of the zurna he would have heard on his journey.



Ex. 8.15. Félicien David: *Le Désert* (1844) - *Marche de la caravane*



Ex. 8.16. Félicien David: *Le Désert* (1844) - *Danse des almées*

In summary, while at the dawn of the nineteenth century the oboe in France had already begun to forge its own solo repertory, it was in the orchestral arena that the instrument could reveal the full extent of its expressive powers. During the period under study (1815-1840), France would

discover the symphonic works of Beethoven, Italian *opera seria*, and be held in the thrall of now-forgotten Grand Opera. But it was the enduring works of Berlioz that gave the oboe the opportunity to fully express its “candid, innocent and somewhat timid”⁶¹⁸ voice in a myriad of memorable solos.

⁶¹⁸ Hector Berlioz, *Grande traité d'instrumentation et d'orchestration modernes* (Paris: Schonenberger, 1844), 104.

8.2. SOLO AND CHAMBER WORKS

Brown notes that more than 60% of the oboe's solo repertoire in the nineteenth century was written by oboists themselves,⁶¹⁹ but because only a fraction of this literature has been made available through modern editions, most oboists are unaware of its breadth and richness. The oboe is not alone in this predicament, however, and as Holoman observes, much of “the [nineteenth] century's enormous repertory [is] still to be rediscovered. Who has [...] heard but a fraction of the corpus of chamber music and song that has been left to us?”⁶²⁰

The cult of the virtuoso, which resulted from the sudden arrival of visiting talent from abroad, held Paris in its thrall during the first half of the nineteenth century. The remarkable performances of Chopin, Mendelssohn, Liszt, Kalkbrenner, Thalberg, Ernst, and Paganini in the French capital catapulted the piano and violin as the uncontested rulers of the concert stage, and this was reflected in domestic music-making. The burgeoning middle class had a voracious appetite for new repertoire, and it has been estimated that by 1829, Paris could count over 80,000 amateur musicians (compared to less than 3,500 at the time of the Revolution⁶²¹), with a piano gracing the parlour of no less than one in ten middle-class households.⁶²² Hundreds of private *soirées musicales* suddenly cropped up, and in the 1830s, “there were nearly as many salons as there were wives of men in high posts who possessed the skill to form and keep a stable of individualists looking to be entertained. Everybody who was anybody was a regular visitor at eight or ten or a dozen salons.”⁶²³

During these intimate gatherings (they usually began after dinner around 9:30 p.m.), wind instruments were relegated to a lower plane, far behind the voice, piano, violin and cello. Yet even among the underprivileged woodwinds there was a pecking order, with the oboe bringing up the rear behind the more facile and accessible flute, clarinet and horn. The oboe certainly did “lose ground to the clarinet”⁶²⁴ – a favourite of nineteenth-century composers⁶²⁵ “with its rounded

⁶¹⁹ James Brown, *Our Oboist Ancestors: A Guide to Who Was Who in the Nineteenth Century Oboe World*, Abbey Printing (Malmesbury: Abbey Printing, 2006), Introduction.

⁶²⁰ D. Kern Holoman, *The Cambridge History of Musical Performance* (Cambridge: Cambridge University Press, 2012), 339.

⁶²¹ Robert Wangermée, *Conscience et inconscience du virtuose romantique : à propos des années parisiennes de Franz Liszt* in *Music in Paris in the Eighteen Thirties*, Bloom, Peter (ed). (New York: Pendragon Press, 1987), 555, 572.

⁶²² Page et al. “Oboe,” in Sadie, Stanley, ed. *The New Grove Dictionary of Music and Musicians* (London: Macmillan, 2002).

⁶²³ Peter Bloom, ed. *Music in Paris in the Eighteen Thirties* (New York: Pendragon Press, 1987), 11-12.

⁶²⁴ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 128.

⁶²⁵ Colin Lawson, *Brahms: Clarinet Quintet* (Cambridge: Cambridge University Press, 1998), 15. “Where Beethoven's œuvre reflects his growing affection towards the orchestral clarinet, Brahms seems to have

tone, expansive compass and superficially easier technique”.⁶²⁶ In the nineteenth century, the oboe continued to be viewed as a specialist’s instrument and “because of the difficulties associated with reeds and the patience required to produce an acceptable tone quality, the oboe never became popular as an amateur instrument and was little used in domestic music-making.”⁶²⁷ Despite this, a sizeable corpus of early nineteenth-century French chamber works for oboe⁶²⁸ has recently come to light that bears witness to a lively, dynamic tradition of oboe playing in France. Unfortunately, this corpus has already come under harsh criticism that deems it meagre and insipid:

The works that opened the nineteenth century [... such as the] *Nocturnes* for piano and oboe by citizen Charles Garnier were even more paltry, and foreshadowed the variations, oriental and pseudo-pastoral pieces of a very poor future. The only merit of this output is to reflect the technical progress made on the instrument. Musically, they do not go beyond the level of *études*, duets and *caprices* found in contemporary method books.⁶²⁹

And while the nocturnes, *airs variés* and *potpourris* of early French Romantic composers may now be dismissed by some as vapid and trite, they nonetheless enjoyed a bourgeois vogue for nearly half a century not *in spite* of, but precisely *because* of their ephemeral nature and lack of depth and profundity. A case in point are the post-revolutionary works of Jadin, which, written in the wake of tremendous social and political upheaval, display a sudden simplification of musical texture that was “celebratory and didactic [and which] defied the canons of suspense and high conflict in order to present a citizenry united to overturn the past.”⁶³⁰ The cultural climate after the Revolution “worked against polyphony, for polyphony implied a divided social body.”⁶³¹ Viewed in the social context of revolutionary equality, “predictable harmonies, and eminently singable

been innately aware of the instrument’s potential, as is evident in his earliest orchestral music. He [...] shared Beethoven’s mature fondness for the combination of clarinets and bassoons with or without horns, representative of the ‘warmer and round-tone blends’ available by excluding an oboe sonority.”

⁶²⁶ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 128. The authors observe that “alongside the clarinet, the oboe was somewhat of an ugly duckling.”

⁶²⁷ Page et al. “Oboe,” in Sadie, Stanley, ed. *The New Grove Dictionary of Music and Musicians*. (London: Macmillan, 2002).

⁶²⁸ Geoffrey Burgess and Bruce Haynes, *The Oboe* (New Haven: Yale University Press, 2004), 129: “The life of the nineteenth-century oboe outside the orchestra has gone virtually unexplored. [...] Much music still remains to be unearthed.”

⁶²⁹ François Fleuret, *Le hautbois dans la musique française, 1650-1800* (Paris: Picard, 1984), 165 : “*Les œuvres qui ouvrent le XIXe siècle [...comme les] Nocturnes pour piano et hautbois du citoyen Charles Garnier, sont encore plus indigentes et laissent présager les variations, les pièces orientales et pseudo-pastorales d’un avenir bien pauvre. Le seul intérêt de cette production est de refléter les progrès dans la maîtrise de l’instrument. Musicalement, elles ne dépassent pas le niveau des études, duos et caprices des méthodes contemporaines.*”

⁶³⁰ James H. Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995) 150.

⁶³¹ *Ibid.*

melodies were the musical ingredients⁶³² most favoured by early nineteenth-century French composers. Furthermore, as Caswell observes, because musicology is primarily concerned with masterpieces that establish new directions and create innovative patterns, it often ignores “long-accepted aesthetic canons [that] meet a society’s established musical needs.”⁶³³ And much like canonic tradition has contributed to the eclipse of the German *Lied* over the vocal French *romance*, so too has it established a hierarchy, on a much smaller scale, of nineteenth-century compositions for the oboe, favouring German works over French. Many are the modern oboists who have studied Schumann’s *Drei Romanzen*, op. 94 (1849), Hummel’s *Introduction, Theme and Variations*, op. 102 (1823), and Kalliwoda’s *Morceau de salon*, op. 228 (1859), yet how few are even aware of the over 100 compositions by Vogt, Brod’s 70 opus numbers, and the 40 *airs variés* of Verroust?

⁶³² *Ibid*, 154.

⁶³³ Austin B. Caswell, *Loïsa Puget and the French Chanson* in *Music in Paris in the Eighteen Thirties*, Bloom, Peter (ed). (New York: Pendragon Press, 1987), 97.

8.2.1. THE OBOE AND PIANO DUET

The oboe and fortepiano duo emerged in France around 1800 and continued to be fashionable well after 1850. Works for this configuration were primarily composed by virtuoso oboists themselves, including Barthélémy, Brod, Bruyant, Garnier, Lavigne, Sabon, Soler, Vény, Verroust, and Vogt. Their compositions explore a range of popular forms of the period, which include through-composed fantasy pieces and sonatas, along with *potpourris*, *nocturnes*, and *airs variés* based on favourite operatic tunes. As Holoman observes,

a sure measure of the success of an opera or symphonic work is the number of transcriptions, potpourris, and *extraits* it fostered. Editions for home performance took account of the instrumental combinations in vogue. [...] These editions were generally rushed through the press in order to respond to the intense public demand for tunes from the latest successful theatrical performances.⁶³⁴

Numerous passages in these works are virtuosic, exploring remote keys which would have been unplayable on a two-keyed Delusse model. An example is Brod's *Valse* in D-flat major for oboe and piano, op. 31. Similar passages are found in the E major étude (1839) for oboe and piano by Louis-Auguste Vény, which makes full use of the innovations of the eight-keyed instrument shown in his tutor (1828).

⁶³⁴ D. Kern Holoman, *The Cambridge History of Musical Performance* (Cambridge: Cambridge University Press, 2012), 334.

45 ADAGIO

Ex. 8.17. Brod: *Valse* in D-flat major, op. 31

2 HAUTBOIS .

And^{te} sostenuto.

no. 2.

Ex. 8.18. Vény: *Etude no. 2* in E major for oboe and piano (1839)

Vény's set of *20 Etudes mélodiques* with piano accompaniment, brought out by Schonenberger in 1839, was highly praised by Berlioz:

*These études by M. Vény, the brilliant virtuoso whose ravishing playing is so easily discerned at concerts given at the Conservatoire, even amidst all of its instrumental splendours, have been adopted by M. Cherubini as instructional material for the Conservatoire's oboe class, and are well-deserving of their title. In addition to addressing the instrument's technical difficulties, each étude, even the most technically demanding, is written in a melodic style that always remains poised. This excellent work by M. Vény, who in Paris already enjoys the respect he deserves, should be widely adopted to develop the practice of an instrument, which, though essential to every good orchestra, is nonetheless inexplicably neglected in the provinces.*⁶³⁵

The oboist, who premiered the cor anglais solo in Berlioz's *Carnaval romain* in 1844, was a favourite of the composer, whose playing he described as “*delicious and too rarely heard*” in 1839.⁶³⁶

In addition to the many virtuosic works of Vogt, Vény, Verroust and Brod, sonically rewarding duos with piano also exist by Bocha, Widerkehr, Jadin, and Reicha, all bearing witness to a lively, dynamic tradition of oboe playing in France, and the creative portfolio accompanying this written dissertation presents eight of these works. Jacques Christian Michel Widerkehr's three *sonates en duo* for oboe and fortepiano were among the first of the genre. Composed in 1798 but not published until 1817, they have falsely been assumed by certain scholars to be “the only true ‘duo sonatas’ for oboe and piano written in the classical period.”⁶³⁷ (A short excerpt of the author playing one of these sonatas on the Adler oboe can incidentally be viewed [here](#).) Louis-Emmanuel Jadin, in collaboration with Charles Garnier, wrote a set of six *nocturnes* published in 1816, whereas Johann Peter Pixis, who, although German-born, moved to Paris in 1824 and

⁶³⁵ Hector Berlioz, *Feuilleton du journal des débats du 31 décembre 1839*: “*J’aime mieux annoncer aux musiciens un ouvrage plus important. Il s’agit de deux Suites d’Études mélodiques pour le hautbois, avec accompagnement de piano, publiées par M. Vény, l’habile virtuose dont le talent délicieux se fait si aisément remarquer dans tous les concerts au milieu même des splendeurs instrumentales du Conservatoire. Ces études, adoptées par M. Cherubini pour servir à l’enseignement dans les classes de hautbois, méritent et justifient leur titre. Outre les difficultés du mécanisme, présentées graduellement à l’élève dans un ordre logique, chacune d’elles est dessinée, dans les traits même les plus compliqués, d’une façon toute mélodique et dans un style constamment distingué. Cet excellent travail de M. Vény, déjà apprécié à Paris comme il le mérite, doit exercer aussi une heureuse influence, en généralisant la pratique d’un instrument sans lequel il n’y a pas de bon orchestre, et qu’on néglige cependant en province, nous ne savons trop pourquoi.*”

⁶³⁶ Hector Berlioz, *Revue musicale : Feuilleton du journal des débats du 22 mars 1839*: “*Vinit (ce délicieux hautbois qu’on entend trop rarement).*”

⁶³⁷ Angela N. Schindler, “Unique Contributions for Oboe in the Classical Period: Jacques Christian Michel Widerkehr's Duos for Oboe and Piano and François Devienne's Six Sonatas for Oboe and Basso Continuo,” (doctoral diss., University of North Texas, 2006), 2.

composed a *Grande Sonate* for oboe and fortepiano that same year. Antoine Reicha included an *Air* for oboe and fortepiano in his 1818 publication *Cours de composition musicale, ou Traité complet et raisonné d'harmonie pratique*. Finally, the harp virtuoso Robert-Nicolas Charles Bochscha composed three *nocturnes*, op. 50, for oboe and harp or pianoforte around 1816.⁶³⁸ Additional duos for oboe and piano include several *fantaisies* and *airs variés* by Lucien Vieuxtemps (c.1850).

Many other works for oboe and fortepiano were composed outside of France between 1800 and 1850, and while these compositions make noteworthy additions to the oboe's early nineteenth century repertoire and would have been destined for an instrument similar to the Adler (a simple-system oboe fitted with between 3 and 13 keys), they stand outside the brief of this dissertation and their study will not be further developed. A non-exhaustive list of these works include the two sonatinas by Thomas Walmisley (c.1846); Donizetti's sonata (c.1817) along with an unfinished *Andante sostenuto* solo movement for oboe and harp or piano⁶³⁹; two sonatas (C major in F major, c.1812) and a *Potpourri* (c.1820) by Danish oboist Carl Anton Braun; a *divertimento* (1824) and *Pastorale und Rondo* (1824) by oboist Theodor Fröhlich; numerous *fantaisies* based on operatic themes for oboe and piano by the Mainz-based oboist Anton Foreith (all published by Schott); two sonatas and a *Potpourri* in G major, op. 1 by oboist Christian Frederik Barth; concertinos, nocturnes and a *fantaisie* by oboist Johann Heinrich Luft; the Sonata in D minor, op. 4 by Henri Birnbach (c.1822); the intriguing and recently recovered Sonata in C major, op. 101 (1824) by Johann Andreas Amon; a *Grande sonate brillante* op. 45 by oboist Friedrich Eugen Thurner; and of course the *Drei Romanzen*, op. 94 by Robert Schumann (1849). Of note is the *Fantasy* (1828) by the British oboist Grattan Cooke, which is a note-for-note transcription of Bernard Henrik Crussell's *Divertimento*, op. 9 for oboe and string quartet (1823).

⁶³⁸ His father Charles [Karl] Bochscha, a German-born oboist, also contributed to the instrument's early nineteenth-century repertoire.

⁶³⁹ Donizetti may have intended this work as the slow movement of an abandoned second oboe sonata.

8.2.2. CHAMBER WORKS

The oboe is featured in a plethora of early nineteenth-century chamber works. In addition to the ubiquitous wind quintet (for flute, oboe, clarinet, horn and bassoon), some of the more recurring configurations include trios for oboe and pianoforte with either bassoon (works by Brod, Grandval, Jadin, Jancourt, Triebert, Verroust and Vogt); violin (Brod and Jadin); cello (Brod and Baudiot); or soprano (*Le Pâtre du Tyrol* by Frédéric Bérat [1839]; *Le retour à la montagne* by Adolphe Adam [1841]; *La jeune fille de l'hôtesse* by Conradin Kreutzer [1843]; three melodies from the 1840s by Louis Clapisson; Jacques Offenbach's *Ronde tyrolienne* [1841], etc). Mention should also be made of the three intriguing trios for flute, oboe and bassoon by Widerkehr, op. 12 (c.1805). An inventive *Trio de salon* for oboe, bassoon and piano (c.1847) by Marie Félicie Clémence de Reiset, Vicomtesse de Grandval (1828-1907) has also recently come to light, and was first performed by Verroust and Jancourt on bassoon.

The oboe quartet or quintet (oboe accompanied by string trio or quartet), which had enjoyed its heyday during the last quarter of the eighteenth century, was quickly losing ground to the innovative combination of oboe and pianoforte, though the form did survive in France up until the 1820s, with later works by Reicha (1824), Vogt and Brod. Composed a generation before the Adler and premièred on a two-keyed model such as those by Delusse, there are dozens of turn-of-the-century French chamber works for oboe and strings by Bochsá père (c.1800), Garnier, Rodolphe Kreutzer (all written in the 1790s and dedicated to Garnier), and Boccherini, who enjoyed several long stays in the French capital and in 1797 published a set of six *quintettini*, op. 55, for oboe and string quartet.⁶⁴⁰ Most of these works have never been recorded. Perhaps the most sonically rewarding examples of this medium are again by an oboist-composer: Karl (Charles) Bochsá (1760-1821), who, like Reicha, was Bohemian but later naturalised in France, composed five oboe quartets (published by Imbault as *quatuors concertans*, c.1800). Dedicated to Sallantin, all are sonically intriguing and technically exacting. In addition, Bochsá wrote a set of variations on the romance *Les plus jolis mots* for oboe and string trio (c.1810). Employed as oboist in the opera theatres of Lyon and Bordeaux, Bochsá settled in Paris around 1806 where he then turned to music publishing.

⁶⁴⁰ Nicola Barbagli, *Little Things in Odd Shapes*. NovAntiqua Records, Nr. Cat. NA35 (London, 2018), trans. Beatrice Scaldini. As Nicola Barbagli observes, "The oboist Gaspare Barli seems to have made a great impression [on] Boccherini, who wrote about him to his Parisian editor Pleyel in 1797: "There is an excellent oboist here, a musician of the King's Chamber, called Gaspare Barli, who, in addition to possessing an extraordinary sweetness of tone, is able to obtain extremely high notes from his instrument, which are exceptional and typical of his playing." It seems that the six op. 55 'quintettini' were written especially for him."

Many other quartets, quintets, sextets, septets, octets and nonets for configurations of mixed winds, strings and piano also exist, most notably Geoges Onslow's woodwind quintet in F major, op. 81 (1852), his Nonet in A minor, op. 77 (published in 1851 but composed c.1829), and his Septet in B-flat major, op. 79 (composed in 1835, published in 1849, and scored for flute, oboe, clarinet, horn, bassoon, double bass and piano); a Nonet in D major, op. 107, by Henri Bertini brought out c.1840 by Lemoine for flute, oboe, bassoon, horn, trumpet, viola, cello and bass; and Friedrich Kalkbrenner's Septet in A major, op. 132, published in 1836 for oboe, clarinet, horn, bassoon, cello, double bass and piano. Kalkbrenner also composed a sextet for oboe, bassoon, violin, viola, cello and piano, now lost, but that was apparently performed three times at the Philharmonic concert series in London between 1815 and 1817 with Kalkbrenner at the piano, Viotti on violin, and Griesbach on oboe. Chamber works by German composers also enjoyed popularity in the French capital – Louis Spohr's Nonet in F Major, op. 31 (1813) was widely performed well into the 1850s, as was Johann Nepomuk Hummel's Septet in D minor, op. 74 (1816). Brod performed the latter with Liszt at the piano at a concert given by the *Société* in 1833.

The wind quintet composed for flute, oboe, clarinet, bassoon and horn was an innovation of the early nineteenth century⁶⁴¹ and had its origins in eighteenth-century Viennese wind octets written for pairs of oboes, clarinets, horns and bassoons. While Reicha was not the first to compose for this formation, he was its greatest advocate, composing 24 quintets between 1811 and 1820 for five professors at the Paris Conservatoire, including Vogt. Technically demanding and monumental in breadth, these chamber works were clearly written with virtuosi in mind. Blanston notes that:

In 1815 a group was formed for the singular purpose of performing Reicha's Quintets at a series of subscription concerts. These were held in the foyer of the *Théâtre Italien* until 1819. These concerts were massively popular, they attracted a cult following and created a sensation.⁶⁴²

These performances made an impression on Berlioz, who in his personal memoirs writes:

[Reicha's] *quintets for wind instruments enjoyed a certain vogue in Paris for several years. They are interesting compositions, but a bit cold.*⁶⁴³

⁶⁴¹ One wind quintet by Antonio Rosetti dates from c.1790 but calls for flute, oboe, cor anglais, horn and bassoon.

⁶⁴² Gurn Blanston, *Antoine Reicha*. http://www.lvbeethoven.fr/Bio/BiographyContemporary_AntonReicha.html, accessed 24 August 2019.

⁶⁴³ Hector Berlioz, *Mémoires, ou Essai sur la musique* (Paris: Michel Lévy frères, 1870), 100. “*Ses quintettes d'instruments à vent ont joui d'une certaine vogue à Paris pendant plusieurs années. Ce sont des compositions intéressantes, mais un peu froides.*”

Two excerpts of the author performing Reicha's Quintet in A minor, op. 91 no. 2 (1818) using the Adler oboe (live performances from 2014 at 430 Hz) can be heard [here](#) and [here](#) (the latter excerpt is shown below). Brod also composed for this configuration in the 1820s (three quintets survive), as did bassoonist François-René Gebauer (1773-1845), who is also survived by three works. Martin-Joseph Mengal (1784-1851), principal horn with the *Opéra Comique* and a composition student of Reicha's, also contributed to the genre.

HAUTBOIS

Solo.

ANDANTE.

Ex. 8.19. Antoine Reicha: Quintet in A minor, op. 91 no. 2 (1818) - *Andante*
oboe solo, bb 1 - 38.

A review in London's *Harmonicon* (22 March 1824) recounts the first reception of Reicha's quintets at the Royal Philharmonic Society. The oboist was Baldassare Centroni (1784-1860), who had been invited to London by his friend Rossini.

*The name of Reicha we do not recollect having ever before seen in a London concert. His quintett [sic] will lead, we trust, to a search for more of his works. It is extremely beautiful, though there is always something of a sameness in a pièce d'harmonie, or composition for wind instruments only. It was listened to with a most profound attention, and seemed to please equally every description of hearer. The performance of it displayed the perfection to which these instruments have arrived, and we will venture to affirm that five better players than were engaged in this quintet could not be found together in any other part of Europe.*⁶⁴⁴

⁶⁴⁴ *The Harmonicon, a Journal of Music* (London: Samuel Leigh, 22 March 1824), 77.

9. CREATIVE PORTFOLIO

9.1. CONTENTS

Nicolas-Robert Bochsa (1789-1856)	
<u>Nocturne in D minor op. 50, no. 1</u> (c.1816)	11'44
Gustave Vogt (1781-1870)	
<i>Vocalises de Crescentini transcrites pour le hautbois</i> (c.1830) *	
- <u>No. 1 - Largo espressivo</u>	2'58
- <u>No. 2 - Largo</u>	2'02
Stanislas Verroust (1814-1863)	
<u>Aranjuez - Fantaisie sur des motifs espagnols, op. 34</u> (c.1839) *	6'43
Henri Brod (1799-1839)	
<u>Elégie sur la mort d'un objet chéri</u> (c.1838) *	5'31
Johann Peter Pixis (1788-1874)	
<u>Romanze, op. 35</u> (1824)	5'32
Louis-Emmanuel Jadin (1768-1853)	
<u>Nocturne in A minor</u> (1816)	9'30
Robert Schumann (1810-1856)	
<u>Mondnacht</u> (1840)	4'12
-	
* <i>première recording</i>	
Total timing:	49'12

9.2. COMMENTARY

I selected eight chamber works for oboe and pianoforte which highlight the unique timbre of the Adler oboe along with its expressive and technical capabilities. Recorded at Craxton Studios (Hampstead, London) in September 2021, this creative portfolio, which bears witness to a lively, dynamic tradition of oboe playing in early nineteenth-century France, forms but a minute portion of a much larger corpus of neglected Romantic chamber works for oboe and pianoforte.

Aurally documenting this repertoire has been of central importance to my research, as it demonstrates many of the personal findings presented in the chapters on performance style and technique, timbre, and reeds in a practical and tangible way, and it is my hope that recording these expressive works in a format that is accessible to both peers and audiences will contribute to providing a reassessment of the commonly-held view that the Romantic era was a time of crisis in the history of the oboe. Demonstrating that this repertoire is indeed practicable, and moreover, on the instrument it was composed for, has given me fresh perspectives on the performance practice of this forgotten literature and an incentive to look upon the nineteenth century as a streamlined continuum of lively eighteenth-century French traditions. The repertoire, composed between 1816 and 1840, is closely mapped to the Adler oboe, which dates from near the end of this quarter-century period (c.1835). Original editions housed at the *Bibliothèque Nationale de France* in Paris were used for the recording. Only three of these works are currently available in modern editions and only four have been previously recorded.

Our programme begins with the Nocturne op. 50, no. 1 in D minor by harpist Robert Nicolas Charles Bochsá, dedicated “à son ami Charles Garnier.” The nocturne in the nineteenth century came to signify a character piece for solo pianoforte or pianoforte accompanying a solo instrument. While the former was often through-composed (as with Field and Chopin), the ‘duo’ nocturne was frequently an *air varié* framed by mirroring sections written in a somewhat stormy, dreamy or sentimental style, featuring an expressive melody over broken chord accompaniment. Both the Bochsá and Jadin nocturnes in this portfolio adhere to this structure. The first in a set of three duos for oboe and piano or harp, Bochsá’s nocturne was probably written in collaboration with Garnier,⁶⁴⁵ with whom the harpist played in the Imperial (later Royal) Orchestra from 1813 to 1817. Though originally scored for oboe,⁶⁴⁶ an arrangement for horn and piano made by Joseph-Émile Meifred (1791-1867) was published by Schonenberger in 1825, indicating that the original version precedes this date. It is likely that the original publication predates 1817, which is

⁶⁴⁵ The oboist Charles Garnier (1752-1847) was the elder brother of Joseph-François Garnier (1755-1825), author of the seminal *Méthode raisonnée pour le Haut-bois* (1802) and oboist at the *Opéra de Paris* from 1775-1808.

⁶⁴⁶ The first two editions, undated, were published by Duhan and Dufaut & Dubois.

when the composer was forced to flee to London to avoid prosecution after becoming enmeshed in a felony involving fraud, forgery and counterfeit, and for which he was eventually convicted *in absentia*.⁶⁴⁷ Bochsá studied composition with Etienne-Nicolas Méhul, and the ‘*romance*’ theme is based on the air “*A peine au sortir de l’enfance*” from Méhul’s opera *Joseph* (1807). The theme was widely popular throughout the nineteenth century, and dozens of variations were composed on it.⁶⁴⁸ The oboist Henri Brod is known to have performed one of Bochsá’s nocturnes for oboe and harp in 1826.

Gustave Vogt’s *Sept vocalises* (c.1830) are transcriptions of *Raccolta di esercizi per il canto* (1810), a set of vocal exercises by the Italian castrato Girolamo Crescentini (1762-1846). Two of these études, which aimed to “imitate the ‘speaking’ qualities of the human voice,”⁶⁴⁹ are included in the present portfolio. During the Romantic period, these untexted exercises were used to develop *cantabile* singing or playing. In each movement, Vogt cancelled out the castrato’s numerous and highly inflected nuances in favour of broader, directional phrasing based on four-bar units. The oboist was one of many composers to transcribe these vocal exercises throughout the nineteenth century, but “Vogt’s transcription is the most radical in replacing the small-scale dynamics with longer phrase units. Most of the small-scale dynamics of the original [...] are smoothed out, giving each phrase a broader sweep.”⁶⁵⁰ As Burgess observes, “Crescentini was at the height of his popularity in France during the Consulate and First Empire and was employed by Napoléon in private concerts at the Tuileries palace. He was one of the most influential vocal teachers of the nineteenth century, and his volumes of vocalises, reissued throughout the century, were standard fare for vocal students.”⁶⁵¹ Though only published in 1860, it is likely that Vogt transcribed the works earlier on (c.1830) with a pedagogical objective, as a teaching aid for proper phrasing. Vogt was appointed *professeur titulaire* at the Paris Conservatoire in 1816, and as the title page indicates “*Ces vocalises sont une excellente étude pour les jeunes hautboïstes.*”

⁶⁴⁷ Bochsá was incidentally one of the founding members of the Royal Academy of Music in 1822.

⁶⁴⁸ Among these are a set of *Variations pour le hautbois sur la romance de Joseph* by Gustave Vogt (1815); *7 Variations sur la romance “À peine au sortir”* op. 28 for piano by Carl Maria von Weber (1812); *Fantaisies pour piano sur les romances de Joseph et de Benjamin* by Louis-Emmanuel Jadin (1807); *Variations de bravoure sur la Romance de Joseph*, op. 20 by Henri Herz; and *Five Variations on a Romance from Méhul’s Joseph*, op. 23 by Franz Xaver Mozart (1820, which, until recently, was mistakenly attributed to the young Liszt).

⁶⁴⁹ Geoffrey Burgess, ‘The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature,’ *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. Utrecht 1994, ed. David Lasocki. (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994), 111.

⁶⁵⁰ Geoffrey Burgess, *“The Premier Oboist of Europe”: A Portrait of Gustave Vogt* (Lanham: Scarecrow Press, 2003), 41.

⁶⁵¹ *Ibid.*

Aranjuez - Fantaisie sur des motifs espagnols, op. 34 by Stanislas Verroust (1814-1863) must have been written before 1839, since the dedicatee of the work, violinist Charles Philippe Lafont, died in an accident that year, when a carriage transporting him overturned. Verroust was born in the north of France, in Hazebrouck, and arrived in Paris in 1831 to study with Vogt. After performing with several Parisian orchestras (*Théâtre de la Porte Saint-Martin*, *Théâtre de la Renaissance*, and the *Théâtre-Italien*), Verroust was appointed principal oboe at the *Opéra de Paris* after Brod's death. Verroust may have met Lafont while employed at one of the aforementioned Parisian theatres, or he may have studied with the violinist, since we know that Verroust had studied violin in his native Hazebrouck and upon arriving in the French capital began working as second violin in the theatre orchestra of the Palais-Royal while studying oboe at the Conservatoire. Verroust performed on a simple-system ten-keyed oboe by Tulou much like the Adler.

Heinrich Wilhelm Ernst's (1812-1865) haunting *Elégie sur la mort d'un objet chéri*, op. 10 was published for violin and piano in Vienna in 1840, but was composed in 1838. Henri Brod's transcription of the work, marked *Adagio melancolico ed appassionato*, was surely one of his last compositional efforts since the oboist died a year later, in 1839. The piece was widely performed during Ernst's lifetime and enjoyed great popularity since its technical demands on the violinist were not unreasonable, making it accessible to amateurs who preferred expressive lyricism over florid bravura. In Brod's transcription for oboe, however, the piece becomes virtuosic on account of its exceedingly long, uninterrupted lines which make great demands on the performer's breath support and control.

Though born in Mannheim and raised in Vienna, Johann Peter Pixis lived in Paris between 1824 and 1845, and like Kalkbrenner, Thalberg, Dussek, Chopin and Liszt, was one of many foreign virtuosi drawn to the French capital in the first half of the nineteenth century seeking opportunity. Pixis was a friend of Vogt's⁶⁵² and his *Grande Sonate pour le pianoforte et flûte ou hautbois*, op. 35, though published in Vienna by Mechetti in 1824, may have had its first performance by the French oboist. The sonata is a virtuosic work, exploiting the full range of the instrument up to high G³, and is dedicated to Madame Katherine de Mosel (1789-1832), an Austrian pianist and composer who studied with Hummel. The slow middle movement, a *Romanze* in E minor, features a long and expressive cantilena in the oboe underpinned by broken chords on the piano. The movement was popular among Vogt's students and was arranged as a stand-alone work by his pupil Auguste Bruyant for cor anglais and piano in 1880.

⁶⁵² An excerpt by Pixis in Vogt's 'musical album of autographs' attests to their friendship. The album, housed at the Morgan Library in New York City, contains sixty-three original compositions collected from 1831-1859, all dedicated to the oboist by leading composers such as Berlioz, Rossini, Meyerbeer, Liszt, Thalberg, Pauline Viardot and Joachim.

Jadin's Nocturne in A minor (1816) was also written in collaboration with Charles Garnier. Part of a set of six nocturnes dedicated to Madame La Baronne de la Bouillerie, this work from the *Cinquième Livre* is the earliest on this recording portfolio, written shortly after the fall of Napoléon's *Premier Empire*. The theme, the song 'Ô ma tendre musette' by Monsigny,⁶⁵³ is followed by a set of five variations (the fourth in the major key while the fifth is a *polonaise*). As with the Bochsá, this nocturne is framed by mirroring sections where the oboe's sweeping cantilena, marked *maestoso*, soars over broken arpeggios in the piano. Alternate versions for flute and violin were also included in the first publication by Duhan, each containing subtle modifications in articulation, rhythm, ornamentation, and even melodic content. Vogt is known to have performed one of Jadin's nocturnes at the *Enfants d'Apollon* in 1822.

Robert Schumann's *Mondnacht* (from *Liederkreis*, op. 39, written in 1840) is presented here as a 'Lied ohne Worte.' Though not an original composition for oboe, we know that the practice of rearranging songs for instrumental forces was prevalent, and one example is a series of transcriptions for oboe and piano of Schubert *Lieder* published by Vogt's student and musical executor Auguste Bruyant in 1857. The 'wordless song' was popular among composers at the time (a prime example is Schumann's *Drei Romanzen* from 1849), and as Mendelssohn indicated, "Even if, in one [of these songs] I had a particular word or words in mind, I would not want to tell anyone, because the same words mean different things to different people. Only the song says the same thing, arouses the same feeling, in everyone – a feeling that can't be expressed in words."⁶⁵⁴ Schumann was a great admirer of Berlioz's works, and the two composers met in Leipzig in 1843, when the Frenchman accepted an invitation from Mendelssohn to conduct a concert in the Saxon city. Furthermore, Schumann wrote a glowing review of Berlioz's *Symphonie fantastique* (in its transcription by Liszt for piano) for the *Neue Zeitschrift für Musik* in 1835.

⁶⁵³ Florence Badol-Bertrand has traced the origin of the theme to the Breton canticle "Mealaka sa fizians, Guvere'hez en lo sikour". See *Louis-Emmanuel Jadin: 3 Nocturnes für Oboe und Klavier* (Zimmermann: Frankfurt, 1998), preface by Florence Badol-Bertrand.

⁶⁵⁴ Wilfrid Jasper Walter Blunt, *On Wings of Song: A Biography of Felix Mendelssohn* (London: Hamish Hamilton, 1974), 84.

9.3. PERSONAL FINDINGS

As mentioned in Chapter III: *Physical Characteristics*, performing on the Adler oboe is precarious due to the model's fragile condition. The Erard pianoforte, to which the Academy museum granted us access, is also a delicate instrument, and we were allowed to perform on it for a maximum of two hours per day. This meant that for the recording process, I had to find another solution for longer sessions, since I was wary of performing on the Adler oboe for more than an hour at a time.

As previously stated, during the course of this study, I was fortunate to have access to an oboe made c.1990 by Olivier Cottet, visible [here](#). Made of boxwood and fitted with twelve silver keys, this model is copied after an original by Carl Theodor Golde (c.1840)⁶⁵⁵ and was formerly owned by Paul Goodwin who donated it to the Royal Academy of Music in London. Golde was based in Dresden, a centre of woodwind manufacture in the late eighteenth and early nineteenth centuries, and his instruments were praised for their fine workmanship and beauty of tone. I found the Cottet copy to play remarkably well at 430 Hz, and have used it for a number of commercial recordings and live performances. As such, it has proven itself a valuable professional tool and was therefore an ideal instrument to use in tandem with the Adler during the recording process. The instrument incidentally proved easy to lower to 426 Hz simply by pulling out the reed by several millimetres.

Early on, I was surprised to discover that the timbre of the two instruments was nearly identical, and swapping one model for the other, even during the same piece, was audibly imperceptible. I switched to the Golde, for example, at the opening of the Verroust's *Aranjuez*, since the low B⁰ in measure 6 sits outside the range of the Adler. Another instance where I was required to exploit the Golde's lower range was at the end of the Brod *Elégie*, which also descends to low B⁰. That the tone colour produced by a modern copy of a German original dating from c.1840 is nearly indistinguishable from that of an original French oboe from the same period speaks volumes about (a) the influence that the oboist's reed, embouchure, and own style of playing can exert on tone production; and (b) the high level of consistency (at least in terms of timbre, responsiveness, and intonation) to which modern replicas can be brought.⁶⁵⁶ This experiment revealed that the instrument itself (one element of the tripartite unit described earlier on) ultimately played a smaller role in the resulting timbre than I had initially anticipated.

⁶⁵⁵ The original, housed at Paris' *Musée de la musique*, can be viewed [here](#).

⁶⁵⁶ Due to time constraints, I was unfortunately unable to compare this copy with a Golde original during the course of this study.

ARANJUEZ

Fantaisie Espagnole

Sur des Airs

du PAGE.

Op. 54.

S. VERROUST

INTRODUCTION

plante.

(The image shows a musical score for the Introduction of Aranjuez by Verroust. It features three staves of music with various dynamics and markings. A red circular stamp is visible over the first staff.)

Ex. 9.1. Verroust: *Aranjuez - Fantaisie Espagnole* (c.1839)

I did however find the Adler to be much more responsive in the third octave, and relied on it systematically when recording high-reaching passages written above the staff (for example, the flourish that goes up to high F³ at the end of the Bochs nocturne).

The practice of fluidly and anonymously shifting between an original and a modern replica during the recording process may be viewed by some as what Glenn Gould has described as an “argument for aesthetic morality.”⁶⁵⁷ In an article entitled *The Prospects of Recording*, the Canadian pianist relates the story where the soprano Elisabeth Schwarzkopf appended “a missing high C to a tape of *Tristan* otherwise featuring Kirsten Flagstad, and indignant purists, for whom music is the last blood sport, howl her down, furious at being deprived a kill.”⁶⁵⁸ I would argue, however, that calling both the Adler and Golde interpretations ‘historically informed’ should not cause any moral concerns (even among ‘Early Music’ purists) seeing as how wind instruments replicas (many of them ersatz versions) have been used on the vast majority of ‘period’ recordings for the past fifty years.

The experience of swapping instruments during the recording process also reminded me of an anecdote involving Pablo Casals. In 1910, the famous cellist carried out a blind test, performing on a series of over forty celli “in a hall kept in darkness” to a panel of participants, and discovered that the cohort preferred the sound of a modern cello by Paul Kaul over that of an original Stradivarius, proving that copies can be made to sound as good, if not better, than originals. In the same interview, Casals recounts the predicament faced by young string players, who (now over

⁶⁵⁷ Glenn Gould, ‘The Prospects of Recording,’ *High Fidelity Magazine* (Vol. 16, April 1966).

⁶⁵⁸ *Ibid.*

a century ago) had “difficulty [...] in acquiring old Italian instruments”, reminiscent of the paradox faced by historical oboists today, who lack appropriate nineteenth-century replicas on which to perform.⁶⁵⁹

At the outset of this study, I was under the assumption that choosing the appropriate ‘hardware’ was critical in creating what I considered to be a convincing historically-informed performance, but key learnings from the recording process have shown that, by regularly switching between two instruments that I considered to be diametrically opposed, the choice of instruments may finally play a lesser role than I initially suspected, and that audible differences are often far less perceptible than those that the performer may be experiencing viscerally. Physically, the two instruments instinctively ‘feel’ wildly different from one another, in that the Adler gives the sensation of being svelte and responsive, almost nervous, whereas the Golde feels stockier and slower to respond. And yet, as I listened back to the Craxton recordings during the editing process, I was somewhat startled to discover that sonically, the two oboes sounded remarkably similar, despite any difficulties I had in disentangling myself from the intricate physical relationships I have with each instrument. One serendipitous conclusion of this exercise then has been that modern nineteenth-century replicas may indeed suffice in recreating ‘Romantic’ soundscapes. This is certainly fortuitous, since as historical oboists, what other alternatives do we have? There simply is not an unlimited number of originals to go around for everyone, and those that have survived and are in good playing condition should be carefully preserved and copied.

⁶⁵⁹ J. M. Corredor, *Conversations with Casals*, trans. André Mangeot (London: Hutchison, 1956), 207-208.

EPILOGUE

This study opened by exposing a paradox faced by historical oboists in current practice. An increasing number of ‘period’ ensembles performing nineteenth-century repertoire has created a rapidly growing demand for professionally viable Romantic instruments, whether they be original models or modern facsimiles. Oboists remain an isolated case in this environment, since no modern copies of nineteenth-century oboes are commercially available, whereas other woodwind instrumentalists have ready access to reliable, well-made Romantic replicas. Confronted with this unique dilemma in the workplace, I acquired an original French oboe by Guillaume Adler from roughly 1835 as a means of reaching my professional and artistic objectives. This case study has followed my nine-year journey in engaging with this instrument and attempting to implement it in high-level professional contexts. The process of resurrecting and rehabilitating a 185-year-old object has been a long and arduous journey fraught with booby traps, and required successive testing of many different parameters: instruments, reeds, performing techniques.

One of my first observations was that the instrument was inclined to play noticeably lower (between 425 and 428 Hz) than the modern pitch standards currently used for Romantic repertoire (ranging from 430 Hz to 440 Hz). My first response in attempting to understand this conundrum was to analyse the instrument’s physical characteristics and to compare its dimensions with those of other contemporaneous models. Statistics revealed that the instrument’s low pitch was potentially related to its physical dimensions. This then spurred an investigation of pitch levels being used in France when the instrument was manufactured. The fact that all of these levels were significantly higher than 425 Hz led me to believe that the discrepancy in pitch was due to my own reed designs. I therefore undertook a detailed study of nineteenth-century oboe reeds, both those described in primary didactic sources as well as existing specimens from museum and private collections. Since no tuition or recordings were available to instruct or inspire me on how to play this instrument, I turned to contemporary treatises for practical guidance, which led to a survey of specific historical performance techniques. Whether or not I chose to rehabilitate these techniques into my own practice was influenced by their compatibility with current professional standards. Engaging with the Adler and documenting its capabilities and limitations, its idiosyncrasies and its unique personality, has been an entirely self-guided and empirical journey, involving much trial and error. The process inevitably led to interrogations on timbre, on the way this oboe was ‘supposed’ to sound, and on the repertoire it was built to perform. Finally, to consolidate all of the embodied knowledge acquired over the course of this investigation, I recorded a portfolio of repertoire for oboe and pianoforte on the Adler model, accompanied by Olivia Sham. The works selected were mapped specifically to this instrument

and recording them was a means of practically and tangibly illustrating all of the empirical research that I had gleaned. The recording process, which came at the end of my investigations, provided me with perhaps the most pivotal of conclusions in the entire study: through interacting with both an original instrument (by Adler) and a modern copy (replica of Golde by Cottet), I discovered that both models, both timbrally and acoustically, sounded remarkably similar, implying that the musician behind the hardware is ultimately more accountable for the aural end results than the hardware itself (a phenomenon I was familiar with from the writings of Richard Taruskin, Nikolaus Harmoncourt, Bruce Haynes, Clive Brown, John Butt and many others, but had never experienced firsthand). And although the act of sourcing historical evidence has been an important task in and of itself, perhaps the most valuable key learning of this study has led me to uncover something quite obvious, something that others might have been able to tell me in advance. In other words, it seems redundant to state that the sound one produces is in many ways more dependent on the player than the 'hardware.' But to summarise the outcome in such rudimentary terms would be to undermine the value of the *journey itself* through the research process. Consequently, I strongly feel that the performer I am concluding this research is not the same oboist who began it.

During the course of this investigation, two peripheral case studies emerged as essential in gaining a better understanding of current practice. The first, a survey of historical oboe makers, revealed that builders, especially those of the younger generation, are increasingly aware of the growing demand for Romantic models but are only now beginning to toy with the idea of copying German nineteenth-century originals, especially those from the Dresden workshop of Carl Theodor Golde (c.1850). Collectively, this cohort views the process of building Romantic replicas to be very challenging (key deterrents include elaborate and time-consuming keywork and an uncertain return on investment), and the process is therefore still very much in its embryonic stage. The second study, a census of my own historical oboist colleagues, confirmed (*a*) that there is a desire to gain access to reliable, professionally viable Romantic instruments; and (*b*) that the vast majority of the oboe's nineteenth-century repertoire has gone unexplored and there is a collective desire to unearth, perform and record much of it.

On a pragmatic level, I have come to the conclusion that, because of its low pitch and fragile condition, the Adler oboe is ill-suited for intensive orchestral use. I have therefore reserved it for sporadic chamber music activities. Since so much of the oboe's French Romantic solo and chamber music has largely gone unexplored, I will continue to excavate and aurally document this neglected repertoire, which I personally find intriguing. Arriving at this conclusion has given rise to a new set of questions: if antique models such as the Adler oboe are indeed incompatible with modern performance standards (whether because of their pitch, timbre or other inherent

attributes), if some of these instruments are in fact irreconcilable with current practice, what *is* the point of using them at all? In other words, one might ask: if HIP has established Berlioz at 438 Hz, and certain originals cannot play at that pitch, why bother reviving them? (And, by extension, if antique models do not ‘fit the bill,’ how will historical oboists succeed in closing the gap?)

One speculation is that current pitch standards may soon evolve, giving rise to a multitude of different levels that will soon replace our four modern conventions (392, 415, 430, 438 Hz, which, as this study has shown, all pose serious challenges when engaging with original models). We can already observe this transition, for example, in the growing trend of staging Rameau operas at 400 Hz, halfway between two existing standards (392 Hz, ‘low French opera pitch’ and the catch-all 415 Hz for everything else ‘baroque’). For that matter, does the very idea of imposing a fixed pitch standard not go against irrefutable historical evidence?

Another key observation of this study has been that today’s ‘whatever works’ approach to performing Romantic repertoire (for example, using late nineteenth-century German Bruckner-style originals to perform the works of Berlioz and vice-versa, using French *système* oboes from the 1860s to perform early twentieth-century repertoire by Mahler), may hint at the fact that performers and audiences alike are unprepared for and/or simply unconcerned with the implications of historical accuracy. Whether it be materially, stylistically, and/or aesthetically, HP musicians and concert-goers may merely be uninterested or unwilling to collectively take risks and recapture the ‘true’ soundscapes of Berlioz’s time. Taruskin would ask *why* we even need to take any risks: it’s our time and our own tastes should prevail. Perhaps, instead, what we prefer is for historical instruments to ‘look’ different, but sound modern?

Bruce Haynes has likened this ‘I know what I like’ approach to Chinese restaurants that adapt their cuisine so as not to ‘surprise’ or offend the palettes of their North American clientele.⁶⁶⁰ A telling example of this occurred in 2021, while I was participating in a recording of Mahler and Wagner *Lieder* with a famous American mezzo-soprano. The repertoire dated from the 1860s and 1890s and we were requested to use Romantic instruments at 438 Hz. The woodwind section was entirely composed of late nineteenth-century German originals, and the recording took place rather uneventfully. The ensuing tour, however, was altogether a different story. The night before the final performance on one leg of the tour, I tested positive for COVID-19 and was sent home to quarantine. Since there were no historical oboist colleagues available to replace me at the last minute, the orchestra decided to hire a local modern oboist (we were touring in the north of Denmark) who would simply have to ‘pull out’ to go from 442 to 438 Hz. The mezzo-soprano

⁶⁶⁰ Bruce Haynes, *The End of Early Music: A Period Performer’s History of Music for the 21st Century*. (Oxford: Oxford University Press, 2007), 9.

soloist came to me two weeks later, immediately before going on stage for a performance at Carnegie Hall, and asked if I could use a modern cor anglais for the second leg of the tour on which we were about to embark. She said, somewhat facetiously, “*It’s not you, I love what you do, it’s just that I really prefer the sound of the modern English horn over the Romantic one you’ve been using. That earlier one is just too uneven, plus, the phrasing is all wrong. You’re doing too many ‘bumps’ and small gestures. I want a long line, a crescendo that starts pianissimo and grows over twelve bars. No shapes, no hairpins, only one long line.*” Needless to say, I was taken aback. I thought to myself: *why bother?* and was yet again confronted with the ever-present gap between what ‘historical’ results can yield and what is ‘socially’ acceptable. I had confirmation that the HP movement is no longer necessarily interested in authenticity, but more in what ‘sounds good.’ As practitioners of historical instruments, we are acutely aware of what exactly it is we’re doing, and carrying out this research has only enhanced that awareness, like consciously speeding on a highway and not getting caught. But sometimes we do get ‘caught,’ despite our best intentions. And therein lies the conundrum or ‘juggling act’ faced by every HP musician today. By theorising my own practice, this study has given me a better understanding of the exact compromises I am willing (and have had) to make as a performer, and I hope that these insights will prove useful to those musicians making similar journeys of their own.

Indeed, laying out the stylistic choices I consciously make when performing Romantic repertoire and confronting each of them individually has allowed me to assess my own practice with great clarity. My conclusion is that many of the historical protocols I encountered in primary didactic sources remain on the fringe of (or instead remain overtly incompatible with) current practice. Those that are more novel, or rather those that represent a greater departure from mainstream modern style, whether it be portamento, high leading tones (‘expressive intonation’), hand-gauging and historical reed making techniques, historical fingerings (and even instrument designs) and even the once-praised ‘acidic’ timbre of the oboe, remain unexplored territory *by design*. Perhaps many of us simply don’t want to go there. Our ‘historical’ interpretations of nineteenth-century music, with our unabashed fondness for vibrato, dark timbre and long-line phrasing, are therefore still essentially modern (and this, despite our use of original or historically-inspired instruments).

The greatest boon this study has given me is the opportunity to theorise and objectify my own praxis, and I am sure that I am not unique in wanting to discover how one’s practice may be shaped or influenced by interacting with different models of the same instrument (in this case, an original antique versus a modern copy). For example, how much is the tone or phrasing one seeks to create shaped by the instrument at hand, and how much is it influenced instead by personal taste and playing style? And by extension, what of vibrato or portamento? Does one

model inspire their use while another disinclines it? In this light, I hope that my findings will encourage other instrumentalists to undertake similar self-reflexive investigations. Furthermore, the interdisciplinary and holistic nature of this study led me to create an improvised model for my investigations, and it is my hope that its framework and methodology could serve as a template for other professional practitioners to adopt, or simply provide impetus, whether or not they are HP and/or double reed specialists.

Finally, on a personal level, this long-gestated study has provided inspiration to begin building my own nineteenth-century copies. Since virtually no Romantic oboes have been copied (and since many antique models have proven to be incompatible with modern expectations), I feel that there is a need, now more than ever, to bridge the gap. Whether this will lead me to tweak original dimensions and create ‘authentic looking’ but ‘modern sounding’ versions (like many baroque oboes crafted nowadays) remains to be seen, but by engaging with an array of skilled makers, this investigation has given me an opportunity to closely observe how they work and encouraged me to take the first steps down a new career path.

BIBLIOGRAPHY

Oboe methods 1772-1901

Asioli, Bonifazio. *Trasunto dei principi elementari di Musica*. Milan: Ricordi, 1827.

Barret, Apollon-Marie-Rose. *Complete Method for the Oboe*. London: Jullien, 1850.

Belpasso, Giovanni Battista. *Metodo per Oboe composite espressamente per Real Collegio di Musica*. Naples: Cottrau, c.1843.

Brod, Henri. *Méthode pour le hautbois (Part I)*. Paris: Vve Dufaut et Dubois, 1825.

– *Méthode pour le hautbois (Part II)*. Paris: Schonenberger, 1830.

– *Méthode de hautbois, édition, revue par G. Gillet, ... pour servir à l'étude du hautbois modifié tel qu'il est adopté dans les conservatoires*. Paris: Lemoine et Fils, 1890.

– *Method for oboe, revised edition by G. Gillet*, English translation by E. Salabert. Paris: Henry Lemoine & Cie, 1895.

Cappelli, Giuseppe. *Metodo teoretico-pratico*. Milan: Lucca, 1853.

Chalon, Frédéric. *Méthode pour le cor anglais ou hautbois*. Paris: Imbault, 1802.

Corret, Emile. *Tablature générale du hautbois à 12 clefs*. Paris: Chabal, 1854.

De Stefani, Ricordano. *Gran Metodo Pratico per Oboè e Corno Inglese*. Parma: unpublished, 1888.

Fahrbach, Giuseppe. *Novissimo Metodo per Oboe di facile intelligenza e colla vista speciale che servir possa alla istruzione de principianti senza l'ajuto del maestro*, op. 27. Milan: Ricordi, 1843.

Fischer, Johann Christian. *New and Complete Instructions for the Oboe or Hoboy*. London: Cahusac, c.1772.

Fröhlich, Joseph. *Vollständige Theoretische-Praktische Musikschule: Hoboeschule nach d. Grundsätzen d. besten üb. dieses Instrument bereits ersch. Schriften...* Bonn: Simrock, 1810.

Garimond, Hippolyte. *Méthode élémentaire pour hautbois ancien et nouveau système.* Paris: Leduc, 1880.

Garnier, Francois-Joseph. *Méthode raisonnée pour le Haut-bois.* Paris: Pleyel, 1802.

Hinterland, Vito. *Nuovo Trattato Generale Scientifico, artistico, teorico, pratico, musicale, corredato di tavole d'esempi e tavole, di figure di tutti gli strumenti attualmente in uso con dichiarazioni delle parti esposte.* Naples: MS, 1846.

Kastner, Johann Georg. *Méthode élémentaire pour le hautbois, suivie d'airs et exercices gradués, composée à l'usage des Pensions.* Paris: Troupenas & Co. 1844.

Langey, Otto. *Tutor for the Oboe.* London: Riviere & Hawkes, 1885.

Le Dhuy, Adolphe. *Petite encyclopédie instrumentale, Collection complète de Tablatures et gammes ou méthodes abrégées en tableaux synoptiques.* Paris: Schonenberger, 1850.

Mariani, Giuseppe Angelo. *Metodo Popolare per Oboe.* Milan: Ricordi, c.1870.

Marzo, Enrique. *Método de Oboé progresivo y completo con nociones de corno inglés.* Madrid: Romero, 1870.

Miller. *Méthode de hautbois contenant les principes de la musique, la tablature du hautbois, des exercices, 15 petits morceaux.* Paris: J. Meissonnier, 1843.

Minguet y Irol, Pablo. *Escala...del Obué in Reglas y Advertencias Generales*, 2nd ed. Madrid, 1774.

Pietzsch, Georg. *Schule für Oboe mit 50 Etüden.* Leipzig: Friedrich Hofmeister, c.1885.

Raoulx, Maurice de. *Méthode de hautbois.* Paris: Naudot, 1841.

Rosenthal, Richard. *Theoretisch-praktische Oboe Schule von Joseph Sellner.* Mainz: Schott, 1901.

Salviani, Clemente. *Metodo complete per oboe cotenuto: Nozioni preliminari, modo di construire la Piva (ancia) principi elementari di Musica, Intravolatura, Scale, Salti, Esercizi e Duetti*. Milan: Lucca, 1848.

Schott, ed. *Gamme de hautbois*. Mainz: B. Schott, c.1825.

Sellner, Joseph. *Méthode pour le hautbois, traduite de l'allemande par Heller et revue par Fouquier, 1er hautbois du Théâtre Royal de l'Opéra Italien*. Paris: Richault, 1827.

Soler, Pedro. *Tablature du nouveau système de hautbois à anneaux mobiles*. Paris: Richault, 1850.

Vanderhagen, Armand. *Méthode nouvelle et raisonnée pour le hautbois*. Paris: Boyer, c.1798.

Vény, Louis-Auguste. *Méthode abrégée pour le hautbois*. Paris: Pleyel et Cie, 1828.

Verroust, Stanislas Xavier. *Méthode pour le Hautbois, d'après Joseph Sellner*, op. 68. Paris: Richault, 1857.

Vogt, Auguste-Gustave. *Méthode de hautbois*. Paris : MS, c.1816. (modern ed. facsimile Fuzeau, 2003).

– *Musical album of autographs*. Unpublished, undated MS (c.1843). Morgan Library, New York City.

Wieprecht, Paul. *Studienwerk für Oboe unter Zugrundelegung der Oboeschule von Garnier*, op. 7. Frankfurt: Offenbach, c.1877.

Other Nineteenth-Century Didactic Sources

Baillot, Pierre. *Méthode de violon par MM. Baillot, Rode et Kreutzer, rédigée par Baillot*. Paris: Imprimerie du Conservatoire, 1802.

– *L'Art du violon*. Paris: Imprimerie du Conservatoire, 1843.

de Bériot, Charles. *Méthode de violon, 2e tome*. Paris: the author, 1857.

Berr, Frédéric. *Traité complet de la clarinette à quatorze clefs*. Paris: Meissonnier, 1836.

– *Méthode complète de basson*. Paris: Meissonnier, 1836.

Clinton, John. *A School or Practical Instruction Book for the Boehm Flute*. London: Cramer, Beale & Co. 1846.

Coche, Victor. *Méthode pour servir l'enseignement de la nouvelle Flûte*. Paris: Schonenberger, 1838.

Corri, Domenico. *The Singer's Preceptor*. London: Chappell & Co., 1810.

Delle Sedie, Enrico. *L'Art lyrique, traité complet de chant et de déclamation lyrique*. Paris, 1874.

Devienne, François. *Nouvelle méthode théorique et pratique pour la flûte*. Paris: Imbault, 1794.

– *Méthode complète pour la flûte par Devienne, nouvelle édition revue et arrangée [...] par Ludovic Leplus*. Paris: Aulagnier, 1835.

Drouët, Louis. *Méthode pour la flûte*. Paris: Pleyel, 1827.

Gunn, John. *The Art of Playing the German Flute*. London: Birchall, c.1793.

Habeneck, François. *Méthode théorique et pratique de violon*. Paris: Canaux, c.1840.

Hugot, Antoine & Wunderlich, Johann Georg. *Méthode de flûte du Conservatoire par M.M. Hugot et Wunderlich*. Paris: Impr. du Conservatoire, 1804.

- Jancourt, Eugène. *Méthode théorique et pratique pour le basson*, op.15. Paris: S. Richault, 1847.
- Klosé, Hyacinth. *Méthode pour servir à l'enseignement de la clarinette à anneaux mobiles*. Paris: Meissonnier, 1843.
- Müller, Iwan. *Méthode pour la nouvelle clarinette & clarinette-alto suivie de quelques observations à l'usage des facteurs de clarinettes*. Paris: Gambaro, 1821.
- Nathan, Issac. *Musurgia Vocalis*. London: Fentum, 1836.
- Ozi, Etienne. *Nouvelle Méthode de Basson par Ozi, Membre du Conservatoire de Musique, Adoptée par le Conservatoire pour servir à l'Étude dans cet Établissement*. Paris: L'Imprimerie du Conservatoire de Musique, 'An XI', 1802/3.
- Spoehr, Louis. *Violinschule*. Vienna: Haslinger, 1832. French translation: *Ecole ou méthode pour le violon à l'aide du teneur de violon, traduit de l'allemand par Mr Heller*. Paris: Richault, c.1840.
- Tromlitz, Johann. *Über die Flöten mit mehreren Klappen*. Leipzig: Adam Friedrich Böhme, 1800. Translated by Ardal Powell as *The Keyed Flute*. Oxford: Clarendon Press, 1996.
- Tulou, Jean-Louis. *Méthode de flûte*, op. 100. Paris: Schonenberger, 1835.
- Walckiers, Eugène. *Méthode de Flûte*, op. 30. Paris: the author, 1829.

Primary & Secondary Sources

Dictionnaire de l'Académie des Beaux-Arts. Tome II: "Anche". Paris: Typographie de Firmin Didot Frères, Fils et Cie, 1868.

Agrell, Donna. "Early Nineteenth-Century Bassoon Repertoire from Sweden: In Search Of The High Register." *The Double Reed*, vol. 40, no. 4.

Albrecht, Carol Padgham. "Joseph Sellner Praises Henri Brod's New Gouging Machine." *The Double Reed*, vol. 40, no. 1.

Austin, Michel. "Overture: King Lear." June 2019. <http://www.hberlioz.com/Scores/skinglear.htm>

Badol-Bertrand, Florence. *Louis-Emmanuel Jadin & Charles Garnier: 3 Nocturnes für Oboe und Klavier.* Frankfurt: Zimmermann, 1997.

– "Évolution de la pratique du hautbois à Paris de la fin du règne de Louis XV à la fin du Premier Empire." Doctoral thesis, Tours: Université François-Rabelais, 1996, unpublished.

– "L'adoption du cor anglais à Paris au tournant du XIXe siècle." *Revue musicale de Suisse Romande.* (March 2016).

Bainbridge, William. *Observations on the Cause of Imperfections in Woodwind Instruments...also remarks on Oboe, Clarinet and Bassoon reeds.* London: the author, 1823.

Baines, Anthony. *Woodwind Instruments and Their History.* London: Faber & Faber, 1957.

Bania, Maria. "'Sweetenings' and 'Babylonish Gabble': Flute Vibrato and Articulation of Fast Passages in the 18th and 19th centuries." Doctoral thesis, University of Gothenburg, 2008.

Barbagli, Nicola. *Little Things in Odd Shapes* (sleeve notes). NovAntiqua Records, Nr. Cat. NA35 (London, 2018), translation by Beatrice Scaldini.

Barbieri, Patrizio and Sandra Mangsen. "Violin Intonation: A Historical Survey." *Early Music*, Vol. 19, No. 1. (Feb. 1991).

- Bartlet, M. Elizabeth C. "From Rossini to Verdi." In *The Cambridge Companion to Grand Opera*, ed. David Charlton. Cambridge: Cambridge University Press, 2003.
- Bate, Philip. *The Oboe. An Outline of its History, Development and Construction*. London: Ernest Benn, 1956.
- Benade, Arthur H. "Woodwinds: The Evolutionary Path since 1700." *The Galpin Society Journal*, Vol. 47 (1994).
- Berlioz, Hector. *Grande traité d'instrumentation et d'orchestration modernes*. Paris: Henry Lemoine, 1844.
- *À travers chants*. Paris: Lévy Frères, 1862. Translated as *The Art of Music and Other Essays* by Elizabeth Csicsery-Ronay. Bloomington: Indiana University Press, 1994.
- *Feuilleton du journal des débats*, 31 décembre 1839.
- *Feuilleton du journal des débats*, 9 décembre 1850.
- *Mémoires*. Paris: Michel Lévy frères, 1870.
- Bernardini, Alfredo. "Andrea Fornari (1753-1841) « fabricator di strumenti » a Venezia." *Il Flauto dolce*, no. 14/15 (Apr.-Oct. 1986).
- "Due chiavi per Rossini? Storia e sviluppo dell'oboe a Bologna prima del 1850." *Il Flauto dolce*, no. 17/18 (Oct. 1987-Apr. 1988).
- Bloom, Peter (ed). *Music in Paris in the Eighteen Thirties*. New York: Pendragon Press, 1987.
- Blunt, Wilfrid Jasper Walter. *On Wings of Song: A Biography of Felix Mendelssohn*. London: Hamish Hamilton, 1974.
- Bowen, José A. "Finding the Music in Musicology: Performance History and Musical Works." *Rethinking music*, edited by N. Cook and M. Everist. Oxford: Oxford University Press, 1999.
- Braun, Wilhelm. "Bemerkungen über die richtige Behandlung und Blasart der Oboe." *Allgemeine Musikalische Zeitung* (12 March 1823).

Brook, Barry S. *La symphonie française dans la seconde moitié du XVIIIe siècle*. Paris: Publications de l'Institut de musicologie de l'Université de Paris, 1962.

Brown, James. *Our Oboist Ancestors: A Guide to Who Was Who in the Nineteenth Century Oboe World*. Malmesbury: Abbey Printing, 2006.

Brown, Clive. *Classical & Romantic Performance Practice 1750-1900*. London: Oxford University Press, 1999.

— *Beethoven: Sonatas for Pianoforte and Violin; Performing Practice Commentary*. Kassel: Bärenreiter-Verlag, 2020.

Bulliot, J.-G. *Notice biographique : Louis-Auguste Vény, de l'Académie nationale de musique et du Conservatoire de Paris, membre fondateur de la Société des concerts, membre de la Société éduenne*. Paris: Autun, Imprimerie Dejussieu Père et Fils, 1879.

Burgess, Geoffrey. *"The Premier Oboist of Europe": A Portrait of Gustave Vogt*. Lanham, MD: Scarecrow Press, 2003.

— "The Evolving Persona of the French Oboe in the Nineteenth Century, As Seen Through Literature." *A Time of Questioning: Proceedings of the International Double-Reed Symposium*. ed. David Lasocki. (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994).

— "New Triebert Discoveries: Observations and Comments on Re-reading the Surviving Documents Relating to Woodwind Instrument Production in Nineteenth-Century Paris." *The Galpin Society Journal*, vol. 65 (March 2012).

— "Pedagogic Material for the Oboe from the Nineteenth Century: A Bibliography." In *Celebrating Double Reeds: A Festschrift for William Waterhouse and Philip Bate*, ed. T. B. Ewell. Baltimore, MD: IDRS, 2009.

— "Piper at the Gates of Dawn. Bruce Haynes: Legendary Pioneer of the Hautboy." *The Double Reed*, vol. 35. no. 1. (July 2012).

— "Henri Brod, Oboist, Maker, Inventor, Composer." *The Double Reed*, vol. 27, no. 4 (2004).

- Burgess, Geoffrey and Bruce Haynes. *The Oboe*. New Haven: Yale University Press, 2004.
- *The Pathetick Musician: Moving an Audience in the Age of Eloquence*. Oxford: Oxford University Press, 2016.
- Burgess, Geoffrey and Peter Hedrick. “The Oldest English Oboe Reeds? An Examination of Nineteen Surviving Examples.” *The Galpin Society Journal*, Vol. 42 (August 1989).
- Burney, Charles. *The present state of music in France and Italy: or the journal of a tour through those countries*. London: Becket, 1771.
- Butt, John. *Playing with History*. Cambridge: Cambridge University Press, 2002.
- Carse, Adam. *The Orchestra from Beethoven to Berlioz: A History of the Orchestra in the first half of the Nineteenth Century*. New York: Broude, 1949.
- Castil-Blaze, François-Henri-Joseph. *Dictionnaire de Musique Moderne*. Paris: Lyre moderne, 1821.
- Caswell, Austin B. “Loïsa Puget and the French Chanson.” In *Music in Paris in the Eighteen Thirties*, Bloom, Peter (ed). New York: Pendragon Press, 1987.
- Choron, Alexandre Etienne, and Adrien de la Fage. *Nouveau manuel de Musique ou Encyclopédie musicale*. Paris: Librairie Encyclopédie de Rore, 1836.
- Cocatrix, “Citoyen”. *Correspondances des amateurs musiciens*. Paris: 1802. Genève: Minkoff Reprint, 1972.
- Colette, Marie-Noëlle and François Lesure. *La Musique à Paris en 1830-31*. Paris: Bibliothèque Nationale, 1983.
- Corredor, J. M. *Conversations with Casals*. Translated by André Mangeot. London: Hutchison, 1956.
- Dauprat, Louis-François. *Le professeur de musique : ou, L'enseignement de cet art : mis à la portée de chacun...* Paris: Quinzard, 1857.

Debussy, Claude. *Monsieur Croche et autres écrits*. Paris: Gallimard, 1971.

Decourcelle, Maurice. *La Société académique des Enfants d'Apollon (1781-1880)*. Paris: Durand Schoenewerk & Co., 1881.

De La Fage, Adrien. *De l'unité tonique et de la fixation d'un diapason universel*. Paris: Dentu, 1859.

Dorian, Frederick. *The History of Music Performance. The Art of Musical Interpretation from the Renaissance to our Day*. New York: W. W. Norton & Company, Inc. 1942.

Drechsel, F. A. "Über den Bau der oboe." In *Zeitschrift für instrumentenbau* no. 52 (Leipzig, 1932)

Dufourcq, Norbert, ed. *The Larousse Encyclopedia of Music*. Paris: Larousse, 1965.

Ecochard, Marc. *L'accord du hautbois baroque et classique. Un aperçu sur l'accord original de l'instrument et ses adaptations modernes, à partir d'un texte du facteur Carl Theodor Golde* (unpublished, 1996). Translated as *Tuning the hautboy. A perspective on original tuning and modern adaptations* by Jem Berry (unpublished).

Ellis, Katharine. *Music Criticism in Nineteenth-Century France: La Revue et Gazette Musicale*. Cambridge: Cambridge University Press, 1995.

Elwart, Antoine. *Histoire de la Société des concerts du Conservatoire impérial de musique*, 2ème édition. Paris: Castel, 1864.

— *Petit traité d'instrumentation à l'usage des jeunes compositeurs*. Paris: Colombier, 1869.

Everist, Mark. *Grand Opéra—Petit Opéra: Parisian Opera and Ballet from the Restoration to the Second Empire* in *19th-Century Music*, Spring 2010, Vol. 33, No. 3. University of California Press.

Eymard, Joël. "A propos du bocal du hautbois." March 2020.

<http://la.trompette.free.fr/Ninob/BOCALhautbois4.pdf>

Fétis, François-Joseph. *Revue musicale*. Paris: Fétis, 1827-1835.

– *Biographie Universelle des Musiciens et biographie générale de la musique, 2nd ed.*, Paris: Librairie de Firmin-Didot et Cie., 1883.

– “De la nécessité d’un diapason fixe.” *Revue musicale* (21 déc. 1833).

– “Variétés: Machine à faire les anches de hautbois et de basson.” *Revue musicale*, Vol. 8, No. 28 (13 July 1834).

– *Biographie de musiciens*. Bruxelles: Méline, 1835.

– *Rapports du Jury international, Exposition Universelle, 1867, Groupe II, classe 10*. Paris: Dupont, 1868.

Fleurot, François. *Le hautbois dans la musique française, 1650-1800*. Paris: Picard, 1984.

Fosse, Céline. “La flûte traversière à une clé : l’art du facteur au service de la pratique musicale, à l’époque baroque et aujourd’hui.” Master’s thesis, Université Lumière Lyon II, 2007.

Francoeur, Louis-Joseph. *Diapason général de tous les instruments à vent*. Paris: Le Marchand, 1813.

Fuzeau, ed. *Méthodes et Traités 14, Série II: France 1800-1860, Hautbois, vols I-III*. Paris: Fuzeau, 2003.

Gautrot aîné & Cie. *Catalogue des instruments de musique*. Paris/Rennes: C. Oberthur et fils, 1867.

Gérard, Michel. “Du hautbois à trois clefs au hautbois à treize clefs.” Doctoral thesis, Université des Sciences Humaines de Strasbourg, Institut de Musicologie, 1984.

– *Le hautbois : Histoire et évolution*. Paris: Delatour, 2015.

Gevaert, F.-A. *Nouveau traité d’instrumentation*. Paris: Lemoine, 1885.

Goossens, Leon, and Edwin Roxburgh. *Oboe*. London: MacDonald and Janes, 1977.

- Goubault, Christian. *La critique musicale dans la presse française de 1870 à 1914*. Slatkine: Paris, 1984.
- Gould, Glenn. "The Prospects of Recording." *High Fidelity Magazine*, Vol. 16 (April 1966).
- Greif, Francisque. "Études sur la musique antique." *Revue des Études Grecques*, tome 24. Paris: Ernest Leroux, 1911.
- Grétry, André Ernst Modeste. *Mémoires ou Essais sur la musique*. Paris: the author, 1789.
- Grimes, Nicole & Angela R Mace. *Mendelssohn Perspectives*. Routledge. Abingdon & New York, 2016.
- Grove, George. *A Dictionary of Music and Musicians*. London: Macmillan, 1880.
- Grush, James. "A Guide to the study of the Classical Oboe." Doctoral thesis, Boston University, 1972.
- Halfpenny, Eric. "The French Hautboy: A Technical Survey. Parts I & II." *The Galpin Society Journal*, Vol. 6 & 8 (1953/1955).
- Hallman, Diana R. "The grand operas of Fromental Halévy." In *The Cambridge Companion to Grand Opera*, ed. David Charlton. Cambridge: Cambridge University Press, 2003.
- Harlow, Martin David. "Viennese chamber music with clarinet and piano, 1783-1827: repertory and performance strategy." Doctoral thesis: University of Sheffield, 2004.
- Harnoncourt, Nikolaus. *The Musical Dialogue. Thoughts on Monteverdi, Bach and Mozart*. Portland: Amadeus Press, 1989.
- *Baroque Music Today: Music as Speech: Ways to a New Understanding of Music*. Portland: Amadeus Press, 1988.
- Hassiotis, Kostis. "A critical edition of the 48 studies for oboe, op. 31 by Franz Wilhelm Ferling (1796-1874), based on original historical evidence and viewed within the context of the evolution of didactic material for oboe, with particular reference to nineteenth-century performing practices." Doctoral thesis: City University London, 2010.

Haynes, Bruce. *The Eloquent Oboe: A History of the Hautboy, 1640-1760*. Oxford: Oxford University Press, 2001.

– *Music for the Oboe, 1650-1800: A Bibliography*. Berkeley, California: Fallen Leaf Press, 1992.

– *The End of Early Music: A Period Performer's History of Music for the 21st Century*. Oxford: Oxford University Press, 2007.

– *A History of Performing Pitch: The Story of "A."* Lanham, MD: Scarecrow Press, 2002.

– "A Reconstruction of Talbot's Hautboy Reed." *The Galpin Society Journal*, April 2000.

– "Making Reeds for the Baroque Oboe - 1." *Early Music*, Vol. 4, No. 1. (January 1976).

Hedrick, Peter. "Henri Brod on the making of oboe reeds." *Journal of the International Double Reed Society*, Vol. 6 (1978).

– "A Ten-keyed Oboe by Guillaume Triébert." *Journal of the International Double Reed Society*, No. 17 (1989).

Holoman, D. Kern. *The Cambridge History of Musical Performance*. Cambridge: Cambridge University Press, 2012.

Holoman, D. Kern. *The Société des concerts du Conservatoire*. Berkeley: University of California Press, 2004.

Hotteterre, Jacques-Martin. *Principes de la flûte, etc.* Amsterdam: Estienne Roger, 1707. Translated by Paul Marshall Douglas as *Principles of the Flute, Recorder and Oboe*. New York: Dover, 1968.

Howe, Robert. "Historical Oboes 2: Development of the French Simple System Oboe 1800-1840." *The Double Reed*, Vol. 24, no. 1 (2001).

– "The Boehm System Oboe and its Role in the Development of the Modern Oboe." *The Galpin Society Journal*, Vol. 56, 2003.

– “Nineteenth-Century French Oboe Making Revealed: a Translation and Analysis of the Triebert et Cie ‘1855’ Nouveau Prix-Courant.” *The Galpin Society Journal*, Vol. 64, 2011.

Huart, Louis. *Galerie des charges et croquis de célébrités de l'époque*. Paris: Deloye, 1839.

Jenkins, Keith. *Re-thinking History*. London & New York: Routledge, 1991.

Johnson, James H. *Listening in Paris: A Cultural History*. Berkeley: University of California Press, 1995.

Joppig, Gunther. *Oboe & Fagott: ihre Gechicht, ihre Nebeninstrumente und ihre Musik*, Bern: Hallwag, 1981. Translated by Alfred Clayton as *The Oboe and the Bassoon*. London: Batsford Ltd., 1988.

Karp, Cary. “Woodwind Instrument Bore Measurement.” *The Galpin Society Journal*, no. 31 (May 1978).

Kastner, Jean-Georges. *Traité général d'instrumentation*. Paris: Philipp, 1836.

Kirkpatrick, Mary. “Expanding Boxwood and Playing In.” *Fellowship of Makers and Researchers of Historical Instruments Quarterly* no. 74 (1994).

Koch, Heinrich Christoph. *Musikalisches Lexikon*. Frankfurt am Main: August Hermann der Jüngere, 1802.

Koechlin, Charles. *Traité de l'orchestration*. Paris: Eschig, 1954.

Kuijken, Barthold. *The Notation Is Not The Music*. Bloomington: Indiana University Press, 2013.

Lardrot, André. “Henri Brod : Hautboïste, luthier, inventeur, compositeur.” *La lettre du hautboïste*, Vol. 8 (2001).

La Borde, Jean-Benjamin de. *Essai sur la musique ancienne et moderne*. Paris: Pierres, 1780.

Landowska, Wanda. *La musique ancienne*. Paris: Mercure de France, 1909, translated as *Music of the Past* by Restout, Denise & Robert Hawkins in *Landowska On Music*. London: Secker & Warburg, 1964.

Lavoix, H. *Histoire d'instrumentation depuis le seizième siècle jusqu'à nos jours*. Paris: Librairie de Firmin-Didot, 1878.

Lawson, Colin. *The Early Clarinet*. Cambridge: Cambridge University Press, 2000.

– *Beethoven and the Development of Wind Instruments*, in R. Stowell, ed., *Performing Beethoven*, Cambridge University Press, 1994.

– *Brahms: Clarinet Quintet*. Cambridge: Cambridge University Press, 1998.

– ed. Lawson, Colin and Robin Stowell. *The Cambridge Historical Performance Encyclopedia*. Cambridge: Cambridge University Press, 2018.

Ledet, David A. *Oboe Reed Styles: Theory and Practice*. Bloomington: Indiana University Press, 1981.

Lehrer, Charles D. “Repertoire of the Oboe in the 19th century: The Hidden Structure.” *Journal of the International Double Reed Society*, Vol. 12 (1984).

– “An Introduction to the 16 Oboe Concertos of Gustave Vogt and a discussion of the nineteenth-century performance practice preserved in them.” *Journal of the International Double Reed Society*, Vol. 16 (1988).

– “Background on the Oboe Concertos of Stanislas Verroust.” *Journal of the International Double Reed Society*, Vol. 18 (1990).

– “A List of Henri Brod’s Compositions with a Short Discussion of his Oboe Concertos.” *Journal of the International Double Reed Society*, Vol. 19 (1991).

Lescat, Philippe and Jean Saint-Arroman, eds. *Hautbois: méthodes et traités, dictionnaires / [de divers auteurs]*. Courlay: Fuzeau, 1999.

Light, Jay. *The Oboe Reed Book*. Des Moines: Drake University Press, 1983.

Maunder, Richard. "Viennese Wind-Instrument Makers, 1700-1800." *The Galpin Society Journal*, Vol. 51 (July 1998).

Meeùs, Nicolas. "Le diapason." *Organologie*, Cours de DEUG, CNED, Institut de Vanves, 2003-2004; 2e édition, 2004-2005. *Organologie générale*, cours fait en Sorbonne, 2003-2011 - Dossier de fichiers.

Minkoff, ed. *Les Tablettes de Polymnie : journal consacré à tout ce qui intéresse l'art musical*. Paris, 1810-1811. Genève: Minkoff Reprint, 1971.

Montal, Claude. *L'Art d'accorder soi-même son piano*. Paris: Meissonnier, 1836.

Nelson, Robin. *Practice As Research In The Arts*. London: Palgrave Macmillan, 2013.

Neuhaus, Heinrich. *The Art of Piano Playing*. Translated by K. A. Leibovitch. New York: Praeger, 1973.

Nietzsche, Friedrich. *Unzeitgemäße Betrachtungen* (Leipzig: E. W. Fritsch, 1874). Translated by R. J. Hollingdale as 'On the Uses and Disadvantages of History for Life' in *Untimely Meditations* (Cambridge: Cambridge University Press, 1983).

Owens, Samantha. "An Italian Oboist in Germany: double reed making c.1750." *Oxford Early Music*, February 2000.

Page, Janet K., et al. "Oboe." In *The New Grove Dictionary of Music and Musicians*, edited by Stanley Sadie. London: Macmillan, 2002.

Piguet, Michel. 'Historical Oboes: Sound and Fingering,' *A Time of Questioning: Proceedings of the International Early Double-Reed Symposium*, Utrecht 1994, ed. David Lasocki (Utrecht: STIMU, Foundation for Historical Performance Practice, 1994).

Pierre, Constant. *La Facture instrumentale à l'exposition universelle de 1889. Notes d'un musicien sur les instruments à souffle humain nouveaux & perfectionnés*. Paris: Librairie de l'Art indépendant, 1890.

— *Les facteurs des instruments de musique*. Paris: Sagot, 1893.

Pontécoulant, Adolphe Le Doulcet, marquis de. *Organographie : Essai sur la facture instrumentale*. Paris: Castel, 1861.

Pustlauk, Anne. "The simple system flute between 1790 and 1850, its performance practice and chamber music repertoire with pianoforte and/or strings." Doctoral thesis, Vrije Universiteit Brussel, 2016.

Quantz, Johann Joachim. *Versuch einer Anweisung die Flöte traversiere zu spielen*. Berlin: Voss, 1752. Translated by Edward R. Reilly as *On Playing the Flute*, Boston: Northeastern University Press, 1966.

Rachor, David. "The Importance of Cane Selection in Historical Bassoon Reed-Making." *The Galpin Society Journal*, Vol. 57 (May 2004).

Rauline, Jean-Yves. "19th-Century Amateur Music Societies in France and the Changes of Instrument Construction: Their Evolution Caught between Passivity and Progress." *The Galpin Society Journal*, Vol. 57 (2004).

Reicha, Antoine. *Cours de composition musicale*. Paris: Gambaro, 1818.

Ringer, Alexander, ed. *Music and Society: The Early Romantic Era: Between Revolutions: 1789 and 1848*. Englewood Cliffs, NJ: Prentice-Hall, 1990.

Rink, John. "'Review Article' on Wallace Berry, Musical Structure and Performance." *Music Analysis*, 9/3 (1990).

Rousseau, Jean-Jacques. *Dictionnaire de musique*. Paris: Duchesne, 1768.

Salenson, Bruno. *De l'art de faire les anches de hautbois populaires & anciens, élaboré sur base de la pratique des hautbois du Languedoc*. Nîmes: Rivatges, 2016.

Salter, Graham. *Understanding the Oboe Reed*. London: Bearsden, 2018.

Schindler, Angela N. "Unique Contributions for Oboe in the Classical Period: Jacques Christian Michel Widerkehr's Duos for Oboe and Piano and François Devienne's Six Sonatas for Oboe and Basso Continuo." Doctoral thesis, University of North Texas, 2006.

Schlesinger, Maurice, ed. *Gazette musicale de Paris & Revue et gazette musicale de Paris*. Paris: Schlesinger, 1834-1880.

Sellner, Joseph. "Aus der Musikwelt." *Allgemeine Theaterzeitung und Originalblatt für Kunst, Literatur, Musik und gefelliges Leben*, ed. Adolf Bäuer, Vol. 29, No. 90 (4 May 1836)

Sherman, Bernard D. "Authenticity in Musical Performance." In *The Encyclopedia of Aesthetics*, edited by Michael J. Kelly. New York: Oxford University Press, 1998.

Sidorfsky, Joyce Ann. "The oboe in the 19th century: study of the instrument and selected published solo literature." Doctoral thesis, University of Southern Mississippi, 1977.

Silvestri, Giacomo. "Carlo Palanca and the Oboe: A Study of His Surviving Instruments." *The Double Reed*, no.43 (2020).

Soulier, Lola. "Le hautbois en France à la fin du XVIIIe siècle. Étude et mise en pratique de la Méthode Raisonnée pour le Haut-bois de Joseph-François Garnier." Master's thesis, Sorbonne Université, 2019.

— "Reconstruction of Oboes Made by Christophe Delusse: from the Material Sources to the Sounding Instrument." In *Making wooden musical instruments: An integration of different forms of knowledge, 3rd annual conference*. Barcelona: Museu de la Música de Barcelona, 2016.

Stern, Sigismund. *Manuel général de musique à l'usage de l'enseignement élémentaire du chant, des instruments et de la composition*. Paris: Brandus, 1850.

Steins, Karl. *Rohrbau für Oboen*. Berlin: Bote & Bock, 1967.

Stotijn, Jaap. *De Kunst Van Het Maken Van Hoborieten*. Wormerveer: Molenaar, 1967.

Stowell, Robin. *Violin Technique and Performance Practice in the Late Eighteenth and Early Nineteenth Centuries*. Cambridge: Cambridge University Press, 1985.

Taruskin, Richard. *Text and Act: Essays on Music and Performance*. Oxford: Oxford University Press, 1995.

Verdegem, Stefaan. "Sellner-type Oboes in Vienna and Mainz in the Second Quarter of the Nineteenth Century." *The Galpin Society Journal*, Vol. 61 (2008).

— "On Making a New Edition of Donizetti's Concertino for English Horn." *The Double Reed*, vol. 44, no. 2 (2021).

Wangermée, Robert. "Conscience et inconscience du virtuose romantique : à propos des années parisiennes de Franz Liszt." In *Music in Paris in the Eighteen Thirties*. Bloom, Peter (ed). New York: Pendragon Press, 1987.

Warner, Thomas E. "Two Late Eighteenth-Century Instructions for Making Double Reeds." *Galpin Society Journal*, Vol. 15 (1962).

Waterhouse, William. *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*. London: Tony Bingham, 1993.

Weber, Rainer. "Early Double Reeds." trans. William Waterhouse. *The Galpin Society Journal*, vol. 54 (May 2001).

Weber, William. *The Great Transformation of Musical Taste: Concert Programming from Haydn to Brahms*. Cambridge: Cambridge University Press, 2008.

White, Paul. "Early Bassoon Reeds: A Survey of Some Important Examples." *Journal of the American Musical Instrument Society*, vol. 10 (1984)

Wild, Nicole. *Dictionnaire des théâtres parisiens au XIXème siècle*. Paris: Aux amateurs de livres, 1989.

Woodfield, Ian. *Music of the Raj*. Oxford: Oxford University Press, 2000.

Yon, Jean-Claude. *Histoire culturelle de la France au XIXe siècle*. Malakoff: Armand Colin, 2010.

Young, Phillip T. *The Look of Music: Rare Musical Instruments 1500-1900*. Vancouver: Vancouver Museums and Planetarium Association, 1980.