Berlioz's Orchestration Treatise

A Translation and Commentary

Berlioz's orchestration treatise is a classic textbook which has been used as a guide to orchestration and as a source book for the understanding both of Berlioz's music and of orchestral practice in the nineteenth century. This is the first new English translation of Berlioz's complete text since 1856, and it is accompanied throughout by Hugh Macdonald's extensive and authoritative commentary on the instruments of Berlioz's time and on his own orchestral practice, as revealed in his scores. It also includes extracts from Berlioz's writings on instruments in his *Memoirs* and in his many articles for the Parisian press.

The *Treatise* has been highly valued both for its technical information about instruments and for its poetic and visionary approach to the art of instrumentation. It includes a chapter on the orchestra itself, seen as a giant independent instrument, and on the art of conducting, one of the first documents of its kind. Berlioz was not only one of the great orchestrators of the nineteenth century, he was also the author with the clearest understanding of the art.

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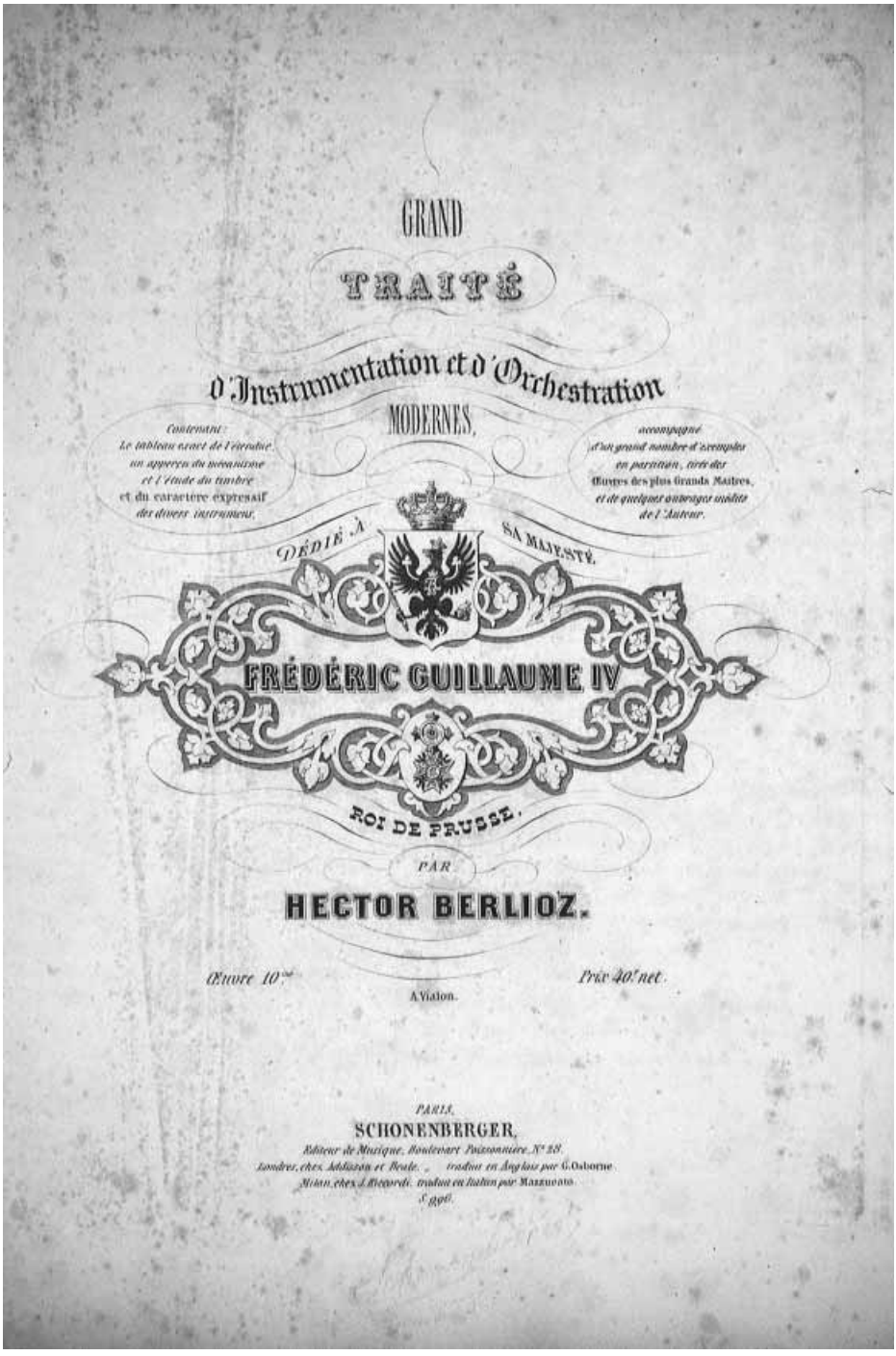
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Preface

Berlioz's *Grand traité d'instrumentation et d'orchestration modernes*, first published in 1844 with a second edition in 1855, is a classic textbook which has been widely read for over a century and a half by students, composers, historians and all who are drawn to Berlioz the musician or Berlioz the man. Like Rameau's *Traité de l'harmonie* it is a remarkable example of a great composer venturing into the world of technical and theoretical exposition and producing a masterpiece which affected the musical thinking of generations. In the nineteenth century Berlioz's *Treatise* (as we shall hereafter call it) was read as a book of instruction; in the twentieth century it became a source book for anyone curious to learn more about the history of instruments and orchestral practice and a revealing exposure of Berlioz's musical thinking. His purpose in writing it was to guide composers towards a more expert and expressive use of instruments and to advise them of pitfalls that the unwary may encounter. This is explained in the book's introduction and again alluded to in the section on 'Other percussion instruments':

> Our purpose in the present work is simply to study instruments which are used in modern music and to seek the laws which govern the setting up of harmonious combinations and effective contrasts between them while making special note of their expressive capabilities and of the character appropriate to each.

The study of an instrument's character and expressive potential was really more important to Berlioz than its range and technical limits, careful though he was to set out the latter in as clear a manner as possible. Practical information was already to be found in other treatises and in the separate 'Méthodes' available for every instrument, so there was a special urgency in conveying his personal understanding of colour and timbre, couched in the notion of continuity and tradition from Gluck through Spontini, Beethoven and Weber to the present day. 'Harmonious combinations and effective contrasts' are treated in the chapter on the orchestra, so that the novice composer may learn the essentials of orchestration from a study of

this book, an aspect of his art which was seriously overlooked, as Berlioz kept repeating, at the Paris Conservatoire. In its enlarged second edition the *Treatise* included an essay on the art of conducting, which Berlioz's own experience had taught him to regard, like the complexities of concert organisation and management, as part of the composer's craft.

Unlike so much of Berlioz's music, the *Treatise* was successful both in France and abroad. It has been translated into five languages and has been almost continuously in print to this day. Both his contemporaries and his successors recognised its great virtues. Bizet admired it and recommended it to his pupils,[1] and Saint-Saëns said of it:

> For all its oddities, it's a marvellous book. The whole of my generation was brought up on it, and well brought up, I would say, too. It had that inestimable gift of inflaming the imagination and making you love the art it taught. What it didn't teach it gave you the desire to find out, and one learns best what one learns oneself.[2]

Rimsky-Korsakov tells how Balakirev's circle of composers followed the *Treatise*'s instructions slavishly, even when its teaching, on natural brass instruments for example, was out of date.[3] Mahler, Elgar, Delius, Busoni, d'Indy, Debussy, Puccini and Strauss are all known to have used it. Zola studied the clarinet from it. Ravel, no great admirer of Berlioz's music, kept a copy of the *Treatise* near at hand.[4] Most subsequent orchestration textbooks – by Gevaert, Widor, Rimsky-Korsakov and Kœchlin, for example – are in some measure indebted to it, and Strauss's version, incorporating many examples from Wagner's scores, has been widely read and translated.

A new edition of the *Treatise* must today serve a quite different purpose since one no longer refers to it for information about, say, the range of the trumpet or how to write for the harp. It has been superseded by many more comprehensive textbooks. Its value rests rather on its incomparable record of the instrumental practice of Berlioz's time and on the light it sheds on his music. For him it was the other way round: he used extracts from his scores to support the study of orchestration, while we use his remarks on orchestration to enhance our study of his scores. My purpose in the present edition is therefore fourfold: 1) to provide a new translation for English-speaking readers who have long had to depend on Mary Cowden Clarke's very Victorian version of 1856 or Theodore Front's 1948 translation of Strauss's version, 2) to relate what Berlioz says in the *Treatise* to what he has to say elsewhere about instruments and orchestration, 3) to comment on

[1] 'It's an admirable work, the *vade mecum* of any composer who writes for the orchestra. It's utterly complete, with abundant examples. It's indispensable!' Bizet reported by Hugues Imbert in *Portraits et études* (Paris, 1894), p. 178.
[2] Camille Saint-Saëns, *Portraits et souvenirs* (Paris, 1909), pp. 5–6.
[3] N. A. Rimsky-Korsakov, *My Musical Life* (London, 1924), p. 66.
[4] Ravel's copy of the *Treatise* is still displayed on the piano at his house at Montfort-Lamaury.

the state of instruments and instrumental practice of Berlioz's time and 4) to compare what he advises in his *Treatise* with what he does in his own music. For the most part, of course, his music is an admirable illustration of the technical and artistic principles set out in the *Treatise*, but there are times when he does not practise what he preaches. He greeted certain new developments, for example the harp glissando and the saxophone, with enthusiasm, but then did nothing to promote them in his music. Nor did he use most of the violin double-stops and harmonics he so carefully set out as available to the composer. But since his purpose was to offer technical understanding to other composers he was under no obligation to distinguish between those features which he would wish to use himself and those which were available to composers of different tastes.

We can now see how the task of writing the *Treatise* refined his own orchestral technique in mid-career. His early works, including the *Symphonie fantastique* and *Harold en Italie*, contained 'errors' that he was able to correct by withholding publication until he had sufficient experience of conducting them himself. His intense interest in orchestration in the late 1830s made the *Requiem* and *Roméo et Juliette* particularly rich examples of advanced orchestral technique which he drew upon as models for the instruction of others, and in his later works he remained largely faithful to the practice he expounded in the *Treatise*, occasionally calling for new instruments such as the saxhorns used in the *Te deum* and *Les Troyens*. It was probably writing the chapter on the organ for the *Treatise* that gave him the idea for the magnificent opposition of orchestra and organ we find in the *Te deum*, composed seven years later.

BERLIOZ AND THE ORCHESTRA

From the *Symphonie fantastique*, universally admired for its audacious orchestration, it is clear that Berlioz's interest in this aspect of his art was manifest early in his career. In chapter 15 of his *Memoirs* he gives a vivid account of attending the Opéra in the 1820s with a circle of friends, from which it is plain that his attention was as sharply focused on the personnel and activities of the orchestra as upon the not always more dramatic goings-on on stage. Hiller recalled that 'for a number of years he was constantly at the Opéra, where he followed the performances score in hand and made a note every time he observed some effect of solo or combined instrumentation'.[5] His Irish friend George Osborne, who knew Berlioz in his student days, later recalled in similar vein:

[5] Ferdinand Hiller, *Künstlerleben* (Cologne, 1880), p. 103, trans. Michael Rose in *Berlioz Remembered* (London, 2001), p. 18.

> It was his constant habit to go into orchestras and sit with the different performers watching them and turning over the pages for them. In this way he learned the capacity of each instrument. Besides which he got several instrumentalists to come to his house where they played together little things which he wrote for them to see what they could accomplish. He also asked both Chopin and myself whether such and such passage could be played on the piano.[6]

When Berlioz had to report on the visit of a German opera company to Paris in 1829 he deplored the state of the Théâtre Italien orchestra man by man:

> The eight first and eight second violins are held together by four young men from the Conservatoire having a good working knowledge of the instrument. Of the four violas one is good, one moderate and two are hopeless. Of the three (would you believe it!) cellos only one made any impression, M. Franchomme, a very talented young man with a brilliant career before him. The other two are old men who fortunately sleep more than they play.
>
> All one can say of the seven double basses is that they are neither good nor bad. There is little better to be said of the brass, except that Gallay is the most gifted horn player in Paris, but for reasons of seniority he plays third horn and never gets a solo. The flutes and clarinets are good, which makes the oboes and bassoons even more unbearable. The bassoons cannot play fast and the first oboe is quite without a sense of rhythm. [. . .] The timpanist is reliable enough, but he pays more attention to catching the ladies' eyes than to counting his bars. It is, in a word, one of the worst orchestras.[7]

Berlioz's ability to dissect the workings of an orchestra and to understand its strengths and weaknesses was a key to his success as a conductor and it was also invaluable both to his composing and to his work as a critic. It bore two remarkable but very different literary fruits. The first was the *Treatise*, in which his awareness of the human dimension of the orchestra is never far from view, and the second was *Les soirées de l'orchestre*, a compilation of essays and reviews put together in 1852 and cast as the serious and frivolous exchanges of the players in a theatre orchestra who are often so numbed by the futility of their duties that they exchange gossip, stories and flights of fancy. Although Berlioz had almost no orchestral experience as a player himself, his illustrious career as a conductor was strengthened by his profound understanding of what goes on in an orchestra and how its members individually function. It is as though his physiology classes at the School of Medicine had taught him to think of the orchestra as an

[6] George Osborne, 'Berlioz', *Proceedings of the Musical Association*, 5 (1878–9), pp. 60–71, cited in A. W. Ganz, *Berlioz in London* (London, 1950), p. 87.
[7] *Berliner allgemeine musikalische Zeitung*, 27 June 1829; *Cm*, 1, p. 25.

organism made up of limbs, organs, joints, nerves and muscles all serving a larger collective purpose.

Whereas most music critics in France would concentrate on the literary and vocal qualities of an opera, Berlioz often chose to draw attention to instrumental effects in unashamedly technical language. His article on Meyerbeer's *Robert le diable* in the *Gazette musicale* of 12 July 1835, for example, is specifically entitled 'On the instrumentation of *Robert le diable*', and it points out that the huge success of the opera was due in no little part to its resourceful and inventive orchestration, making demands far beyond the capacity of most of the provincial theatre orchestras who were called upon to play it.

THE WRITING AND PUBLICATION OF THE *TREATISE*

Berlioz's consuming passion for instruments and their use was obviously a central feature of his art from the beginning. The *Robert le diable* article might be taken as an early indication that he might also become a teacher of the art of orchestration, not just a superlative exponent. Comfortable in his command of contemporary French instrumental practice and its rapidly advancing technology, Berlioz received a jolt in 1837 when Johann Strauss *père* brought his Viennese musicians to Paris, one of the earliest orchestras to go on tour as a group. There is no mistaking the shock of Berlioz's realisation that the German lands did things differently in this respect. He was principally impressed by Strauss's sense of rhythm (hence the title of his notice in the *Journal des débats*: 'Strauss, his orchestra, and his waltzes. Of the future of rhythm'[8]), but his curiosity about the different instrumental styles of foreign orchestras was aroused, leading eventually to the German tour of 1842–3 when he could study these things for himself.

In the same year as Strauss's visit, 1837, Georges Kastner, a young composer and polymath newly arrived from Strasbourg, published his *Traité général d'instrumentation*. When Berlioz read the book and met the author we do not know, but by 1839 they had become friends. Kastner seems to have been close to Berlioz during the composition of *Roméo et Juliette* in that year,[9] and when Kastner followed up his *Traité* with a second volume, *Cours d'instrumentation*, in 1839, Berlioz gave both books a warm welcome in the pages of the *Journal des débats*.[10] While he applauded Kastner's achievement, he felt he had not gone far enough in defining what the art of instrumentation could truly do:

[8] *Jd*, 10 November 1837; *Cm*, 3, pp. 329–35; Condé, pp. 122–8.
[9] *Cg*, 2, p. 576. Kastner was later presented with the autograph manuscript of *Roméo et Juliette* as a gift.
[10] *Jd*, 2 October 1839.

> Instrumentation, according to him, is the 'art of applying appropriate types of instruments to a given line of music'. Certainly it is, but it is much else besides. It is the art of using instruments to colour the harmony and the rhythm; furthermore it is the art of generating emotion by one's choice of timbres, independent of any considerations of melody, rhythm or harmony.

Citing numerous examples of apposite instrumentation by Gluck, Beethoven, Meyerbeer and others, Berlioz is clearly seized by his own consuming interest in the subject, and we may safely guess that the writing of this review implanted the idea of compiling his own treatise which would expound the art as he saw it despite the existence of Kastner's very comprehensive handbook.

He did not pursue it, however, for two years. In that time he composed the *Symphonie funèbre et triomphale*, *Les nuits d'été* and his arrangements of *Der Freischütz* for the Opéra. Having promised Schlesinger a series of articles entitled 'De l'instrumentation' for the *Revue et gazette musicale*, Berlioz evidently had to write them in a hurry for a succession of deadlines.[11] On 21 November 1841 the first of sixteen articles appeared, with the last article of the series published on 17 July 1842. These articles make up the bulk of the later *Treatise*, but they differ greatly from it in their lack of musical examples, dictated by the format of the journal, and their lack of technical discussion. The articles contain the discursive, non-technical matter of the book, with an emphasis on the poetic and expressive character of individual instruments. Berlioz throws in his characteristic asides on his favourite topics, and he chides modern composers for their persistent misuse of instruments. His admiration for Gluck, Beethoven, Weber and certain living masters, very selectively cited, is clear. He also made repeated criticism of the Conservatoire for failing to give instruction in certain important instruments (such as percussion) and for failing to 'conserve' such fine historical instruments as the viola d'amore. Not, presumably, out of deference to the then late director of the Conservatoire, Cherubini, but more with an eye to a less ephemeral readership, Berlioz removed these darts and barbs in the *Treatise* itself. The sixteen articles also lack any reference to his own compositions, except in the anonymous form 'a recent symphony', 'a certain Requiem' and so forth.

Whether he had all along planned to assemble the articles into a larger volume on the lines of Kastner's two books is unclear, although the serialisation of books was a common publishing practice of the time. Encouraged perhaps by the publication of the articles in Italian in the *Gazzetta musicale di Milano*, he proceeded immediately to fashion them into the full-blown *Treatise*. He wrote in August 1842:

[11] *Cg*, 2, p. 705.

> I am just finishing a *Grand traité d'instrumentation* which will be reasonably profitable, I hope. It will fill a gap in instruction books and I have been urged by many people to undertake it. My articles in the *Gazette musicale* only scratched the surface, they were just the bloom on the rose. Now I have to go over it all and do the foundation work, taking care of all the little technical details.[12]

He found a publisher, Georges Schonenberger, who had not published anything by Berlioz before, but who was known rather for his scores of operas by Rossini and Donizetti. Schonenberger offered Berlioz 2500 francs for the book, or 5000 francs if he could get two hundred subscribers in advance, and the last months of 1842 were devoted to putting the finishing touches to the book and attempting to secure simultaneous publication abroad, as well as preparing for his first extended foreign tour. Schonenberger's advance of 2500 francs was essential to pay for the expenses of the tour.[13]

Just before leaving for Germany Berlioz met the great naturalist Alexander von Humboldt, who smoothed the path for his coming concerts in Berlin. It was evidently Humboldt who suggested offering the dedication of the *Treatise* to Friedrich-Wilhelm, King of Prussia. The King did indeed receive Berlioz with enthusiasm, both on this visit and again in 1847, and he rewarded the dedication with a gold snuff-box and a gold medal. Although Berlioz's principal purpose in going to Germany was to take his music to a wider audience, he was also anxious to learn what he could about the state of instrumental playing and teaching. He had also secured from the Minister of the Interior a commission to report on German musical institutions, and his report gave due attention to the state of instrumental playing in different cities.[14] He wrote a series of articles about the trip for the *Journal des débats*, presented in the form of letters to his friends and later assembled in the *Memoirs* under the title 'Travels in Germany I', and these give a great deal of space to the new valve system for brass instruments, Parish Alvars's technique on the harp, the various talents of the Stuttgart orchestra, the sticks used by timpanists, the quality of the cymbals, the scarcity of cors anglais and so on. This section of the *Memoirs* is an essential adjunct to the *Treatise*, being written at a time when his thoughts were full of mutes, embouchures, trills and the latest orchestral gadgets.

[12] *Ibid.*, pp. 726–7.
[13] *Cg*, 3, p. 112. *Cg* 3 provides most of the information about the publication of the *Treatise*. In December 1842 (*Cg*, 3, p. 36) Berlioz said he would lose 2500 francs if 200 subscribers were not found, while in February 1844 (*Cg*, 3, p. 163) the figure is 1500 francs, perhaps reduced because publication was nearly a year late. On 2 January 1843 the *Neue Zeitschrift für Musik* reported that Berlioz had sold the *Treatise* for 10,000 francs.
[14] Peter Bloom, 'La mission de Berlioz en Allemagne: un document inédit', *Revue de musicologie*, 66 (1980), pp. 70–85.

1 Letter to Humbert Ferrand of 12 June 1843, seeking subscriptions to the publication of the *Treatise*.

He found, consequently, that on his return to Paris in May 1843 a good deal needed to be changed in the proofs of the *Treatise*, especially in the sections on the harp, the horn, the trumpet and the cornet. Berlioz reported working through six sets of proofs, one of which, now in the Bibliothèque de Grenoble, gives ample evidence of his late revisions to the text.[15] These were no doubt one cause of the delay in publication, together with the necessity to coordinate the German edition (translated by J. C. Grünbaum and published by Schlesinger, Berlin) and the Italian edition (translated by Alberto Mazzucato and published by Ricordi, Milan). The English edition (translated by George Osborne and published by Addison and Beale, London) never materialised, nor did the Russian edition for which Berlioz had hoped.[16] A set of proof pages of the French edition with many autograph corrections was given to Spontini, probably in November 1843, and on the 24th of that month Berlioz gave a copy to Stephen Heller, still bearing some last-minute corrections.[17] On 23 December a clean bound copy was given to Meyerbeer, who was charged with transporting two further copies to Berlin, one for the Berlin Academy and one for the King of Prussia.[18] This first French edition is often referred to as the '1843' edition, but although it was certainly printed in that year Schonenberger did not put it on sale until 1 March 1844, two weeks before the date by which two hundred subscribers were to have been found. Whether that number was reached is not known. It was published with the opus number 10.[19]

The *Treatise* was laid out in large format and execrably printed. An essential part of Berlioz's plan was to include a great number of excerpts in full score by Gluck, Beethoven, Weber and others, and he also printed a number of passages from his own scores, most of them unpublished at the time. While the pages of engraved music are elegant enough, Berlioz's prose is set out on lines over eight inches long with innumerable misprints and typographical blemishes of many kinds. Many of these survive in later issues from the same plates. Paragraphing and layout were crudely executed, and the German edition, which printed both French and German texts in parallel columns, had a distinct advantage in physical make-up over the French edition, even though it included some unauthorised extracts from Haydn and Mendelssohn of which Berlioz did not approve.[20]

[15] Bibliothèque de Grenoble, Vh 1036 Rés., is a set of proofs lacking the chapter on voices and heavily corrected by Berlioz. Vh 1960 Rés. in the same library is a copy of the 1844 edition with annotations in many hands (including Berlioz's) evidently prepared for an English translator, perhaps George Osborne or Mary Cowden Clarke.
[16] *Cg*, 2, p. 730.
[17] *Cg*, 3, p. 143. The Spontini copy was formerly in the Cortot collection and has recently been offered for sale; it bears many more autograph corrections than the Heller copy (British Library, Hirsch Collection) and must be earlier by a few weeks.
[18] *Ibid.*, p. 146. Meyerbeer's copy is in the Deutsche Staatsbibliothek, Berlin.
[19] For a list of editions of the *Treatise*, see the Bibliography.
[20] *Cg*, 5, pp. 183–4.

The *Treatise* received very little notice in the press, although the *Journal des débats* published Spontini's official report on the book for the Académie des Beaux-Arts. Its success was to be in the long rather than the short term. But it established Berlioz's reputation as an authority on instruments, reinforced by the thorough attention he gave to instruments shown at the Industrial Exhibitions of 1844 and 1849 and by his espousal of the work of two successful manufacturers, Edouard Alexandre and Adolphe Sax. The latter was at the peak of his brilliant inventive career, and throughout the 1840s was revolutionising the design and manufacture of wind instruments. Berlioz gave his constant support, with enthusiastic articles on the saxophone, the saxhorn, Sax's proposals for reorganising French military bands, and his contribution to the sensational offstage music at the Opéra from 1847 on. Berlioz was happily not drawn into the series of lawsuits that plagued Sax's career. Less controversial but equally successful was the firm of Alexandre et fils, whose keyboard instruments, particularly the 'orgue-mélodium', figured repeatedly in Berlioz's writings. This association seems to have been a direct result of the appearance of the *Treatise* in 1844, and a close friendship with Edouard Alexandre was sustained to the end of Berlioz's life.

In 1848 there appeared five articles under the title 'Voyage musical en Bohème', later to be recast as 'Travels in Germany II' in the *Memoirs*. Within Berlioz's account of his visit to Prague in 1846 he set out his thoughts on the proper curriculum of a conservatoire. Since orchestration was high on his list of priorities, he included an important text which should be read in conjunction with the *Treatise* and which might have served as a preface to its second edition:

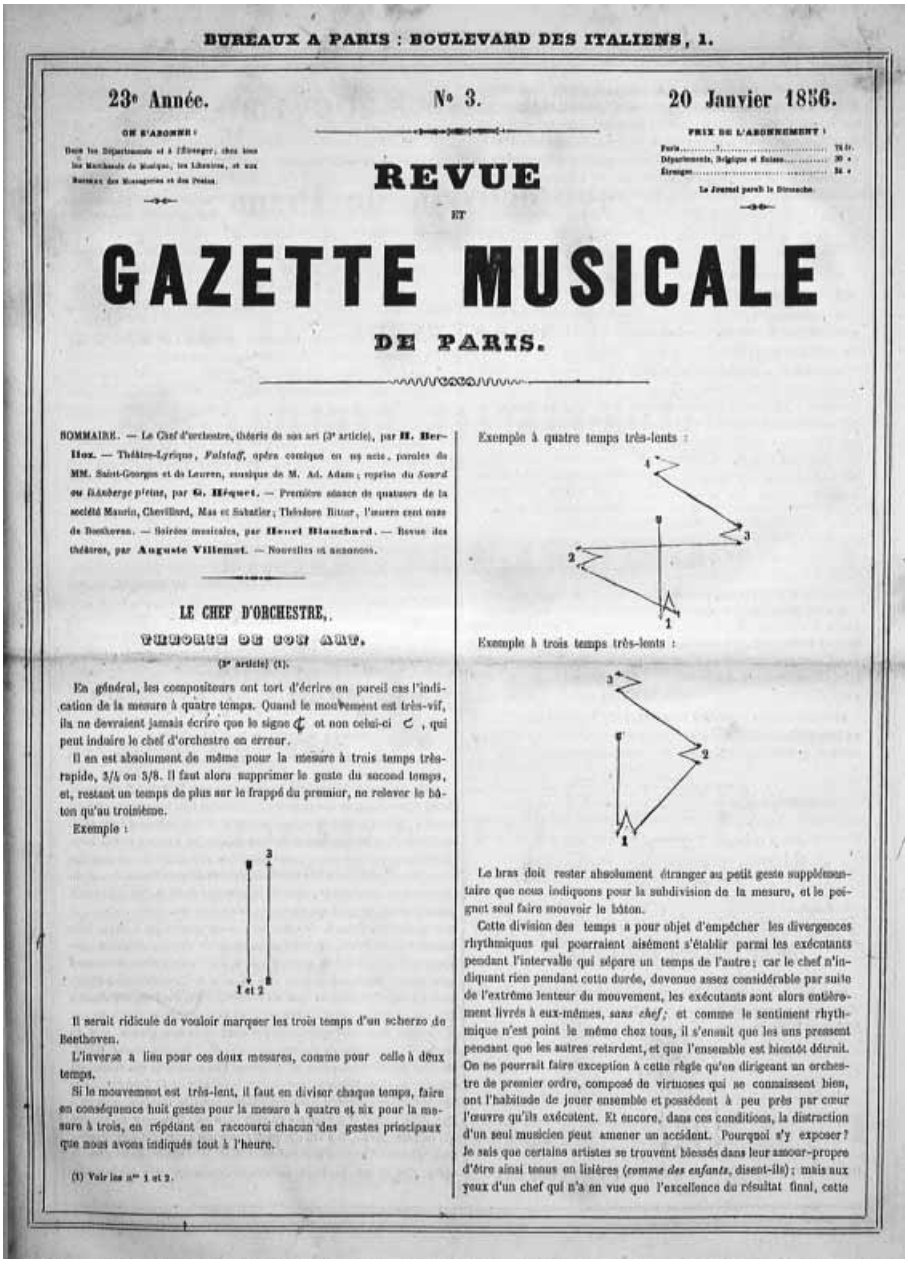
> Another subject yet to be included in the syllabus of any existing conservatoire – one which to my mind is becoming more necessary every day – is instrumentation. This branch of the composer's art has made great strides in the last few years and its achievements have attracted the attention of critics and public. It has also served with certain composers as a means of faking inspiration and concealing poverty of invention beneath a show of energy. Even with undeniably serious and gifted composers it has become a pretext for wanton outrages against good sense and moderation, so you can imagine what excesses their example has led to in the hands of imitators. These very excesses are a measure of the practice, or malpractice, of instrumentation, which is for the most part mere whistling in the dark with blind routine to guide it, when it is not sheer accident. For it does not follow that because the modern composer habitually employs a far larger number of instruments than his predecessors he is any more knowledgeable about their character, their capacity and mechanism and the various affinities and relationships that exist between them. Far from it: there are eminent composers so fundamentally ignorant of the science that they could not even tell you the range of some of the instruments. I know from my own experience

> of one to whom the compass of the flute was an undisclosed mystery. Of brass instruments and the trombone in particular they have only the most shadowy notion; you can see this from the way most modern scores, just as in the old days, cling to the middle register of these instruments and avoid taking them high or low, simply because the composer, not knowing their exact compass, is afraid of overstepping it; as he has no inkling of what can be done with the notes at either end of the scale, he leaves them strictly alone. Instrumentation today is like a foreign language which has become fashionable. Many affect to speak it without having learnt to do so; consequently they speak it without understanding it properly and with a liberal admixture of barbarisms.[21]

Berlioz was then an obvious choice as a French Government representative on the jury appointed to judge musical instruments at the Great Exhibition in London in 1851, and he served in the same capacity at the Paris Exposition Universelle in 1855. Earlier that year, 1855, when Berlioz was in London for some concerts, he was approached by Alfred Novello with a proposal for an essay on the art of conducting. It was agreed that this would be an extra chapter to be appended to a revised and enlarged edition of the *Treatise* translated into English. He wrote the essay immediately on his return to Paris and sent it to Novello in September 1855 along with a section on new instruments (chapter 13) and some revisions in the main text. The book was translated by Novello's sister, Mary Cowden Clarke, and published by Novello & Co in May 1856. This was a very successful publication, going into a second edition in 1858 and remaining in print well into the twentieth century. The essay on conducting was serialised in Novello's house journal, the *Musical Times*, between May and August 1856.

Berlioz also persuaded Schonenberger to issue a revised second edition in French, with the extra chapters on new instruments and on conducting (chapters 13 and 15), and this appeared at the end of 1855.[22] The chapter on new instruments, which owed much to his friendship with Sax, Alexandre and Kastner, appeared also in the *Journal des débats* on 12 January 1856 as part of Berlioz's report of the Exposition Universelle; indeed it was his work on that jury that gave him the opportunity to study the latest instrumental inventions. The chapter on conducting, 'Le chef d'orchestre: théorie de son art', was serialised in the *Revue et gazette musicale* between 6 January and 2 March 1856, and it was also issued by Schonenberger as a separate booklet. Lemoine et fils, who acquired Schonenberger's catalogue in 1862, have reissued the second edition of the *Treatise* at intervals to this day.

[21] *Memoirs*, 'Travels in Germany', II/6.
[22] In a letter of 9 January 1856 Berlioz implied that the second edition of the *Treatise* had been published for some time (*Cg*, 4, p. 239) and it has always been referred to as the 1855 edition. A footnote in the *Rgm* of 6 January 1856, however, says that it is due to appear 'shortly'.



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LE CHEF D'ORCHESTRE,

THÉORIE DE SON ART.

(3e article) (1).

En général, les compositeurs ont tort d'écrire en pareil cas l'indication de la mesure à quatre temps. Quand le mouvement est très-vif, ils ne devraient jamais écrire que le signe ¢ et non celui-ci C, qui peut induire le chef d'orchestre en erreur.

Il en est absolument de même pour la mesure à trois temps très-rapide, 3/4 ou 3/8. Il faut alors supprimer le geste du second temps, et, restant un temps de plus sur le frappé du premier, ne relever le bâton qu'au troisième.

Exemple :

Il serait ridicule de vouloir marquer les trois temps d'un scherzo de Beethoven.

L'inverse a lieu pour ces deux mesures, comme pour celle à deux temps.

Si le mouvement est très-lent, il faut en diviser chaque temps, faire en conséquence huit gestes pour la mesure à quatre et six pour la mesure à trois, en répétant en raccourci chacun des gestes principaux que nous avons indiqués tout à l'heure.

(1) Voir les nos 1 et 2.

Exemple à quatre temps très-lents :

Exemple à trois temps très-lents :

Le bras doit rester absolument étranger au petit geste supplémentaire que nous indiquons pour la subdivision de la mesure, et le poignet seul faire mouvoir le bâton.

Cette division des temps a pour objet d'empêcher les divergences rhythmiques qui pourraient aisément s'établir parmi les exécutants pendant l'intervalle qui sépare un temps de l'autre ; car le chef n'indiquant rien pendant cette durée, devenue assez considérable par suite de l'extrême lenteur du mouvement, les exécutants sont alors entièrement livrés à eux-mêmes, *sans chef* ; et comme le sentiment rhythmique n'est point le même chez tous, il s'ensuit que les uns pressent pendant que les autres retardent, et que l'ensemble est bientôt détruit. On ne pourrait faire exception à cette règle qu'en dirigeant un orchestre de premier ordre, composé de virtuoses qui se connaissent bien, ont l'habitude de jouer ensemble et possèdent à peu près par cœur l'œuvre qu'ils exécutent. Et encore, dans ces conditions, la distraction d'un seul musicien peut amener un accident. Pourquoi s'y exposer ? Je sais que certains artistes se trouvent blessés dans leur amour-propre d'être ainsi tenus en lisières (*comme des enfants*, disent-ils) ; mais aux yeux d'un chef qui n'a en vue que l'excellence du résultat final, cette

2 *La revue et gazette musicale*, 20 January 1856, the first serialisation of *Le chef d' orchestre*.

Ricordi revised and reissued the Italian edition, and the German translation was similarly revised and reissued by Schlesinger of Berlin; the conducting essay was also separately issued under the title *Der Orchester-Dirigent*. In 1864 Gustav Heinze of Leipzig published a new German

translation by Alfred Dörffel under the title *Instrumentationslehre* which includes a preface in German signed by Berlioz but in fact written by Richard Pohl.[23] Numerous editions were issued by Heinze and his successor Peters, and in 1904 Peters issued it with Strauss's additional notes and examples. Strauss's purpose was to study Wagner's orchestration as the natural culmination of Berlioz's work in this sphere, with a few examples also from his own scores. Berlioz himself would have found this wholly unintelligible, since his own sound world was far from Wagner's and since his exposition of the art of orchestration was backward-looking (to Gluck and Beethoven) rather than modern, despite the *Treatise*'s title. Strauss's edition has been reprinted a number of times. It was translated into French by Ernest Closson in 1909, into Russian in 1912, and into English in 1948 by Theodore Front, published in New York by Edwin F. Kalmus and later reprinted by Dover Publications.

OTHER TREATISES

Kastner's and Berlioz's treatises were the most comprehensive textbooks on orchestration that had then been published, but they were not the first.[24] In two articles in the *Gazette musicale* in 1834 (2 and 23 March) Joseph Mainzer declared that he could find no textbook in Germany or France that would give instruction in the ranges of individual instruments or their characters and idiosyncrasies. Pointing out that instrumentation was an important aspect of music with a significant history, he felt the time was ripe for such a textbook and announced that he himself was about to write one in order to spare composers the laborious task of gleaning such information from the numerous tutors and methods published for individual instruments, the product of the Conservatoire's early policy of widening the scope of public musical instruction. In fact there had been several such books, including a useful handbook published in 1813 by Alexandre Choron, the *Traité général des voix et des instruments d'orchestre*, based on Louis-Joseph Francœur's *Diapason général de tous les instruments à vent* of 1772. This was in turn based in part on Valentin Rœser's *Essai d'instruction* of 1764. Rœser was mainly concerned with explaining how to use the two recent additions to the orchestra, the clarinet and the horn, while Francœur's eight chapters discuss in turn the flute, the oboe, the clarinet, the horn, the bassoon, the trumpet, the serpent and the human voice. This last section is an interesting anticipation of Berlioz's chapter

[23] *Cg*, 6, p. 511.
[24] For orchestration treatises before Berlioz, see Adam Carse, 'Text-books on orchestration before Berlioz', *Music and Letters*, 22 (1941), pp. 26–31; and Hans Bartenstein, 'Die frühen Instrumentationslehren bis zu Berlioz', *Archiv für Musikwissenschaft*, 28 (1971), pp. 97–118.

on voices, while the strings are assumed to be too familiar to need any attention. A similar book came from Othon-Joseph Vandenbroek, a Flemish horn player active for many years in the Paris Opéra orchestra. His *Traité général de tous les instrumens à vent à l'usage des compositeurs* (Paris, 1793) gave particular attention to the horn but also covered other wind instruments and timpani too.

Choron's 1813 treatise is likewise principally concerned with wind instruments. He set out the range of each, with useful indications of which notes of the range are weak or difficult or out of tune, which keys suit which instrument, which trills are possible and what kind of phrase has to be avoided at quick tempos. Strings are very briefly summarised, with sections also on keyboard instruments and voices.

It is not certain that Berlioz knew Choron's treatise, but it is probable, for it anticipates many of his principal concerns, even though it was out of date by the time he came to write on the same subject himself. We should expect him, though, to have been familiar with the *Cours de composition musicale* (probably published in 1816–18) by Antoine Reicha, his counterpoint teacher at the Conservatoire. In his *Memoirs* Berlioz said that neither of his teachers, Reicha nor Le Sueur, taught him anything about orchestration and of Reicha he even said that he 'knew the individual scope and possibilities of most of the wind instruments, but I do not think he had more than rudimentary ideas about grouping them in varying numbers and combinations'.[25] In fact part of Reicha's textbook is devoted to orchestration and is far more concerned with orchestral combinations than with the properties of single instruments. His conception of the orchestra as a large instrument upon which the composer plays is so close to Berlioz's own that we have to conclude that Berlioz had never read it, otherwise he would surely have had something more positive to say.[26]

In about 1832 a little handbook appeared, almost unnoticed. This was *Des voix et des instrumens à cordes à vent et à percussion, ouvrage à l'usage des personnes qui veulent écrire la partition et arranger des morceaux en harmonie* by Joseph Catrufo. When Kastner's *Traité général d'instrumentation* appeared in 1837, it did not mention Francœur, Choron or Catrufo, nor did Fétis in his *Manuel des compositeurs, directeurs de musique, chefs d'orchestre & de musique militaire*, which appeared in the same year. Both Kastner's and Fétis's books were designed to equip their readers with a brief but full body of information on the nature and range of instruments. Kastner directed his work especially towards young composers and was the more comprehensive of the two; Fétis had conductors principally in mind. Both writers were voluminously productive on all theoretical and historical aspects of music and these two works exemplify their methods well.

[25] *Memoirs*, chapter 13.
[26] David Charlton, 'Orchestration and Orchestral Practice in Paris, 1789–1810' (Ph.D. diss., Cambridge, 1973), pp. 35–6.

Kastner declared he had been urged to undertake the work by Berton and Reicha, and he confirmed his aim of giving with precision and brevity the fundamental information about every instrument, including many oddities for which Kastner obviously felt strong sympathy. Thus, besides the voices and all the standard strings, wind and percussion of his day his treatise lists the 'viola di sparla', the 'décacorde', the 'gussel ou gusli' and the 'aéolodicon', not to mention many other inventors' brainchildren that never even looked like winning admirers or users. Nonetheless his work is precise and painstakingly informative. He makes scarcely any reference to particular examples of instruments' use, but lists all available 'Méthodes' for individual instruments, works from which he had compiled his main information.

Fétis's book is brief but purposeful. No classic or contemporary works are referred to and there is a certain disregard for the niceties of instrumental practice of which Kastner was so fond. His advice to conductors about how to audition, tune, rehearse, arrange and organise an orchestra was timely and characteristic. Berlioz would have allowed himself a smile on reading the chapter 'Du respect du directeur de musique ou du chef d'orchestre pour les œuvres des compositeurs', having roundly lambasted Fétis in *Le retour à la vie* (later named *Lélio*) in 1832 for distorting the works of great composers. Of Berlioz's familiarity with Fétis's book we have no record. It was reviewed in the *Revue et gazette musicale* not by Berlioz but by the violinist Panofka.

Kastner followed up his *Traité* with a companion volume, *Cours d'instrumentation*, in 1839. Its purpose was to show the application of the knowledge set out in the *Traité*, that is to say to give instruction in the choice of instruments for particular effects and occasions. He gives a summary history of the art of instrumentation and statistics on the composition of the best orchestras (Paris, Stuttgart, Darmstadt), and assesses the character of individual instruments with well-known examples of their use by recent composers. The layout of scores and the use of mutes, pizzicato and special effects are also discussed. Half the book gives examples in full score of what Kastner regarded as the best models for a young composer: extracts from operas by Gluck, Mozart, Meyerbeer and Berton, from choral music by Cherubini and Berlioz (the *Requiem*), and from Beethoven symphonies and other works. This is the book which, we may suppose, inspired Berlioz to write his own treatise. Kastner later issued supplements to both his books, both supplements appearing in 1844 at the same time as Berlioz's *Treatise*.

Curiously parallel to Berlioz's *Treatise* is a remarkable and little known publication by a German musician, Ferdinand Gaßner (1798–1851), Hofmusikdirektor of the Baden Kapelle in Karlsruhe. He was a worthy though unremarkable musician at a time when other German cities might claim their musical leadership in the hands of such men as Mendelssohn, Schumann, Hiller or Liszt. Gaßner's preoccupations were similar to

Berlioz's, and his publications were, like his date of birth, just a few years ahead. In 1838 there were published in Karlsruhe the two volumes of his *Partiturkenntnis, ein Leitfaden zum Selbstunterrichte für angehende Tonsetzer oder solche, welche Arrangiren, Partiturlesen lernen oder sich zu Dirigenten von Orchestern oder Militärmusik bilden wollen*, in which the families of instruments and their individual members are set out and discussed in turn, furnished with details of range, tonal variation, flexibility and character, and accompanied by musical examples drawn from the works of Mozart, Boieldieu, Winter, Meyerbeer, Rossini and others. He was much concerned with instrumental colour and character and with matching sound to its expressive purpose, and although his book inevitably lacks Berlioz's wit and strong sense of personal mission, it is certainly as comprehensive and humane as his.

There is no evidence that Berlioz ever met Gaßner or came across his work. Having no German he could not read it (it did not appear in French until 1851). An uncanny parallel is provided by Gaßner's follow-up publication, a book, indeed probably the first book, on the technique of conducting. *Dirigent und Ripienist* was published in Karlsruhe in 1844, an extremely comprehensive handbook on all the practicalities of the conductor's trade: how to select programmes, prepare pieces for performance, organise rehearsals, deal with hostile and incompetent performers, set the orchestra out on the platform and get them tuned up. He then deals with tempo, expression and ensemble, and describes the correct baton movements, though without the diagrams that are such a picturesque feature of Berlioz's conducting essay. Gaßner then appends a series of sixteen diagrams showing platform arrangements adopted by orchestras in different German institutions, a precious guide to the practices of that age.

After Berlioz there continued to appear new textbooks on orchestration. In French the first important example was the *Traité général d'instrumentation* by François-Auguste Gevaert (Ghent, 1863), translated into Russian by Tchaikovsky in 1865 and revised as the *Nouveau traité d'instrumentation* in 1885. Ernest Guiraud's modest volume, *Traité pratique d'instrumentation*, appeared in 1892, the year of his death. Charles-Marie Widor's more substantial and influential textbook, *Technique de l'orchestre moderne*, appeared in 1904 with many subsequent editions. In his preface Widor paid his respects to Berlioz's treatise and claimed to be merely bringing that work up to date: 'The present work is simply a sequel to a work which deserves the most religious respect and to which we do not aspire.' Strauss's *Instrumentationslehre* (1904) was, as we have seen, an adaptation of Berlioz's work for modern German composers, while Rimsky-Korsakov's posthumous treatise *Osnovï orkestrovki* (St Petersburg, 1913) used his own works exclusively as models for imitation. Among the many orchestration textbooks published in the twentieth century those by Cecil Forsyth (1914)

and Walter Piston (1955) have been most widely read in the English-speaking world, while French readers have relied mostly on Widor's treatise, Busser's enlargement of Guiraud's *Traité pratique d'instrumentation* (Paris, 1933) and Kœchlin's four-volume *Traité de l'orchestration* (written in 1939–43 but not published until 1954–9).

THEMES AND IDEAS

The *Treatise* is a judicious mixture of technical detail, sometimes set out at length, and personal views about instruments and composers. The technical information has been assembled with great care, the fruit of consulting many *Méthodes* and textbooks and of buttonholing friends whose expertise Berlioz could trust. Surviving letters to the flautist Coche, to the authority on the viola d'amore Johann Kral and to the violin-maker Vuillaume attest to Berlioz's search for authoritative information.[27] The complexity of brass instruments of the day almost certainly required Sax's advice, and his magnificent exposition of the trombone and its uses seems to have had inside help, perhaps from Dieppo, the leading trombonist of the age. He was fully aware of a precept stated clearly twice in the guitar section: that only a player of the instrument can write for it (and, by implication, about it) with competence.

Yet he was capable of error, even when writing about his own instrument, the guitar, and we should approach the sections on the violin and the piano, for example, with caution since he had no personal expertise to draw upon. The violin entry is unusually full, from the technical point of view. It covers tuning, range, trills, double-stopping and chords, tremolo, subdivision, bowing, harmonics, mutes, *sul ponticello*, pizzicato, *sul G*, *sul D* and much else. Yet some of the suggestions about harmonics, for example, would be misleading for a novice composer, and Berlioz was cautious enough not to follow his own advice. His understanding of both piano and organ pedals was seriously adrift, and he sometimes mixes up the right and left hands. He was obsessively concerned with the transpositions of wind instruments and explained the subject, sometimes at extraordinary length, evidently because he found players and composers to be woefully ignorant of it. Since current practice was changing rapidly as he wrote, particularly in the case of the cornet, his advice is sometimes breathless, as if the whole topic was getting too complex for a mere treatise to deal with.

Pursuing his goal to 'study instruments which are used in modern music' he deals comprehensively with all the strings, woodwind, brass and percussion then available in France. Without being sidetracked, as Kastner was, by

[27] *Cg*, 2, p. 706; *Cg*, 5, pp. 134, 137.

the crazy inventions that proliferated at that time, Berlioz gives due space to the most important advances, in particular the double-action harp, the application of valves to brass instruments, the bass clarinet, the tuba and Sax's new families of brass instruments, including the saxophone. He seems not to have been aware of the organ swell-box or of advances in machine-tuned timpani, both of which would probably have been to his liking. He included the concertina even though he cannot possibly have seen it as an orchestral instrument, and he gives space to several obsolescent instruments such as the tenoroon and the bugle for which he never had any use himself; in fact he despised the bugle as fit only to 'lead conscripts out to the parade ground', and even then he feels sorry for any soldier who is subjected to it.

In his choice of excerpts Berlioz is much less forward-looking. The passages that he cites from the *Requiem* and *Roméo et Juliette* illustrate an advanced orchestral style (curiously, he never even mentions *Harold en Italie* or *Benvenuto Cellini*, both of which could have provided abundant illustrations of his points), yet the predominance of passages from Gluck, who had been dead for nearly sixty years when the *Treatise* was written, contradicts his claim to be propounding *modern* orchestration. This is what Saint-Saëns meant when he spoke of it as a 'paradoxical' book. Sacchini and Spontini, whose music was already almost forgotten, are cited with approval. Beethoven and Weber were familiar but no longer modern. Strauss's insertion of extracts from Wagner and from his own works gave the *Treatise* an even more unbalanced air. But Gluck was the model from which Berlioz learnt his orchestral sensibility and this, he would assert, was not subject to the vagaries of fashion or mechanical science. Berlioz's ideal was to apply Gluck's incomparable sense of dramatic aptness to modern instruments, an ideal most clearly embodied in *Les Troyens*, with its very Gluckian dramatic tone and brilliant modern orchestration.

There is another sense in which Berlioz's craft is modern. At certain points in the book he advocates techniques for getting effects from instruments which in practice deceive the listener. Somewhere between the eighteenth century, when orchestration was still the art of part-writing, giving instruments self-contained and intelligible things to do, and the early twentieth century, when, as in Ravel for example, the art of disguising one instrument as another and cleverly dovetailing two lines to sound like one was finely developed, composers began to manipulate instruments as parts in a great machine, not as voices in a choir. The milestone is perhaps the *Symphonie fantastique* and the curious passage at the end of the first movement where Berlioz subdivides the violins for a passage in constant quaver movement played *forte* against the full tutti of the wind. He judged the passagework to be too risky for the players to play all the notes, so he split it into two parts to obtain a more secure performance. But because the first

and second violins are seated at opposite sides of the orchestra it would be spatially very uneven to divide this passage between the firsts and seconds. So he divided *both* firsts and seconds; four lines of music thus give the effect of a unison line (see Ex. 25, p. 28). This was certainly a new concept of orchestration, manipulating the allocation of notes to create an effect unperceived by the players themselves. The distribution of the notes of a melody between two or three horns or trumpets crooked in different keys was also a device serving the same end and one which he advocated with enthusiasm and practised widely in his scores.

Although Berlioz's music was regarded as audaciously advanced by many critics of his time, he was never much interested in the concept of modernity for its own sake. His sense of the future was tinged with idealism and impracticable fantasy. He would have liked to assemble, as he explains in the chapter on the orchestra, a huge festival ensemble including thirty pianos, thirty harps and a whole section of violas d'amore. His utopianism here (and in the story 'Euphonia' in *Les soirées de l'orchestre*) presumed that he would have the controlling authority over such vast forces. He was driven to despair by the inefficiency and ill-will of many with whom he had to work (as we read in the last chapters of the *Memoirs*) and an authoritarian strain creeps into his views on conducting. It is hard to imagine an orchestra today taking kindly to his suggestion that players who fail to count their bars should be fined and that a whole section of players should pay for those who habitually offend. On the other hand many conductors will be sympathetic to his view that lazy players who cannot be bothered to do tremolos at the proper speed should be fired.

Behind his idealism and his earnest endeavour to infuse in the reader a proper respect for the high craft of orchestration lies the humour that is never absent from his writings. The *Treatise* is not a funny book on the scale of *Les soirées de l'orchestre*, *Les grotesques de la musique* or even the *Memoirs*, but there are frequent glimpses of Berlioz's habitual humour that raise a smile and lighten the pedagogy. As always, it is tinged with irony, even pain. His evocation of tenth-rate choral conductors (in the chapter on conducting) is absurdly funny, yet for Berlioz it recalled many bitter experiences which he would gladly have done without. Much more appealing are those passages where he finds an excuse for leaping tangentially on to one of his favourite hobby-horses and riding it with fury as far as it will go. Such a passage is the passionate sermon, prompted by his discussion of pedalling in the chapter on the piano, on treating the works of other composers with proper respect. Such a passage is the extraordinary essay on chromatic harmony to be found in, of all places, the section on the concertina; indeed one suspects that Berlioz wrote about the concertina solely in order to be able to air these views. Less surprising is the homily on the proper style of church music to be found in the chapter on the organ.

Berlioz moves us most when he gets carried away by his passion for the subject. The whole *Treatise* betrays a feverish enthusiasm for the art of orchestration as though no one had ever discovered it before. We sense his deep involvement in it similar to the absorption he described when composing works like *Roméo et Juliette* and *Les Troyens*. He gave it an opus number as if it were to be considered one of his musical works and it is no less personal, despite its wealth of technical detail, than they. There are few passages in all his writing to compare with his evocation of the nobility of the trombone, for example, or the miraculous page where the mere thought of how Weber used the clarinet in the overture to *Der Freischütz* draws out an exclamation of admiration so deeply felt that under the stress of emotion the pen seems to fall from his hand. This spirit alone will ensure that the *Treatise* will be read as long as Berlioz's music is played and as long as the music of his age still retains its power to enthrall us.