

provide a ballet for which the word 'spooky' is perhaps more appropriate than 'série' would be, and they rise from their tombs to a broken, halting triplet rhythm played by bassoons in two parts. In *Le Prophète* Meyerbeer's last opera for Paris, three Anabaptist ministers (the libretto deals with the persecution of the Anabaptists) preach in unison, their voices doubled by the bassoon. He was as completely a master of orchestral effect, so that Berlioz's *Treatise of Modern Instrumentation*, notes with enthusiasm his employment of what can be called musical effects; Berlioz explained the effectiveness of the use of a single bell, tuned to F in the bass clef, its tone extended as it loses power by holding its single crochets through complete triple-time beats, while the brass—horns, three trombones and ophicleide—play unison Cs three octaves deep. Meyerbeer, too, realized the effectiveness of *pianissimo* gong strokes under dissonant brass chord marked *pianissimo* or triple *piano*. Meyerbeer is one of Berlioz's most frequently quoted authorities for remarkable dramatic effects in the orchestra.

His mastery, however, is not simply a matter of finding sound effects to heighten moments of tension and add *frissons* to sinister or spooky action. When tunes of broad, pompous dignity are needed in a register where trumpets are not at their most effective, he employs cornets in a manner that never tempts them to sound vulgar. In the love duet in the second act of *Les Huguenots*, he extracts all the possible poignancy from the situation by setting cor anglais and clarinets to whisper broken phrases to each other, the clarinets divided beneath the lower-pitched instrument so that the cor anglais becomes the more penetrating voice. The ill-fated lover, Raoul, who is to be slaughtered in the massacre, sings a beautiful Romance in Act I, accompanied by the archaic, seven-stringed viola d'amour; its tone quality immediately shows us that Raoul is a man apart, an idealist and lover with a mind and character above the common run of people.

The style and the effects that Meyerbeer developed, the huge sensational scenes of ritual, procession and calamity, remained to be used by almost every nineteenth-century composer of opera. To call him a specialist orchestrator is to point out what Berlioz meant when, to point out the areas of their compass in which instruments are at the most effective, and to show what effects they can make in other areas, he found himself frequently citing the example of Meyerbeer.

SEVEN

The Art of Orchestration

Berlioz was born in 1803, the year of Beethoven's *Eroica* Symphony. His home was the small town of La Côte St André, not far from Grenoble. From his father, a doctor, he learnt Latin and developed a passion for classical literature. Dr Berlioz noticed his son's instinctive passion for music, arranged for the boy to have piano lessons—he hardly profited from them—and provided him with a flute and a guitar, which young Hector managed more effectively. Harmony he learned from old text books, and by the time he was fifteen he had begun to compose; apart from a few songs with piano accompaniment he wrote chamber music, usually for flute and instruments with assorted tone colours. Sent to Paris to study medicine, he spent all the money and time he could afford at the Opéra or at concerts, neglecting his medical studies for the study of scores, notably those of Gluck, whose operas fascinated him by their combination of intense emotion and classical restraint. Gluck's orchestra, its eloquent, unhyssical woodwind and its almost statuesque poise, moved him intensely. Forced by circumstances to earn money as a music critic, Berlioz wrote reviews and essays in superb prose, intense in expression, witty, sardonic, imaginative, emotional but brilliantly lucid and economical; more than any other writer he expressed the mind of the Romantic musician. Music must be an expression of passionate emotions in all their immediacy; traditional rules and conventions must never be allowed to prevent the composer from expressing the truth of his own feelings; if the rules came into conflict with the demands of expression, it was the rules which must be abandoned.

For all the limitations of his skill as a performer, Berlioz became the first, and perhaps the supreme, master of the orchestra as a body capable of the widest imaginable range of tone colours and of a dynamic range which from the barest whisper to the almost unbearably powerful. In a group of ceremonial works—the *Requiem*, the *Symphonie Funèbre et Triomphale* and the *Te Deum*, he made unprecedented demands for performers, but these were works designed for special occasions in special auditoria, the

Requiem for the chapel of Les Invalides, the *Symphonie Funèbre et Triomphale* for open-air performance in the Place de la République and the *Te Deum* for the church of St Eustace. In such works, the composer could give himself freedom to explore the acoustic qualities of huge, resonant buildings—in works which demanded magnificence of utterance because of the occasions for which they were written; there are passages in the two church works in which Berlioz explores the limits of sonority, but there are also passages of austere restraint and quietness. Most of his music makes no unusual call for instruments not to be found in the standard French orchestra of his day, with an ophicleide in the brass double-bass register until the tuba became a more satisfactory voice from the deeps, with four bassoons, and cornets in the brass section adopted because of the slowness with which the French accepted the valve trumpet. He regarded two harps as essentials in any powerful ensemble if they were to make any notable effect. The drier voiced side and snare drums, and the bass drum, which are far less resonant than timpani and sound only at the moment of impact, with no power to prolong their note, came into his orchestra, as did both the standard size cymbals and small, "tinkling" (according to 1 Corinthians 13) antique cymbals.

These grandiose ceremonial works make demands for almost unlimited power. The text of the *Dies Irae* in the *Requiem* is a Latin hymn about death and the Last Judgement, imagining the terrors of the end of the world. Writing music to be heard in a large, lofty cruciform church, Berlioz set out to saturate the building in sound. Taking the heavy brass away from the body of the orchestra and the horns, he demanded four separate groups of trumpets, trombones and ophicleide to be placed one on each side—to north, south, east and west—of the orchestra, so that the Last Trumpet becomes a huge fanfare, the four brass groups answering each other until the entire building vibrates with their power; the world ends in great, rolling timpani chords over which the voices shout in consternation. The effect of brass fanfares echoing and re-echoing from all corners of the universe, and of great alternating timpani chords was first attempted by Berlioz in the *Resurrexit* he composed in 1824 and 1825, and which he twice revised for concert performance. He was, apparently, not interested in the rest of the Mass which surrounded this single movement. The *Requiem*, in 1837, made more of the same idea and the *Resurrexit* seems then to have dropped out of his consciousness.

There are passages of overwhelming dynamic power in the *Requiem*, but Berlioz was able to keep a sense of vigorous, athletic movement even when using the heaviest orchestral weight. The great sensational pages are restricted to the setting of the *Dies Irae*,

after which the heavy brass is discarded except for a strange punctuating effect in the choral recitatives in the *Hostias* of the *Offertorium* and later: trombones low in their register hold a note which grows from *piano* to *forte* and back to *piano* while three flutes fill out the harmony of which the trombone plays the keynote, attempting to suggest the effect that comes, for example, from playing an extended note low on a piano keyboard when the damper pedal is pressed and higher strings are free to vibrate in sympathy with the note played. The effect is usually doubtful because of the difficulty in sustaining a very low note without inviting ugliness of tone and an almost rattling *vibrato*. (See Appendix 2, No. 6.)

The orchestration of the rest of the *Requiem* is no less original than that of these huge purple patches, but it is far less sensational. In the *Offertorium*, the choir chants on two adjacent semitones while the orchestra has the melody, a reversal of rôles which virtually turns the choir into the accompanist. The effect was one which pleased the composer, who used it elsewhere, notably in the funeral cortège of Juliet in his *Romeo and Juliet* Symphony. In the *Te Deum*, which opens with great rolling chords from the orchestra at the east end of the church answered by similar but unrelated chords from the organ in the choir gallery at the west end, Berlioz writes for high pitched antique cymbals as well as for multiple cymbals of the ordinary kind, played quietly together as "Cherubim and Seraphim continually do cry"; the quiet clashing suggests the sound of censers swinging before God's throne. The work was designed for a military occasion, with massed side drums in a rarely-played march for the Presentation of the Colours.

The *Symphonie Funèbre et Triomphale* was commissioned by the government to celebrate the tenth anniversary of the revolution of 1830. The work was intended for a ceremony in the Place de la République; the first movement, a magnificent symphonic march, was meant to be played on the march to the ceremony and conducted by Berlioz in bandmaster style, wearing the uniform of an officer of the Legion of Honour. It was scored, originally, for brass and woodwind, a huge military-band; 200 instrumentalists played, losing co-ordination as they moved through the streets; the sound made an impression when the procession moved through tree-lined boulevards but was lost where nothing was available to reflect the sound.

The second movement is a funeral oration, a long slow movement for trombone and orchestra; it was ruined by the massed side drums of the Garde Républicaine as they stood down as their share of the ceremony ended. The last movement, called 'Apoteosis,' is another march, not a funeral march like that of the first movement but a triumphal march with a jolly, popular tune and

the whole is summed up in a chorus which uses the cheerful march tune. The work, despite the comic disasters of its first performance, was a great success and Berlioz made it available for concert performance by adding strings and adjusting the original orchestration to accommodate them.

Ceremonial music in France was traditionally on an extremely grandiose scale, designed from the days of Lully to achieve great magniloquence of utterance, and Berlioz, in his three great ceremonial works, was totally a master of this style, but his ceremonial works stand at the farthest imaginable extreme from the charm and gentleness of another masterpiece, *The Childhood of Christ*, which is delicate and restrained. The music has a tenderness and a grace of melody; its orchestration is full of colour and originality not by the building of colossal edifices in sound but by virtue of his precise understanding of the capacities of every instrument he needs. It was in this that Berlioz was the first composer who could be called an orchestral specialist.

The *Fantastic Symphony*, for example, was composed only three years after Beethoven's death. It uses clarinets in B flat, A and E flat. The B flat clarinets are richest in tone and tend to be melancholy in their lower register while cheerfully perky towards the top of their range, and Berlioz always uses them in the register which serves his expressive purposes. Clarinets in A tend to be rougher in tone but more consistent in mood throughout their register. Clarinets in E flat are stridently shrill and impudent at the top of their range, and Berlioz chooses them to introduce the distorted, parodied version of the symphony's *idée fixe*, its main theme in which the artist hero of the work imagines his Beloved ruling the roost over a witches' Sabbath. The rough-toned clarinets in A provide grotesque counterpoints to the grim, lurching March to the Scaffold.

Berlioz always uses instruments in the register in which they are most eloquent and most characteristic. When they are given a melody it is always placed in the portion of their register where it gains the type of tone which is appropriate to it in that stage of its existence—rich sonority of a violin's lowest G, string and the piercing beauty of its highest E, string, as well as the more neutral quality of its A and D strings, for example, are used always by design, just as clarinetists can take three instruments so that they are able to give the composer precisely the quality of sound he requires. The mood of almost frenzied excitement in which a great deal of Berlioz's music was conceived—"The text of the *Requiem* was a quarry that I had long coveted. Now at last it was mine, and I fell upon it with a kind of fury. My brain felt as though it would explode with the pressure of ideas," he wrote in his *Memoirs*—did

not prevent him from calculating the details of a work with cold precision. If nothing like the heavy tread of the double-basses divided to play four parts at the beginning of the March to the Scaffold in the *Fantastic Symphony* had ever been heard before, the effect has a growing ferocity completely in the mood of that grotesque, fierce music. (See Appendix 2, No. 5.)

No earlier composer had made so exhaustive a study of the actual voices of instruments, the areas in which their voices are rich and eloquent, and those in which they sounded thin and colourless. His *Traité on Modern Instrumentation* is detailed to the point at which even trills and *tremolando* effects on unusual instruments are possible and written out. The title of the book itself indicated in nature: to Berlioz, "instrumentation" was the study of individual instruments and their qualities; the art of combining them in an effective score he calls "orchestration".

Furthermore, he had heard, and marvelled at, Paganini's violin technique and saw how it could be applied to other instruments. Paganini had so expanded the violinist's technique that, during his lifetime, no other violinist was capable of attempting to play his compositions; he invented styles of bowing like *spiccato*, with the bow leaping from the strings between detached notes, and *martellato*, the bow striking the strings to give an almost percussive effect; he detached notes from each other within a single bow stroke. He would not only play *pizzicato*, with the strings plucked instead of bowed, but developed a left-hand *pizzicato*, the unoccupied fingers of his left hand plucking an accompaniment to notes fingered in the normal manner and bowed at the same time.

Many of these tricks, for all their cleverness, were of little practical use to the orchestral composer, for any orchestra could make the same effects simply by dividing the violins; to Paganini, their value was that they suggested that he was doing the impossible and they worked his audience into frenzies of almost superstitious adulation and helped to create the legends about him that had a vast commercial value to a virtuoso passionately fond of money: his shambling walk was the result of years in prison wearing gyves between his ankles; the G string of his violin was made not from catgut but from the intestines of his wife or mistress—whichever it was—for whose murder he had been imprisoned; he owed his almost supernatural skill to a Faustian bargain with the devil, whom some people seem to have seen on the platform with him, guiding his bowing arm as he played.

To Berlioz, Paganini suggested the possibility of a great expansion of technique not only among the strings but throughout the entire orchestra, and was able, from his precise knowledge of instrumental possibilities, to make demands which no previous

composer had considered to be either practicable or necessary while expecting his players to be capable of entering accurately on some minute subdivision of the beat. Especially from Paganini he discovered the possibility of string harmonics, the almost whistling notes an octave above their natural pitch which string players can obtain by touching the string lightly instead of pressing it firmly down. The existence of harmonics had been known since the seventeenth century, but earlier musicians had never systematized them as Paganini did, and had regarded them as cheaply sensational effects. The 'Queen Mab' Scherzo, in the *Romeo and Juliet* Symphony (music that is a rapid, light-textured study in delicate sonorities) has a magical passage in which flute and cor anglais introduce a new theme against a high trilled note and a slowly changing series of chords in high harmonics on the violins which Berlioz has divided into four parts. (See Appendix 2, No. 7.)

To Berlioz, the viola was an instrument with a distinct personality of its own, not a mere component of the bass in a string orchestra. It personifies the Romantic poet and his longing in *Harold in Italy*, and is a suitable vehicle for melancholy thought. Berlioz never gives it any of the brilliance he devotes to the violins but reserves it for melancholy reflection; apart from Mozart in the Sinfonia Concertante for viola and violin, no earlier composer had found the necessity for granting it independence or found the type of expression which suited its character.

New instrumental combinations appear on almost any page of Berlioz's work, together with new effects. Violins and flutes in unison, sharing a melody create a sound he seems to have enjoyed. The combination of flutes and violins doubling a melody in octaves, with the flute lying uppermost, was a combination which, in Haydn's hands, sounds delicious and light, but in the *Fantastic Symphony* the urgent plangency of the violin and the breathy innocence of the flute in unison create a new sound for the *idée fixe* of the *Fantastic Symphony* as the beautiful, asymmetrical melody begins to evolve. Berlioz leaves the new sonority almost naked, with an accompaniment which cannot distract the attention.

Like other French composers of his period, French reluctance to use the valved trumpet left him to exploit the cornet, which carries the waltz melody of the Ball in the *Fantastic Symphony* in a register where the trumpets are condemned to the wide gaps of their harmonic series, and Berlioz uses them to make the romantic dream of the symphony something real and actual; the cornet by nature speaks in a more commonplace voice than the trumpet, and Berlioz's Ball becomes a mere social occasion while it is playing though the music avoids the vulgarity of utterance to which the instrument is sadly prone. In the *March to the Scaffold*, however,

it becomes part of the military band which leads the condemned hero to his death, with woodwind, horns, trumpets and an ophicleide to make the music horribly jaunty and vulgar to offset the lurching march of the victim and the disgusting excitement of the onlookers. The lurching, ungainly progress begins in cellos and double-basses, with bizarre counter-melody from the bassoon. When the band has basted, the trombones take over the lurching theme.

The percussion section of the orchestra owes more to Berlioz, perhaps, than to any other composer. The *Fantastic Symphony* ends its lonely, beautiful *Scène au Champs*—oboe and cor anglais calling and answering each other, it suggests, from vast distances—with a subdued muttering of distant thunder; two sets of timpani playing chords create this effect. The cymbals, used by most composers to create great, climactic *fortissimi*, have a much wider range in his work; they can be stroked gently together, clashed quietly or struck gently with drumsticks—as the moment demands. The side drum, with its dry rattle, comes whenever its voice is appropriate, but Berlioz uses the side drum only when there is a military context for it; Berlioz's side drum has no important civilian duties. Before Berlioz, drumsticks were wooden-headed, allowing no variation of tone; the timpani as Berlioz knew them were shallower than modern timpani, so that few conductors today would consider that the sixteen demanded for the *Requiem* are all necessary with our deeper-shaped instruments. In addition, he prescribed the use, both for timpani and for the other percussion, of a variety of sticks—traditionally wooden-headed, leather-headed and sponge-headed.

Any instrument in Berlioz's orchestra can sing when song is required from it. Romeo, in Berlioz's symphony, is naturally melancholy and poetic. His melody opens the first movement after the choral introduction; it is one of those melodies which the composer develops by a process of evolution; it grows into qualifications and after-thoughts and leads directly into the music of the 'great festivities at the Capulets', a ball scene that grows increasingly noisy and excited; before the end, the melody of Romeo alone, beautiful and melancholy, is heard over the excitement, sung (the word seems more appropriate than 'played') by a trombone.

Orchestration, to Berlioz, was not simply the disposition of notes conceived in the abstract among the instruments of the orchestra and the skill required to dispose them in the most effective way. Many things in Berlioz's scores seem to be created by the instrument which plays them, expressing its personality in a way which would destroy their point and effectiveness if they were played by some other instrument; the colours and sonorities of his scores have an importance in his works hardly less than the importance

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of harmony and balance, so that if Romeo has to meditate with the voice of a trombone, the trombonist's duty is to find a *legato*, meditative tone of voice in his instrument. The point is that Romeo is thinking at a noisy, successful party. The lurching progress of the condemned hero's progress to the scaffold and the brassy vulgarity of the military band in attendance at his death, in the *Fantastic Symphony*, are there because they are true to the situation, just as the bizarre glee of the bassoons are right because they are in the crowd relishing the repulsive spectacle. In the great ceremonial works, Berlioz seeks the maximum of power and dignity that can be combined with his naturally athletic movement and an intensely nervous style; he himself wrote that anyone playing his music had to remember its nervous energy, its elegance and its melancholy. Outside the ceremonial works, much of his music is extremely restrained, for his originality was not restricted to finding new ways of writing louder music than had been heard before. In *Lelio*, the strange addition to the *Fantastic Symphony* for speaker, soloists, chorus and orchestra which Berlioz used as a hold-all for a variety of small works which he did not know what to do with as separate entities, is a movement called 'The Aeolian Harp', the classical instrument which the ancient Greeks hung up, so that its strings could vibrate in the wind. Berlioz's evocation of this intangible music of nature is breathtakingly quiet, gentle, almost intangible and, after more than a century and a half, dazzling in its originality.

To what extent Berlioz was aware of the consequences of his care for colour we do not know: Berlioz the prose writer was prepared to rhapsodize about the poetical effects at which he aimed and to point out with pleased factuality how exactly he brought them off. Their consequence, an unusual clarity of line, does not enter into his discussions although his care to see that instruments are used in their most eloquent register and that however difficult the music they are asked to play, they are never asked to do anything which belies their own nature; the instruction to the violins to play *col legno*, with the wood of their bows, in the last movement of the *Fantastic Symphony* is very rare in Berlioz's work. Berlioz's orchestration is, strictly speaking, purely functional because the colour is an essential function of expression and clarifies the work's thought-processes as well as its presentation.

The idea of orchestration as a specialized branch of the composer's work, needing study apart from the other elements of his work, or in addition to them, grew from his compositions and from the study of instrumental possibilities and practicalities in the *Treatise on Modern Instrumentation*. Schumann's symphonies, composed between 1851 and 1861, are the work of a composer who

admired Berlioz and, as a critic, wrote eloquently about such of Berlioz's compositions as came his way: the quality of their themes is striking, their harmony impressive and their aim nobly ambitious. They are much superior to many works which have won far greater popularity. They remain problematical works because their orchestral presentation is less than expert and they need special sympathy from the conductor, so that when Mahler performed them he re-orchestrated them, or rather amended their orchestration widely enough to have his versions regarded as re-orchestrations. Schumann's inexperience of the orchestra leads him to thicken the scoring, to indulge in doublings which cease to add emphasis and can make his music, in under-rehearsed or unsympathetic performances, sound sadly stodgey and heavy in movement. The orchestra had become too complicated an instrument for those who had not mastered its special technique, and Schumann's flawed but impressive symphonies come from a composer who could neither resist nor properly digest the orchestra's new richness. Schumann was for a time a conductor in Dusseldorf, but too late in his career to utilize his experience of the orchestra in practice in his music; he was, too, it seems, an unsuccessful conductor.

Most of Berlioz's music was heard for the first time at concerts which he himself mounted. In Paris he hired the hall or theatre, organized the best *ad hoc* choir and orchestra he could find, had the orchestral parts copied at his own expense, arranged the publicity and the box-office staff; he rehearsed his forces exhaustively. Usually his concerts were played to capacity audiences and great enthusiasm, but the expenses were so great that his earnings from these great efforts were usually pitifully small.

That is why his growing fame as a composer and his skill as a conductor took him to London in 1848 as conductor of the opera promoted by his eccentric compatriot Louis-Antoine Julien, the conductor of successful Promenade Concerts. In 1852, having spent a year as conductor of the New Philharmonic Society, challenging the conservative policies and social exclusiveness of the original Philharmonic Society, he was later offered the conductorship of the Philharmonic Society itself. Concert tours, with programmes of his own music and chiefly, that of Beethoven, took him to all the major German music centres, to Vienna and to Russia. The accounts of his travels, written as open letters to his friends and printed in the *Journal des Débats* (the newspaper of which he was music critic) were included eventually in his *Memoirs*.

They provide, amongst other things, a vivid picture of orchestral conditions in Central Europe between 1840 and 1850. At Stuttgart he found an orchestra with the instruments necessary for what he called "Modern operas", including a harpist—a rarity, he dis-

covered, in mid-nineteenth-century Germany, but at Hechingen, a small town nearby, he rearranged movements from the *Fantastic Symphony*, *Harold in Italy* and the *King Lear* overture for a tiny orchestra of only fifteen strings and with only ~~one~~ ~~trumpet~~ ~~trumpets~~. His report of his visit to Mannheim begins with a hilarious account of a typical rehearsal at which the trumpeters were equipped with trumpets playing in the wrong key and timpanists who knew no other sticks but those with wooden heads; he had, however, taken an assortment of sponge-headed sticks with him. After three or four hours of getting things straight, the musicians showed themselves to be enthusiastic, disciplined and eager to rehearse until they knew the music well enough to be sure of giving a good performance. Mannheim provided him with a harpist, but the cor anglais was played badly by a good oboist; as there was no ophicleide, a valve trombone was given a special extension to enable it to cope with ophicleide notes outside its range. At Weimar, Liszt had pressed all the string players in the neighbourhood into service to provide the visitor with twenty-two violins, seven violas, seven cellos and seven double-basses.

Mendelssohn, who thought Berlioz a musical barbarian (Berlioz himself had a great admiration for Mendelssohn's music), had done all he could to prepare for Berlioz's visit. The orchestra had been augmented to include twenty-four violins; there was a cor anglais, but it was so bad that all its solos had to be given to a clarinet; and there was neither harp nor ophicleide. At Dresden, where Wagner had recently been appointed *Kapellmeister*, apart from a double-bass player so old that he could hardly support the weight of his instrument, he found everything he wanted though the oboist could not be cured of the habit of adding decorations to his part. Brunswick could not provide an ophicleide or a cor anglais; the harp was an old-fashioned instrument without the nineteenth-century system of pedals which enabled it to play in every key, and the harpist was a fine musician but only a novice as a harpist. But the orchestra took to Berlioz's music and played it with fiery enthusiasm. Hamburg provided an ophicleide but no cor anglais, but Berlin was a musician's paradise; orchestra and military bands were matched by a choir large enough to do justice to the monumental music of the *Requiem*. Hanover offered him an orchestra of good musicians but only twenty-four strings; there was no ophicleide, so Berlioz used a tuba from the military band as a substitute. The orchestra at Darmstadt was bigger and had a good ophicleide.

In Vienna, Berlioz found the court orchestra as good as the best orchestras he had encountered anywhere in Europe, and Nicolai was one of the few conductors he singled out for praise. He noted

that programmes in Vienna normally consisted of old music. The concerts he heard, unlike the one he conducted, were played by amateur orchestras which he admired for their enthusiasm and the fact that they came to rehearsal with their parts already studied. What he did not seem to analyse was that these orchestras, and the professional Court Orchestra, had grown up with Beethoven's music but had seen no reason to try to expand their style to cope with any music later than Beethoven's, like the Philharmonic Society in London, and the *Société des Concerts du Conservatoire*, they existed in the past and had no interest in the way the orchestra was expanding to meet new expressive needs. That is why Berlioz spent two years of his life and a vast amount of energy attempting to create a concert society and orchestra capable of understanding and performing contemporary works, like the New Philharmonic Society in London, the first season of which, in 1852, Berlioz conducted.

Like every other composer who, by the 1850s, composed music which did not remain decorously within the limits set for them by Beethoven's admirers, Berlioz was described as a disciple of Wagner though the music of the two is temperamentally and technically poles apart and despite the fact that the *Fantastic Symphony* was written when Wagner was still in his teens and the *Requiem* when he was only in his early twenties. From 1839 to 1842, Wagner was living in abject poverty in Paris and undertaking every musical chore which could earn him a little money. He had begun his climb up the German musical ladder with conductorships at increasingly respectable theatres; however his inability to keep his expenses within a sensible relationship to his income had made it necessary for him to run away to Paris in the hope of getting rich quickly through the composition of an opera which would sweep the authorities of the Paris Opéra off their feet. He had little money with which to patronize the Opéra or the Paris concerts, but he heard Berlioz's four symphonies. To his mind they had great faults of construction and a lack of artistic restraint which worried him, but their imagination, their passion and their unprecedented orchestral colours and textures made him feel, he wrote later, like a mere schoolboy. The two leaders of the modern revolution met, as they did in Dresden in 1842, but they never became friends. Berlioz wrote warmly of such of Wagner's music as came his way and seems to have had little difficulty in coming to terms with the German master's style though he wrote adversely of Wagner's too frequent recourse to strings *tremolos*, a device which he regarded as lazy and unimaginative. Wagner later wrote harshly of some of Berlioz's works before he could possibly have heard them, but Wagner, during his stay in Paris, was a completely obscure German

musical hack who had, so far, created nothing to indicate his genius, so that Berlioz's sympathetic handling of his early works indicates the French composer's insight.

Wagner was ten years younger than Berlioz. His first professional engagement had been as chorusmaster in the tiny opera at Würzburg in 1832, when he was nineteen; his task was to drive a choir of fifteen through elaborate new operas, like Meyerbeer's *Robert le Diable*, which demanded massive choral and orchestral forces. In 1834 he moved on to a conductorship at the slightly less undernourished opera-house at Magdeburg—a promising post for a musician not yet twenty-two years old. In 1837 he became conductor of the reasonably well organized opera in Riga, but two years later, overwhelmed by the accumulation of debts that had followed him from Würzburg and Magdeburg, he took to flight and made his way to Paris to compose an unsolicited work for the Opéra and thus make his fortune and an unassailable reputation.

At this time, Wagner was still a promising but entirely immature composer looking for a style. He had, however, trained himself to become an extremely efficient conductor, looking for performances in which he could achieve the subtleties of interpretation which few of his contemporaries could understand but knowing how to conduct in a manner which could achieve them.

Although he knew that his real future lay in the opera-house, where he planned to regenerate (that was his word) German life and German art through music and poetry and through the mythology of his people, he realized that the orchestral and chamber music of Beethoven, and to a lesser extent the symphonies of Haydn and Mozart, pointed out the direction in which music must travel: opera was to make use of the techniques developed in the symphony. An orchestra which had not got the symphonies of Beethoven into its blood stream, he believed, was an orchestra denied the real fruits of its training.

Therefore he set to work in Riga to establish regular concerts by the theatre orchestra. He gained the permission of the theatre management to organize subscription concerts with the twenty-four musicians who comprised his band; when he appealed to them in an open letter to support his plan, the orchestra joined him to a man, perhaps because of the idea that any profits—and he admitted that at first profits would be slow to come—would be shared among the players. But the concerts never began, and Wagner lost his post six months later.

In Dresden, where he was appointed Kapellmeister at the Royal Opera in 1842 after the production of his first really effective opera, *Rienzi*, concerts had been given by various short-lived amateur orchestras and, from 1844 to 1847, by Ferdinand Hiller, a com-

poser, conductor and pianist, and a disciple of Mendelssohn in the 1830s. Hiller's reputation at that time stood higher outside Saxony than Wagner's. His orchestra consisted of professional musicians not attached to the court establishment, and though Wagner had no respect for Hiller as either conductor or composer, Hiller moulded his team into a workable orchestra.

The court musicians, employed in the opera and the royal chapel, gave one concert each year, on Palm Sunday, for its own pension fund, and both the court authorities and the players themselves objected to the idea of regular concerts, as likely to diminish the appeal of the all-important yearly event. In 1846, Wagner used the pension-fund concert for a performance of Beethoven's Ninth Symphony, still regarded in Dresden as an incoherent, difficult work which could not win a capacity audience. In the event, the performance was so great a success that the Ninth Symphony became standard fare at later pension-fund concerts and aided Wagner in his campaign to establish regular concerts by his orchestra. And though both Hiller's and Wagner's ventures failed, regular concerts in Dresden continued under the direction of two freelance musicians, who took over Hiller's ensemble and made it successful by playing their programmes in the open air, for one of Dresden's deficiencies was the absence of any suitable concert hall.

Wagner's determination to make concert as well as operatic music part of his province was in tune with the ideas of many other musicians of the time. Spöhr, for example, not a revolutionary figure either in political beliefs or in musical doctrine, had secured permission to give regular public concerts with the court orchestra in Cassel, popular and effective subscription concert series were well established in Halle, Frankfurt and many other German towns which were following the example of Leipzig, so that the traditional division between opera as the art of the aristocracy and the concert as a middle-class amateur substitute was coming to an end.

When, in 1848, Wagner left Dresden as an exiled revolutionary with a price on his head, he ceased to be a regular professional conductor. In Zürich, where he made his home, he worked for a time with the Music Society and the Opera, but for the most part he was free to concentrate on composition; his experience as conductor of the Philharmonic Society concerts in London in 1855 was dispiriting enough to lead him to abandon any idea he might have had of earning his living in the one musical sphere where he was an acknowledged master. After London, Wagner conducted little except thoroughly rehearsed, model performances of his own works, and those were few because he refused to permit productions which might prove through the deficiencies of a theatre's equipment or personnel to be unworthy, like Berlioz, he found that

performances by other conductors discouraged rather than did service to his cause.

By this time *Rienzi*, grand opera on Meyerbeer's scale, *The Flying Dutchman* (the first truly Wagnerian work), *Tannhäuser* and *Lohengrin* were going the rounds of the German opera-houses with great success, though Wagner knew that many of the productions showed little understanding of what he was actually trying to do. He was at work on the opera of *The Nibelung's Ring*, though many years were to pass and his style was to develop much farther before he completed the cycle of operas with *Siegfried* in 1869 and *Die Götterdämmerung* in 1874.

As a master of the orchestra, Wagner was Berlioz's equal, but their aims and their styles were entirely different. The brilliance and colour of Berlioz's orchestration goes along with elegance and fluidity of movement; his power is achieved not so much by weight and mass as by energy and muscular strength. Wagner's 'sound-ideal' (to anglicize a useful German term) was richness of sound through blended colour out of which, from time to time, important themes flash with great brilliancy of colour; at the same time, it is sound designed to saturate any auditorium. In the *Rheingold*, when Valhalla has been built for the gods and their shady business-transactions are momentarily forgotten by all except their leader, Wotan, they make their way over the rainbow bridge to their new fortress. Wotan picks up the sword which he is to pass on to his human descendants, though Wotan does not yet realize this, to be created to redeem the world from his own sharp practice. The music at that point is a sonorous and splendid processional march as the gods enter their new abode, and the motif which is to represent the sword and be developed as the sword plays its part in destiny flashes with superb power and clarity from the trumpets.

Both Wagner and Berlioz, when writing to achieve maximum power, wrote louder music than any of their predecessors, but there is, of course, a vast distinction to be drawn between loudness and noisiness; in his early works, as in *Rienzi*, the opera to which he owed his initial success, Wagner's orchestral technique leads to noisiness from uncertainty of texture. He had not, at that time, learned how to organize his orchestra so that it assimilated great outcries from the brass, and at times the brass stands out with strident ferocity. As his use of the orchestra developed and as his musical ideals became more subtle, Wagner's orchestral textures contain and assimilate the hugest orchestral fortissimos which are designed and scored with such roundness and deliberation that they remain beautifully mellow and rich. The climax of *Siegfried's Funeral March*, in *Götterdämmerung* when the brass rises to its grandest climax in praise of the murdered hero, or when, as the

opera ends, the old world of the gods collapses in flames, the Rhine overflows and an ancient wrong is finally righted, what seems to be unleashed is not unbearable volume but mighty, irresistible power.

It is Wagner's search for orchestral textures capable of sustaining the power of his vision and achieving the gorgeously sensuous climaxes in which dramatic tension explodes into intense emotion, as at the end of Act I of *Die Walküre*, which forces his orchestral style to reach unparalleled richness and beauties, as in the perfect, unbroken arch of the *Lohengrin* prelude, a meditation on a single theme (that which characterizes the Holy Grail, whose servant Lohengrin was). Four solo violins, with the rest of the violins divided into four parts, with three flutes and two oboes, all high above the stave soaring in ethereal heights, expound no more than a chord of A major. This is echoed by the flutes and oboes, and it swells from *pianissimo* to *piano* while the woodwind carry it back to *pianissimo* again. As it dies away, the four solo violins take it up an octave higher, in harmonics, and into this atmosphere of effortless gentleness, the 'Grail' theme, on which the prelude meditates, appears first in the highest violin register; first woodwind and then brass enter, climb to a mighty fortissimo which dies away, in the distant heights of the opening; Wagner himself said that he had thought as he wrote of the Holy Grail descending from heaven in a vision, revealing itself to mankind and then ascending until it was lost to sight.

The subdivided violins, imposing themselves on the hearer's attention at a register which exploits their most piercing sweetness, have a beauty which is not disembodied but which is almost swooningly sensuous, and the whole effect of the prelude is to exploit an orchestra in which there seem to be no real contrasts; Wagner wrote, very often, and perhaps nowhere more gorgeously than in this prelude, to achieve an entirely homogeneous orchestration. Ultimately, it seems, he wished for an orchestra which contained all the possible contrasts of tone and colour as enrichments and not as differences.

It was unity of texture rather than ever-increasing power which led Wagner to attempt to complete the brass choir, in which diversities of tone rather than deficiencies in the register seemed to worry him most; he set out to give it not only as wide and complete a range as the strings but also a similar unity of tone. For the orchestra of *The Ring*, he invented the instruments which we know as 'Wagner tubas'; their primary purpose was to fill the gaps between trombones and horns, and they were to be played by a second quartet of horn players; their tone is closer to that of the horns than any of the other brass, and the word 'tuba' in their

name seems to be a misunderstanding of the German word *Tuben*, which simply means 'tubes'. Wagner used them in a group of four: two in the tenor register, tuned in B flat, and two in the bass register, tuned in F: they are played through horn mouthpieces; they have four valves to improve the intonation of their lower notes.

Even as late as 1862, when he prepared the score of *Tristan und Isolde* for publication, Wagner was still not content with the brass section of the orchestra. Because the valve horn, apparently necessary for such complex harmony as that of *Tristan* did not play with the mellow richness of tone which had been the great beauty of the old natural horn, and because the difference of tone between open and hand-stopped notes on the natural horn disturbed him, Wagner prefaced the score with notes about the orchestration. In these he more or less specifies the use of natural horns, instructing the players to equip themselves with all possible crooks so that as much as possible of the score can be played in open notes, and to resort to hand-stopping only for those notes which could not possibly be reached by any other means; at the same time, he looked forward to the time when the tone of valve horns was sufficiently improved to make it not only convenient but correct to use them.

Wagner's search for richness and homogeneity of time was eventually satisfied in the Festival Theatre at Bayreuth, which, if not exactly designed by him, was built to his requirements. We are accustomed to Wagner singers struggling often both unmusically and unsuccessfully through the sound of his orchestra in traditionally designed opera-houses, and this was one element in performance he planned to avoid. The orchestra pit in the Bayreuth Theatre is closed in, invisible to the audience, as is the conductor, behind an acoustic shell which directs the sound towards the stage, so that by the time it reaches the audience it is completely blended and damped sufficiently to carry with, but not to overwhelm, the voices of singers on the stage. But the greatest glory of the Bayreuth Festival Theatre is its resonance and richness, the extent to which sounds heard in the theatre are alive in their own right. Shortage of money when the theatre was built determined that both its interior and exterior walls were built of wood as a purely temporary measure. Stone, concrete or brick—and the theatre was meant to be built of brick—covered in plaster or curtained, either reflect or absorb sound, but in the Bayreuth Festival Theatre, the only sound-absorbing material is the canvas 'ceiling' (another temporary measure), while the wooden body and the decorative 'pillars' of wood, which were empty and simply acted as sound boxes; the whole theatre is itself a vast resonating box vibrating in sympathy with the music played within it. The resulting sound was so glorious

that, while the outer walls of the theatre were rebuilt according to the original plan, the wooden interior was left unaltered and has been carefully preserved, any replacements provided by the types of wood originally used in the 'temporary' construction. As the theatre was built with little regard for expense until its original framework was completed, and as there was no effort to compromise Wagner's 'sound ideal', music heard in the Festival Theatre is Wagner's music heard precisely as Wagner wished it to be heard; these are not, of course, the ideal conditions for all kinds of music. Wagner engaged 115 players for his first Bayreuth Festival, and the acoustical conditions he had designed were not meant to emasculate them, so that the tone was rich, sumptuous and permitted singers to sing beautifully without forcing the orchestra into unnatural restraint.

Within the terms of his ideal, Wagner's orchestra is capable of great varieties of expression. As much as Mozart's opera audience it is involved in the drama which provides it with its own point of departure. The storm which beats against Siegmund as he makes his way to shelter in Hunding's house at the beginning of *Die Walküre* is, at first, an elemental natural force directed against him; it becomes the situation in which he is trapped, it encapsulates the fate that awaits him and which nothing can avoid. The flash of light from the hilt of the sword which his father Wotan had driven into the roof tree of Hunding's house, the brilliance of the moonlight as, magic sword in hand, he runs with Sieglinde from his enemy's home, the magic of the forest in which Siegfried kills the dragon and learns the language of birds: these are sound pictures as vivid as any in music, but they are also expressions of the inner nature of the action in which the *dramatis personae* are involved; the music demands the scene it creates, for the music is always the meaning and purpose of the drama it helps to enact, and Wagner's richness of colour and magnificence of utterance springs always from the inner nature of the scene which interprets the essential drama in the music. If, for much of the time, Wagner's instruments sink their individuality to the music, but without sacrificing it, they do so to become part of a superb and beautiful wash and blend of colour. The magic of Hans Sachs's midsummer eve in *Die Meistersinger* is, as much of the greatest of Wagner's music always is, musical intoxication, but the intoxication is created by the characters and their situation, for it is out of these that the gorgeousness of the music rises.

A Wagnerian music-drama (to use the term that the composer preferred to opera) is an application to opera of the style and technique of symphonic composition. But whilst the symphony sets its own limits on the number of themes a composer handles and

the harmonic range of his development, any passage by Wagner can involve not the development of a theme but the development of a number of themes involved in an interplay motivated by characters and situation. Even so spectacular a purple patch as 'The Ride of the Valkyries', which opens the last act of *Die Walküre*, deploys and develops three themes all in one way or another expressing aspects of the Valkyrie personality, their habit of riding through the air and the horses on which they do so. A whole process of thought and the ideas related to it, is bound up in the 'Magic Fire Music' with which *Die Walküre* ends: it combines themes associated with the magic fire which defends the sleeping Brünnhilde, the divine spell that puts her to sleep, with her loss of divinity, with Wotan's sorrow at the punishment of the favourite daughter who has disobeyed him. The music has a great, rich, sensuous beauty, but the beauty is the fruit of an intense, symphonically organized development of themes and the splendour of his orchestral style of glowing, blended, splendidly coloured sound. The orchestral intoxication is not a way of treating the music, applied to it by a brilliantly skilful craftsman; it is simply the audible manifestation of the music because it is the way, perhaps the only possible way in which Wagner's proliferating thematic material and its development can be made lucid and comprehensible; in this sense, its beauty is a by-product. *See Appendix 2*

The love music of *Tristan und Isolde* is the expression of a love too demanding and too passionate to reach satisfaction in human life: its fullest expression comes in the huge love duet in several movements which occupies a great deal of the opera's second act. This itself is a development of a number of distinct but related themes, most of them mere short phrases, which express, or manifest, or which are associated in the composer's mind with (there is no really acceptable way of putting into words the relationship between Wagner's motifs and the thought which they embody), the fate which made the love of Tristan and Isolde inescapable, of the impossibility of its fulfilment, of the guilt it involves by demanding the betrayal of a friend, of love as the only reality in a world of unrealities, of day as illusion and of night as the time of reality because it is the time of love, and finally, of irresistible sexual excitement. Whatever the metaphysical value of Wagner's poetic expression of these ideas in Wagner's obscure, metaphysical text, the music is at least as explicit as *Lady Chatterley's Lover*. Commentators on the opera find some forty *leit-motiv* (or essential themes) out of which the music grows, all given added significance by the various dramatic situations through which they develop and gain new implications, and they are developed in a wonderfully seamless polyphonic style. The music of inevitable frustration, of an

endless longing to be satisfied only in death, opens the prelude, and from it, a whole complex of related themes germinate, each manifesting a new aspect of the love of Tristan and Isolde. Any few bars of the Prelude show how themes only a phrase long develop from each other and intertwine. (*See Appendix 2, No. 8.*) *See Appendix 2*

Wagner's polyphony is not only or always the subtle development of small motifs by combination and transformation. At the other end of the world from *Tristan und Isolde* is *Die Meistersinger*, the subject of which, behind its happy plot of a song contest and a love affair, is the strength of musical tradition and the power of tradition to assimilate new and apparently revolutionary musical expression: the revolutionary learns the true worth of tradition, the traditionalist the power of originality; it is the love music, of course, which is revolutionary and has to find the way to reconcile itself with the tradition. The Mastersingers have a fine, proud, professional theme; their tradition is a shorter theme, almost a march and closed in on itself; once it has spoken, it can do little but repeat itself while the Mastersingers' theme is open-ended and can move along in sequences which make possible exciting harmonic changes and movement; the new note of revolution is sounded by the love song with which the young hero-artist wins the contest; at the end of the overture, the three combine masterfully to make the reconciliation of revolution and tradition entirely explicit.

To Berlioz, the art of modern instrumentation was, in a sense, to use the various instruments and themes in a way which showed them to belong to each other, to set the instruments of the orchestra free to express their own personalities and to add the power of their personalities to the essential purposes of the music. To Wagner, on the other hand, the orchestra was really a multiple instrument of vast power, with a vast range of expression and colour; his orchestration was the art of choosing the instrument or combination of instruments which could most perfectly convey his thought and emotion. One needs only the final chord of *Tristan und Isolde*—a resolution of dissonances, harmonic problems and therefore emotional, intellectual and spiritual problems for which the ear has longed since the opening of the work—to see in its spacing through the orchestra, its various colours blending as the colours of a rainbow blend, to recognize the composer's consummate mastery. If nothing else by Wagner survived, the final life-enhancing pages of the overture to *Die Meistersinger* and the closing bars of *Tristan und Isolde*, though they would tell us only a little about Wagner the musical thinker and almost nothing about Wagner the dramatist, would show us that he was one of the supreme masters of the orchestra.