NEMA NEWSLETTER

Editor: Francis Knights

Volume viii/1 (Spring 2024)

Welcome to the *NEMA Newsletter*, the online pdf publication for members of the National Early Music Association UK, which appears twice yearly. It is designed to share and circulate information and resources with and between Britain's regional early music Fora, amateur musicians, professional performers, scholars, instrument makers, early music societies, publishers and retailers. As well as the listings section (including news, obituaries and organizations) there are a number of articles, including work from leading writers, scholars and performers, and reports of events such as festivals and conferences.

INDEX

Listings

The *NEMA Newsletter* is produced twice yearly, in the Spring and Autumn. Contributions are welcomed by the Editor, email fk240@cam.ac.uk.

Copyright of all contributions remains with the authors, and all opinions expressed are those of the authors, not the Association.

NEMA is a Registered Charity, website http://www.earlymusic.info/nema.php

v.2 revised

Interview with Lisa Beznosiuk

Francis Knights

Francis Knights: How did you first get interested in music and what was your early training?

Lisa Beznosiuk (illus.1): I can't remember a time when I wasn't interested in, or deeply affected by hearing music – it would usually be an emotional response, for example, crying in church at the sound of the organ. I grew up in East London and began learning piano at about the age of seven, often playing at home with my violinist brother, Pavlo. Later my Dad took me to hear a youth orchestra at our local Saturday music school and I became totally obsessed with the flute. I loved the sound, which seemed so free and natural compared to the reed instruments. I loved the shiny, glamorous silver appearance (compared to the dark wooden winds – ironic given the direction in which my career went!) and I also relished the fact that the flute went sideways instead of forwards like all the other wind instruments (apologies to all my woodwind colleagues!)

Illus.1 Lisa Beznosiuk with her original Heinrich Grenser four-key flute

After what seemed an interminable wait I was finally able to start flute lessons with David Jewel at the Redbridge Borough Music School on Saturday mornings, learning on a hired instrument. The provision of free music lessons by local borough councils was life-enhancing and changed many lives, whether or not the students went on to become professional musicians, and it is sorely missed.

I lived for Saturday mornings – for my flute lessons and playing in the wind bands and orchestras. My brother and I also spent many happy hours choosing records and scores from our excellent local music library in Leytonstone, now also sadly gone. When I wasn't playing the flute I would listen to records, following the scores assiduously and dreaming of a day when I might play in a professional orchestra. I'm amazed that I ever got any schoolwork done!

Having fallen for the silver flute it's hardly surprising that I leaned towards the exciting, colourful orchestral repertoire of the 19th and early 20th centuries - Mahler, Rimsky-Korsakov, Tchaikovsky, Ravel, Debussy, Stravinsky and Sibelius…

During my teens I would go with a school friend to BBC Proms concerts at the Albert Hall-sometimes several times a week. This was the 1970s, when Pierre Boulez, as Principal Conductor of the BBC Symphony Orchestra, created fabulous, inspiring programmes featuring all my favourite composers plus a lot of contemporary music.

There hadn't been much baroque music in my musical diet to date but there was one Prom concert which I remember vividly for the extraordinary sound world, unusual harmonies and beautiful melodies - Rameau's opera-ballet *Les Boréades* conducted by John Eliot Gardiner with the Monteverdi Orchestra and Choir. I next encountered the work playing it with Gardiner in his English Baroque Soloists in about 1984, and again in 1998 at the Salzburg Festival and the Proms with Simon Rattle and the Orchestra of the Age of Enlightenment. It turned out that Simon Rattle had attended the same Prom concert in the 70s and been similarly smitten with the music of Rameau!

Studying at the Guildhall School I found myself slightly out of step with the prevailing style of modern flute playing, struggling to produce the requisite volume and powerful vibrato. It seemed necessary for me to 'pretend' in order to be expressive in that particular flute style and I was a bit lost, until one day I heard a lunchtime recital given by baroque flute luminary Stephen Preston, which really changed my life. To my ears this simple wooden instrument made the ideal flute sound - naturally expressive and colourful. Stephen helped me get my first *traverso* and I felt instantly at home. At last I was able to make the sound that I'd always had in my head.

Stephen was an inspiring player, researcher and teacher, impressing upon his students the need to understand the essential significance of nuance, shaping, legato, articulation and rhythm in baroque music. He passed on his deep understanding of *bel canto* and baroque dance and encouraged us to apply them to instrumental playing, often asking us to repeat a bar over and over (!) until the correct expression was achieved. I can still picture student

groups taking it in turns to play, and then dance minuets for each other. Thus it was that my practical study of the flute opened the door to the fascinating world of baroque music.

Tell us about your performing and recording career, and how it has changed over the years. How has the historical instrument movement developed since you started?

After graduation I was extremely fortunate to be entering the music profession at a time when the 'early music' scene was really taking off. I was in the right place at the right time and exciting solo and ensemble opportunities came my way, including some pioneer baroque and classical recordings with the English Concert (illus.2), the Academy of Ancient Music[1] and English Baroque Soloists.

Illus.2 As Principal Flute of the English Concert, playing the Roderick Cameron boxwood Denner copy

I also count myself very lucky to have played alongside Stephen Preston and Nicholas McGegan in lavish productions of Rameau opera-ballets staged by Lina Lalandi and the English Bach Festival. Lina was responsible for inviting European trail-blazers Frans Brüggen, Gustav Leonhardt and the Kuijken brothers to play in her festivals – yet more inspiration for aspiring baroque musicians.

Looking back I realize I had very little conception of the business side of a professional career in music; I just adored playing the music and was fortunate enough to be working whilst being able to live cheaply - I didn't even have a student loan to pay back because my music education had been almost free.

During the course of my career, performance on period instruments naturally extended into later repertoire – Mozart, Haydn, Beethoven and beyond – fuelled by a burgeoning recording industry. I am amazed when I look back through my diaries and see how much work there was: civilized touring with enough rest time, recordings and associated concerts with adequate rehearsal! When Roger Norrington mounted his epic 'Experience' weekends at the Southbank (Haydn, Beethoven, Berlioz) the London Classical Players would record at Abbey Rd Studios, having had the luxury of a weekend of concerts, recitals, relevant talks and events; I even remember there being a German sausage stall to complement the repertoire. During this heyday of recording it was normal for members of the orchestra to do a first 'take' then all crowd into the production room and listen to the recording, discuss balance, changes etc with the producer and director. Happy times!

In 1986 I was among the original group of musicians who founded the Orchestra of the Age of Enlightenment (illus.3 and 4). We wanted to pool our knowledge of period performance and take responsibility for our own ensemble. As well as inviting established European directors from our field of expertise, like Frans Brüggen and Gustav Leonhardt, we wanted to lure conductors from the mainstream such as Simon Rattle, Charles Mackerras and Vladimir Jurowski.[2] At the time we had no inkling of just how successful the OAE would become or the extent to which this healthy cross-fertilization between historical and mainstream performance would come to influence the way music is now played and programmed the world over.

Since then the title 'early music' has given way to 'historical performance', and the range of music covered grown ever wider and closer to the present day such that, nowadays, performances of Mahler (illus.5), Elgar and Stravinsky on period instruments are not uncommon. I relish this breadth of repertoire and, for current OAE concerts, have been preparing works ranging from Bach to Sibelius, via Glinka and Rachmaninoff on a number of different flutes.[3] Piccolos too! (illus.6).

Illus.3 The OAE wind section under Charles Mackerras recording Schubert's 9th Symphony at Abbey Road Studios (1987), with Neil McLaren (flute) and Paul Goodwin (oboe). Lisa is playing her Cameron eight-key Grenser copy. Photo:Alex von Koettlitz

Illus.4 A more recent OAE wind section, with Katy Bircher and Lisa (eight-key copies of Grenser by Cameron and Tutz), alongside Anthony Robson (oboe)

Which composers and repertoire do you most enjoy playing?

- It is always a huge pleasure to come back to Bach, especially playing the Passions at Eastertide.
- Rameau – anything!
- Mozart, Piano Concertos, Symphonies 39, 40, 41, *Marriage of Figaro*
- Beethoven, *Fidelio*, Symphony No.3
- Berlioz – there is an exceptional, unique sound to his music when performed on period instruments.

Illus.5 Rudall Carte ebony flute (c.1925), Boehm system with open G#, used by Lisa for late Brahms and Mahler with Norrington and for Tchaikovsky with Jurowski

Illus.6 Original and reproduction piccolos by Martin Freres, Henry Potter and Roderick Cameron

What types of instruments have you used over the years?

My first one-keyed flute was a boxwood Goulding flute made in London, probably c.1820 (illus.7). Subsequently many of my baroque and classical flutes were made by Roderick Cameron, who sadly passed away late last year (illus.8). We worked together on his copy of the original Bressan flute in the collection at the Victoria & Albert Museum (illus.9). This thick-walled ebony flute with its distinctive silver rings possesses a rich, dark sound which I think I have subconsciously tried to emulate ever since on every flute I possess!

Illus.7 Boxwood flute by Goulding (London, c.1820)

I have also played baroque and classical flutes by Brian Ackerman, Alain Winkelman, Alain Weemaels, Folkers & Powell, Martin Wenner, Rudolf Tutz and Giovanni Tardino. My original flutes include instruments by Goulding, William Henry Potter, Heinrich Grenser, Teboldo Monzani, Martin Thibouville, Louis Drouet, Rudall & Rose, Rudall Carte and Claude Rive (for a list of what I've used on recordings, and some illustrations, see the Appendix below).

Illus.8 An informal early photo of Roderick Cameron and his daughter in Nairn, Scotland, with Neil McLaren and Lisa trying his eight-key flutes

Illus.9 The Roderick Cameron Bressan flute (1992). A favourite flute with rich, dark sound; Lisa played it for many years, including on her Handel Flute Sonatas recording for Hyperion and the Bach Passions with John Eliot Gardiner. Photo: Susan Benn, taken at Homerton Hospital a few days before giving birth to daughter Luba Tunnicliffe!

Tell us about your teaching career

I have always loved teaching – it is greatly rewarding, but much harder than performing! It's a great privilege and responsibility to help players achieve their potential, whatever their starting point, and I am extremely proud of my students' successes. I have taught at the Royal College of Music, the Royal Academy of Music, the Royal Northern College of Music and the Guildhall School of Music and Drama, in addition to invitations from conservatoires abroad. My overall teaching philosophy is to lead or show a student how to teach themselves, rather than dictate what they should do or how they should play.

Things have changed so much since I was a student, when early music tuition was comparatively rare in British music colleges. No dedicated courses were offered and those of us who wanted to find out more had to spend hours in libraries seeking out treatises on performance or rare repertoire, much of which is of course now available with a few clicks of a mouse. The ready availability of information has led to a much wider appreciation and knowledge of different styles of performance, which have now become an accepted feature of the international concert scene. As a result, students and professionals alike are much more flexible and open to different ways of playing.

Do you have any musical ambitions still unfulfilled?

It may seem a strange thing to say but I don't think I am, or have ever been, particularly ambitious. In my youth I was a reasonably good pianist and had many opportunities to play harpsichord continuo as a student, and I would like to do more of this before my keyboard skills disappear altogether.

I would also love to feel more comfortable playing traditional Irish tunes on my Rudall Rose flute – historically authentic! Although in possession of a good musical memory, I am completely in awe of traditional flautists who hold hundreds of tunes in their heads.

APPENDIX

Select Discography

The flutes played on each recording are listed in italics, and some are illustrated at the end.

1. Solo repertoire

Mozart: Flute Quartets and Beethoven Serenade in D, Op.25, with Pavlo Beznosiuk (violin), Tom Dunn (viola) and Richard Tunnicliffe (cello) (Avie) (illus.10). *Heinrich Grenser six-key ebony flute (1804), A428* (illus.11)

Bach: Complete Flute Sonatas, with Paul Nicholson (harpsichord), Richard Tunnicliffe (cello), Elizabeth Kenny (archlute) and Rachel Brown (flute) (Hyperion). *Alain Weemaels one-key ebony flute after Ioannes Hyacinthus Rottenburgh, A392* (illus.12)

Handel: Complete Flute Sonatas, with Paul Nicholson (harpsichord) and Richard Tunnicliffe (cello) (Hyperion). *Roderick Cameron one-key ebony flute with silver rings after Pierre Bressan, A415*

Vivaldi: Concertos for Flute & Strings, Op.10, with Trevor Pinnock and the English Concert (Archiv). *Roderick Cameron one-key boxwood flute after Godfridus Adrianus Rottenburgh, A415*

Vivaldi: 'La Notte' and other concerti, with the Orchestra of the Age of Enlightenment (Linn Records). *Roderick Cameron one-key boxwood flute after Jacob Denner, A415*

Mozart: Flute Concerto in G and Concerto for Flute & Harp, with Frances Kelly, Christopher Hogwood and the Academy of Ancient Music (Decca). *Roderick Cameron eight-key ebony flute after Heinrich Grenser, A430*

Bach: Orchestral Suite No.2 in B minor and Triple Concerto in A minor, with Trevor Pinnock and the English Concert (Archiv). *Roderick Cameron one-key boxwood flute after Jacob Denner, A415*

Bach: Orchestral Suite No.2, with Frans Brüggen and members of the Orchestra of the Age of Enlightenment (Philips). *Roderick Cameron one-key ebony flute after Ioannes Hyacinthus Rottenburgh, A392*

Bach Brandenburg Concerto No.5, with Trevor Pinnock and the English Concert (Archiv). *Brian Ackerman one-key ebony flute after Pierre Bressan, A415*

Bach Brandenburg Concerto No.5, with members of the Orchestra of the Age of Enlightenment (Virgin). *Roderick Cameron one-key boxwood flute after Jacob Denner, A415*

'Concord of Sweet Sounds', Music for Flute, Lute & Guitar, with Nigel North (lute/guitar) (Amon Ra). *Roderick Cameron one-key boxwood flute after Jacob Denner, A415 and eight-key ebony flute after Heinrich Grenser, A430*

2. Orchestral repertoire as Principal Flute

Bach: St Matthew Passion, St John Passions, Mass in B minor, Magnificat, with John Eliot Gardiner, the Monteverdi Choir and the English Baroque Soloists (Archiv). *Roderick Cameron one-key ebony flute after Pierre Bressan, A415*

Bach: Cantatas, with Gustav Leonhardt and the Orchestra of the Age of Enlightenment (Philips). *Roderick Cameron one-key ebony flute after Pierre Bressan, A415*

Rameau: *Les Boréades*, with John Eliot Gardiner, the Monteverdi Choir and the English Baroque Soloists (Erato). *Alain Winkelman one-key boxwood flute after Godfridus Adrianus Rottenburgh*

Leclair: *Scylla et Glaucus*, with John Eliot Gardiner, the Monteverdi Choir and the English Baroque Soloists (Erato). *Alain Winkelman one-key boxwood flute after Godfridus Adrianus Rottenburgh*

Haydn: The Creation, with Christopher Hogwood and the Academy of Ancient Music (Decca). *Roderick Cameron eight-key ebony flute after Heinrich Grenser, A430*

Haydn: Symphonies, with Sigiswald Kuijken and the Orchestra of the Age of Enlightenment (Virgin). *Roderick Cameron eight-key ebony flute after Heinrich Grenser, A430*

Haydn: Symphonies, with Roger Norrington and the London Classical Players (EMI). *Roderick Cameron eight-key ebony flute after Heinrich Grenser, A430*

Haydn: Symphonies Nos.6-8, with Trevor Pinnock and the English Concert (Archiv). *Roderick Cameron one-key boxwood flute after Godfridus Adrianus Rottenburgh*

Mozart: Symphonies, Christopher Hogwood and the Academy of Ancient Music (L'Oiseau Lyre). *Goulding one-key boxwood flute (c.1800), Potter four-key boxwood (c.1800), Drouet eight-key ivory flute (c.1820)* (illus.13 and 14)

Mozart: Late Symphonies, with John Eliot Gardiner and the English Baroque Soloists. *Roderick Cameron eight-key ebony flute after Heinrich Grenser, A430*

Mozart: Complete Piano Concertos, with Malcolm Bilson (fortepiano), John Eliot Gardiner and the English Baroque Soloists (Archiv). *Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Mozart: Symphonies Nos.39-41, with Trevor Pinnock and the English Concert (Archiv). *Rudolf Tutz four/eight-keyed ebony flutes after Heinrich Grenser*

Mozart: Symphonies Nos.39-41, with Roger Norrington and the London Classical Players (Virgin). *Rudolf Tutz four/eight-keyed ebony flute after Heinrich Grenser* (illus.15 and 16)

Mozart: Piano Concertos, with Robert Levin (fortepiano), Christopher Hogwood and the Academy of Ancient Music (Decca). *Rudolf Tutz four/eight-keyed ebony flute after Heinrich Grenser*

Mozart: *Così fan Tutte*, with Simon Rattle and the Orchestra of the Age of Enlightenment (EMI). *Rudolf Tutz four/eight-keyed ebony flute after Heinrich Grenser*

Mozart: *Die Zauberflöte*, with Roger Norrington and the London Classical Players (EMI). *Rudolf Tutz four/eight-keyed ebony flute after Heinrich Grenser,* and piccolo and panpipes

Beethoven: Symphonies, with Christopher Hogwood and the Academy of Ancient Music (Decca). *Drouet eight-key ivory flute (c.1820), Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Beethoven: Symphonies, with Roger Norrington and the London Classical Players (television broadcast). *Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Schubert: Symphonies Nos.5 and 8, with Roger Norrington and the London Classical Players (EMI). *Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Schubert: Symphony No.9, Charles Mackerras and the Orchestra of the Age of Enlightenment (Virgin). *Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Rossini: Overtures, with Roger Norrington and the London Classical Players (EMI). *Anon French one-key piccolo*

Bellini and Wagner Arias, with Jane Eaglen, Mark Elder and the Orchestra of the Age of Enlightenment (Sony). *Thibouville ten-key rosewood flute (c.1840)* (illus.17)

Berlioz: Symphonie Fantastique, with John Eliot Gardiner and the Orchestre Révolutionnaire et Romantique (Philips). *Rudall & Rose nine-key rosewood flute (c.1840)* (illus.18)

Berlioz: Symphonie Fantastique, with Roger Norrington and the London Classical Players (EMI). *Thibouville ten-key rosewood flute (c.1840)* (Second Flute) and *Anon six-key ebony piccolo*

Chopin: Piano Concertos, with Emmanuel Ax (piano), Charles Mackerras and the Orchestra of the Age of Enlightenment (Sony). *Rudall & Rose nine-key rosewood flute (c.1840)*

Brahms: Symphonies 1-4; German Requiem, with Roger Norrington and the London Classical Players (Virgin). *Rudall & Rose nine-key rosewood flute (c.1840)*

Smetana: Ma Vlast, with Roger Norrington and the London Classical Players (Erato). *Rudall & Rose nine-key rosewood flute (c.1840)*

Wagner: Siegfried Idyll and orchestral excerpts, with Roger Norrington and the London Classical Players (Erato). *Rudall & Rose nine-key rosewood flute (c.1840)*

Donizetti: *Imelda di Lambertazzi*, with Mark Elder and the Orchestra of the Age of Enlightenment (Opera Rara). *Drouet eight-key cocuswood flute*

Donizetti: *Maria di Rohan*, with Mark Elder and the Orchestra of the Age of Enlightenment (Opera Rara). *Rudall & Rose nine-key rosewood flute (c.1840)*

Mendelssohn: A Midsummer Night's Dream, Violin Concerto and Symphony No.4, with Charles Mackerras and the Orchestra of the Age of Enlightenment (Virgin). *Roderick Cameron eight-key ebony flute after Heinrich Grenser*

Illus.10 Lisa recording the Mozart Flute Quartets in 1986, with husband Richard Tunnicliffe (cello), brother Pavlo Beznosiuk (violin) and Tom Dunn (viola)

Illus.11 Heinrich Grenser six-key ebony flute (c.1804), with four corps de rechange and two foot registers

Illus.12 Alain Weemaels copy of Ioannes Hyacinthus Rottenburgh, with two corps de rechange

Illus.13 The ivory Drouet flute, performing with Christopher Hogwood (fortepiano) and the Salomon Quartet (Simon Standage, Micaela Comberti, Trevor Jones and Jennifer Ward Clarke). Photo: Alex von Koettlitz

Illus.14 Ivory Drouet flute. Lisa used this instrument before makers were producing good copies of eight-key flutes

Illus.15 Rudolf Tutz copy of Heinrich Grenser four-key ebony flute, which Lisa uses for Mozart, Haydn etc in order to 'save' her original Grenser

Illus.16 Rudolf Tutz copy of Heinrich Grenser eight-key ebony flute; Lisa's main instrument for orchestral repertoire from 1790-1820

Illus.17 Thibouville ten-key flute in rosewood (c.1840). A lovely French flute with a light but penetrating sound quality - ideal for Berlioz! Interestingly, it has a d^2 trill key (great for the William Tell Overture!) and the Tulou F# key

Illus.18 Rudall and Rose nine-key rosewood flute (c.1840). Lisa's absolute favourite 19th-century flute: She has played it in Berlioz, Brahms and Wagner, and will next in a Mendelssohn project with OAE directed by Andras Schiff: the five symphonies, the two piano concertos and the violin concerto, with Alina Ibragimova

Notes

[1] For the early history of the AAM, see Richard Bratby, *Refiner's Fire: The Academy of Ancient Music and the historical performance revolution* (London, 2023).

[2] Helen Wallace, *Spirit of the Orchestra* (London, 2006).

[3] See https://oae.co.uk/juggling-flutes-almost-literally.

Notes on Veronese's notes

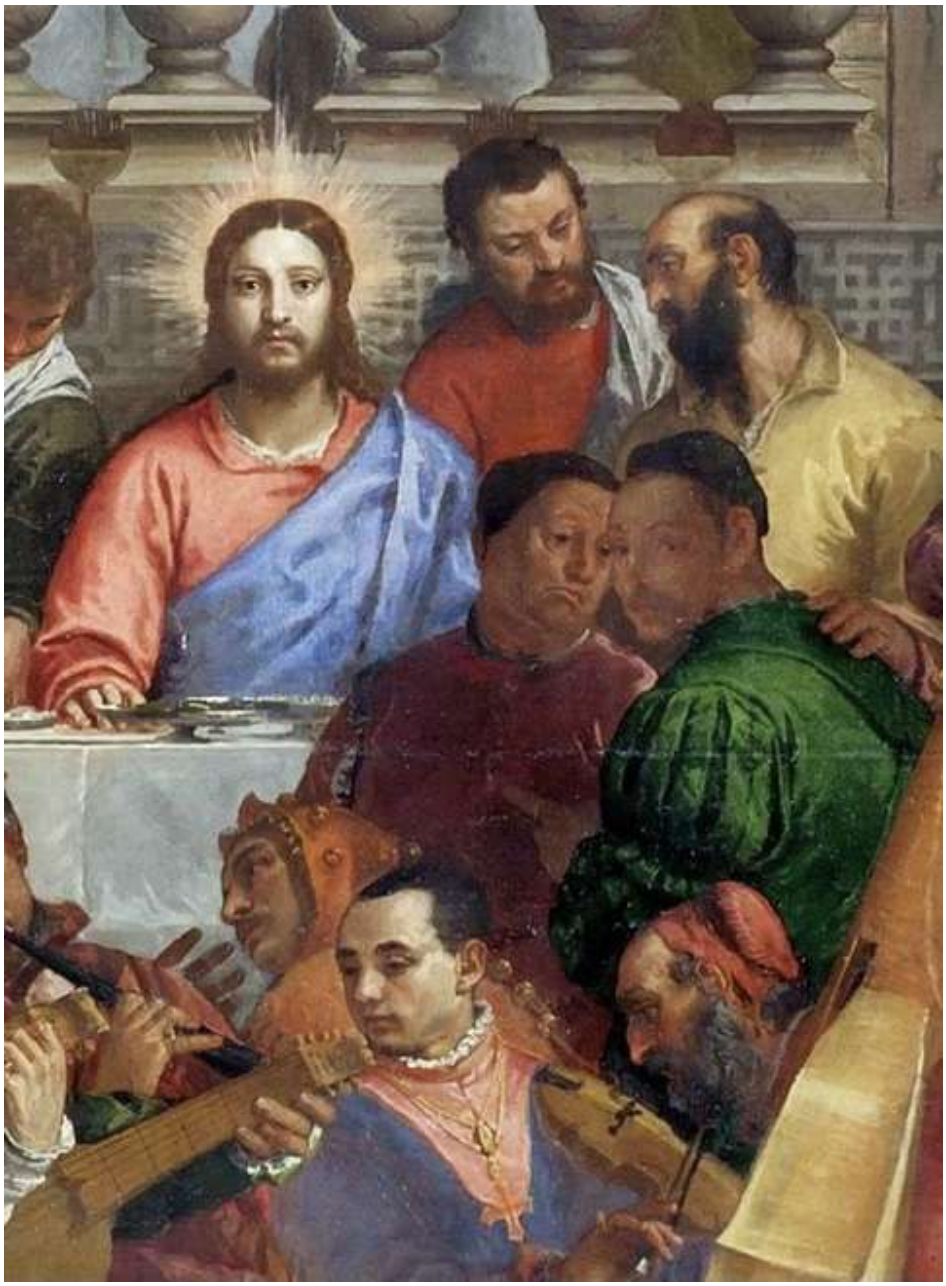
Glen Wilson

Few paintings depicting musicians have been more discussed than Veronese's 'Wedding Feast at Cana' (1562/3) (illus.1). The largest work in the Louvre, it now hangs, mostly ignored, in the same room as da Vinci's 'Mona Lisa', where armies of tourists raise their smartphones towards the distant icon, like an audience at a pop concert. X-rays have revealed Veronese's numerous *pentimenti*. He rearranged many aspects, possibly in fear of, or cooperation with, the Inquisition, which in 1570 hauled the artist in to explain something suspicious. Veronese humbly apologized, offered full cooperation, and promised it would never happen again. The *Sanctum Officium* was a joint government-clergy operation, but from 1560 the Inquisitor himself had been a no-nonsense Dominican.

Illus.1 'Wedding Feast at Cana' (1562/3) by Paolo Veronese (1528-1588)

'Wedding Feast at Cana"s most remarked-upon feature is the central figure of Jesus Christ. He is such a small component in the sea of colour and action. That is, of course, the whole point: an almost ironic contrast between the most significant person (in the Christian view) ever to walk the earth, and the insignificant tumult (in the long term) around him. The son of God is shown as just another man among men and women, except for the glow surrounding him.

Among the 130 figures are numerous portraits of the great and good of the epoch, right up in rank to the Ottoman Sultan, Queen Mary Tudor and the Emperor Charles V. Christ's mother is seated beside him. All are present at the wedding party where her divine son performed his first miracle. The painting depicts the moment when word is spreading through the crowd that someone has just inexplicably transformed jugs of water into wine of excellent quality. Pietro Aretino, the well-connected Venetian arbiter of everything great and small, good and bad, known as 'the scourge of princes', is the figure in green glancing at the viewer, pointing at Jesus as if to say, 'He did it'. A sceptic stands before him, looking doubtful (illus.2).



Illus.2 'Wedding Feast at Cana' (detail, centre)

In 1678, Marco Boschoni identified four of the musicians as the 'Golden Circle' of Venetian painting:[1] Veronese himself in white playing a viol, Titian in red opposite him on violone, Tintoretto with a violin, and Bassano playing a left-handed cornett. (His left hand has disappeared behind Tintoretto, and a bit of the jester's costume is visible beneath the sleeve (illus.3)). These identifications have been questioned, but they match contemporary portraits. I have no doubt that they are correct. Elsewhere I have identified the fifth performer (the third string player) as an idealized, youthful Adrian Willaert, *maestro di cappella* of San Marco.[2] He was a known friend of Titian and, according to Aretino, a *forza di natura*. He died while Veronese was working on 'Cana' (7 December 1562).

Illus.3 Musicians in 'Wedding Feast at Cana': probably Veronese, Willaert, Bassano, Tintoretto and Titian

There are four part-books of music in the painting, all double, hinged oblongs. Three have music notation visible on them. Titian's is the least readable, a chaotic scribble. (Could this be Veronese's comment on the elderly master's abilities as a musician, or even as a painter?) Veronese's is better (illus.4). Willaert's, as befitting the *maestro*, is almost legible (illus.5). The temptation to try and winkle out what is being played is immense.

The distinguished French organologist Florence Gétreau has made an attractive case for Lassus' six-part motet *Nuptiae factae sunt in Cana Galilaeae*, soon (1566) to be published in Venice by Gardane.[3] She sees six musicians, including the sackbut to the left of the main circle. But he is not actually playing, and I think he represents the trumpet of *Fama*. A

giant figure in a turban, the fingers of his right hand are visible behind Willaert as he draws the jester's attention to the momentous event going on behind him.

Illus.4 Music books in 'Wedding Feast at Cana'

Illus.5 Music notation in 'Wedding Feast at Cana'

The cornett and violin are playing from the same part-book, so it seems to me that we are dealing with a four-part piece with the discant dominating, song-like. Gétreau sees text in the painted part-books. I have difficulty agreeing with her, except for some indistinct markings on Veronese's page. But if it is indeed Willaert who is looking over Veronese's shoulder in an attempt to get him back in line, one might assume the *Circolo d'Oro* is performing one of the Fleming's songs – perhaps one of his *frottole* or *villanesche alla napolitana* (1545). The notation, to the degree that it is legible, looks like black notes with frequent leaps, such as are found in the prints of these genres.

It is vain to hope that a specific piece could be deduced from these sketchy clues, but it is also fun to speculate. I have a favourite candidate. The most popular Venetian collections of *frottole* were Petrucci's ten books, printed between 1504 and 1512. They came in small choirbook format: four separate parts on two facing pages: discant and tenor on the left, alto and bass on the right. Very often there are three lines for each, as seen in Veronese's part-books. Only the discant is texted.

For large instruments, this arrangement would have been unusable, but if the pages were cut up into separate pieces, it would work. A page of one of these books cut in half horizontally would yield strips 80 mm wide, approximately the width of a hand. That is about the dimension shown in 'Cana'.

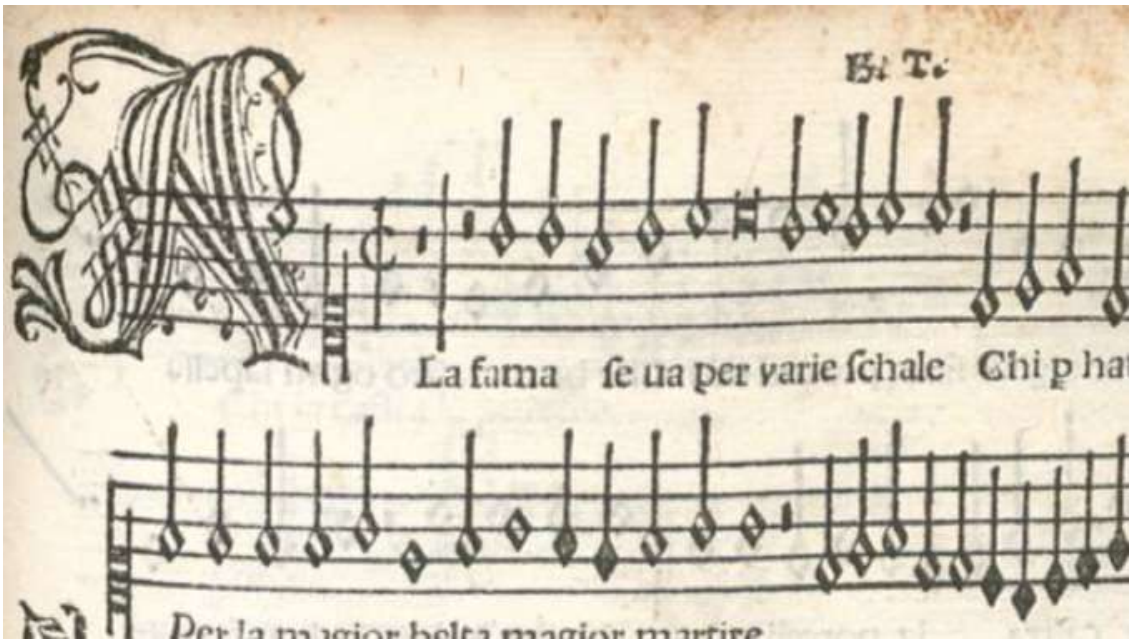
In Petrucci's ninth book (1509),[4] the top item in the index has the following text:

> *À la fama se va per varie schale*
> *Chi per aver sue voglie amarte intese.*
> *Io che altra via non ho*
> *Tolto ho a patire*
> *Per la magior belta magior martire.*[5]
>
> (He who, in order to satisfy his desires intended to love you, can achieve fame in various degrees. I, who have no other path, have chosen to suffer the greatest martyrdom for the greatest beauty.)

Scale, 'degrees' or 'steps', can of course also refer to the scales of music. The *frottola* fits nicely into the painting's programme. The profane world has just been shaken to its foundations, and the musician-painters don't even know it yet. 'B.T.' above Petrucci's staff indicates the composer, Bartolomeo Tromboncino (1470-1535) (illus.6). His name and profession are congruent with the sackbut of *Fama*. Veronese would have had no idea how he looked, therefore – let us suppose – his face is turned away from the viewer. And the reference to different 'scales' or degrees of fame embodies the fundamental lesson of Veronese's masterpiece.

One cannot be sure if Veronese's part-books show printed[6] or manuscript parts. They are too vague even for that elementary determination. But I think we can be fairly certain that something profane, composed in four parts, is being played. That is enough for Veronese

to place himself and his illustrious friends in proper perspective. The two sections of the discant part-book have come apart and are leaning against an hourglass (see illus.4). No explanation of that symbol is necessary.



Illus.6 Bartolomeo Tromboncino, À la fama se va per varie schale *(1509)*

Glen Wilson, born in the USA in 1952 and a Dutch citizen since 1988, looks back on a long and distinguished career as an early keyboard specialist, writer and editor, and was recently limited to the last two occupations by a mild stroke. He taught at the Würzburg Musikhochschule for many years, and has recently completed a biography of Eta Harich-Schneider (1894-1986).

Notes

[1] Marco Boschoni, *Le ricche miniere della pittura veneziana* (Venice, 1678), p.94.

[2] www.glenwilson.eu, Article 64.

[3] Florence Gétreau, 'Le Concert Instrumental des "Noces De Cana" de Véronèse: Interrogations pour une Lecture Méthodique', *Revista de Musicología*, xvi/2 (1993), pp.985-988.

[4] Book X is lost. A complete collection of books I to IX, including *unica*, is found only in the Bayersiche Staatsbibliothek, Munich.

[5] 3 x 3, a symbol of the Holy Trinity.

[6] The format of Willaert's printed *Villanesche* does not fit what is shown in the painting.

The historical rehearsal of early music

Francis Knights and Pablo Padilla

INTRODUCTION

A working musician's life comprises mostly practice and rehearsal, but this world 'behind the curtain' has left only modest traces in the historical record. The nature of the evidence for early rehearsal practice is limited, scattered and fragmentary. Even from the beginning of the 19th century, when documentation of musical practices becomes much fuller, information about actual rehearsals, goals and results is thin on the ground.[1] Circumstantial or other evidence for the earlier periods includes musicians' letters, institutional account books and disciplinary documentation, comments from theorists and descriptions from listeners, but for some key areas, nothing whatsoever is known. In interpreting both historical commentary and anecdote it is vital to remember two things: that 'the past is a foreign country; they do things differently there', in the words of novelist L. P. Hartley;[2] and that practice likely varied from century to century, within style and genre, and from country to country, city to city and individual to individual. In other words, extrapolation backwards from modern practice may tell us very little about past working methods; and a coherent historical narrative cannot be assembled from such disparate scraps of evidence that remain. Nevertheless, a consideration of the rehearsal and performance options for particular past repertoires in terms of place, personnel, education, availability of time, performing materials, aesthetics and so on may lead to a better understanding of how the musical sources of the past were turned into sound - and how well. As John Morehen noted, 'Of all the areas where there is a paucity of contemporary information, that of performance standards is perhaps the most frustrating'.[3] Much of the rehearsal information that survives ties in with current concerns about performance practice, 'the question of what, historically, [musicians] thought and did when turning the notated work into the musical event'.[4]

The nature of historical evidence

Rehearsal technique was a skill that was very likely passed on through an apprenticeship or by observational basis: anyone taking a rehearsal themselves would have sat through dozens, probably hundreds of such occasions, and hopefully been able to learn the working sequence of events that provided the best result within the limited time available. Because of this, such systems would not need to have been written down, and indeed were not until the end of the 19th century, when amateur conductors needed to acquire these skills to work with newly-founded amateur choirs and orchestras. Similarly, as private events where musicians did not

generally want to be seen 'in preparation',[5] there is very little in the way of definite iconography, although an early 18th-century painting by Marco Ricci representing an opera rehearsal actually exists in three versions (for one of these, see illus.1):[6] singers and a languid group of strings are gathered round a small harpsichord in what looks like a private house, and their casual demeanor indicates that this is a rehearsal not a domestic performance, despite all being formally dressed.

Illus.1 Marco Ricci (1676-1730), Rehearsal of an opera *(c.1709), Yale Center for British Art, YCBA/lido-TMS-1007 (Wikimedia Commons)*

It is important to note that much of the evidence for rehearsal as an aspect of performance practice is in the form of negative comments; and such descriptions as survive tend to be at the extremes, either praising performers for their abilities, or complaining about poor tuning, ensemble and so on. There is relatively little sense of what 'average' music-making might have been like, possibly due to its very normality.

From the evidence, information needs to be carefully decoded to see what its nature is, in respect of the expertise of the writer, the reason they made such remarks, and to whom.[7] Even private letters, especially those between professional musicians - a prime source of useful material about rehearsal - might have been subject to some self-censorship: Leopold Mozart told Wolfgang to be careful what he writes concerning his Salzburg employer, as 'one of your letters might get lost or find its way into other hands'.[8] Elsewhere, contradictory views may have existed, only one side of which now survives: as an example of the former, at Archbishop Laud's visitation of Salisbury Cathedral in 1634 the canons gave opposing evidence about the standards of the music, one saying that the choristers were 'not well ordered or instructed in singing', while another claimed that 'the choristers are well ordered … all save two sing their parts perfectly'.[9] Even where the documentation is robust, as in the papers of the Sistine Chapel unearthed by Richard Sherr and others,[10] with its fascinating detail of a choir at work, the relevance of these specific practices to any other institution, period or country is very uncertain indeed.

Where rehearsal is mentioned at all, the lack of detail can be disappointing: a rare Cambrai Cathedral chapter document from May 1497 specifically mentions it as part of their arrangements, but the meaning is obscure, as 'rehearsal' is not the point being made: 'Wherefore because the vicars go behind the choir in summer without sufficient cause (unless they should be invited for the purpose of rehearsing motets), the canons order that henceforth they may not presume to go there, unless for said reason'. Whether 'behind the choir' (or quire) means literally that, or actually outside, is unknown.[11]

Performance quality and intention

The fundamental fact of rehearsal is that there is never enough time, as Andrew Parrott noted in 1978; the two basic problems he identifies are 'those inherent in the music, and those inherent in the musicians',[12] but of course there are many other components affecting rehearsal and performance conditions. Probably the most frustrating documentary absence is a sense of what the quality of the outcomes might have been. The idea of a completely accurate performance was of course understood, but how often was it achieved? As Roger North noted, music 'demands little less than perfection in the performance, which is not alwaies found',[13] while in 1727 Ernst Gottlieb Baron drily observed that 'it sometimes happens that the compositions is good but the performance is bad'.[14] Without knowing the desired 'output' of a historical rehearsal, it is very difficult to judge the musical or technical 'input' that would have been required to make it happen.

A note-perfect performance was more likely in solo circumstances: Oxford composer Edward Lowe (c.1610-1682) wrote to a female keyboard pupil urging her to 'play thes Lessons in the Oder Sett down Constantly once a day … keep your eye (as much as you can) in your Booke. If you chance to miss goe not from the Lesson, till you have perfected it.

Above all, Play not too fast'.[15] One possible manifestation of performance precision was through the removal of human error through the use of mechanical instruments: 'It Would Be without Error' (Marie-Dominique-Joseph Engramelle, 1775).[16]

Second, of the two main categories of rehearsal technique today, preparing the piece, or training the ensemble, there is relatively little historical evidence for the second.[17] Perhaps aspects of tuning, blend, vowel colour and so on were tackled through the music itself, rehearsals over long periods of time producing an ensemble with an established and well-trained approach, but this might be a more modern conception. Practice could also have varied depending on the institutional nature or purpose of the music, whether secular, sacred or occasional. In addition, the complex and individual inter-relationships between rehearsal goals, the time available, the difficulty of the music and the skill of the performers cannot be known.[18]

Third, it is important to remember that modern ideas of scientific precision did not exist then, and that people were used to functioning using various approximations of (for example) time,[19] weights, measures and spelling; musical notation, in all its forms, may not have been seen as precisely prescriptive either. How were time (the length of a rehearsal, and the distribution of its tasks) or tempo measured by musicians? Even two centuries after the invention of the metronome, debates about correct tempi in some 19th century repertoire (especially Beethoven) are not settled. In addition, what now appears to be a 'fast' tempo for a performer of today may have been different in the past: Edmund Fellowes complained about the 'drawled' tempi of Tudor services in early 20th century British cathedrals,[20] but this is merely subjective and we have no way of knowing whether that tempo or our faster tempos were closer to 16th century practice, or why they might have differed.

Professional public concerts

For public concerts in particular, one major purpose of rehearsal was to maintain standards sufficient to prevent disasters of the kind recorded by Johann Friedrich Reichardt (1751-1814) at a concert in Vienna in 1808: a Gloria 'miscarried altogether' while a Sanctus was 'a complete failure in performance'.[21] Fortunately the concert included Beethoven's Piano Concerto No.4, 'terribly difficult, which Beethoven played astonishingly well in the fastest possible tempi', together with his symphonies No.5, 'very elaborate and too long' and No.6, 'filled with the liveliest images and the most brilliant ideas and figures'. Of the C minor symphony, Reichardt makes a point of mentioning that 'a cavalier sitting near us reported having observed at the rehearsal' that the busy cello part was 34 pages long; clearly, some were permitted to attend such rehearsals (see below).[22]

Burney recounts a performance in Italy where he was barely able to judge the quality of an under-rehearsed work: 'If there had been more frequent rehearsals of the Miserere of Leo, in

8 real parts, which Ansani had performed last year, 1781, at the Pantheon, by more than 40 voices, I can conceive, from such movements as were correctly executed, that the effects of the whole would have been wonderful'.[23] Fortunately, a poor rehearsal might not sabotage the success of an actual performance, as Mozart found in Paris in July 1778: of his new symphony (K297) for the Concerts Spirituel, he wrote, 'I was very nervous at the rehearsal, for never in my life have I heard a worse performance. You have no idea how they twice scraped and scrambled through it. I was really in a terrible way and would gladly have had it rehearsed again, but there was so much else to rehearse, there was no time left'. However, it was still performed to 'great applause'.[24]

Music before the age of sound recording

Understanding the attitudes and practices of early modern musicians is hampered by a particular and absolutely crucial technological watershed, that of sound recording. For earlier composers and musicians, their art existed in the moment, and was subject to all the errors that might occur in live music-making. However, these mistakes were as ephemeral as the sound of the music itself, and one cannot assume that they were of the same concern as to modern musicians, for whom live performance now aspires to the technical accuracy of a CD. Judging earlier musicians by these standards, and with the modern possibilities of repeated playback, may be to misunderstand the attitudes of the past. As Robert Philip observes in his important study, *Performing music in the age of recording*, 'Early recordings make it clear that standards of accuracy, tuning, clarity and precision were generally lower in the early twentieth century than they are today, and there is no reason to suppose that they were higher through the nineteenth century',[25] and this is reinforced in respect of tuning by Beverly Jerold: 'Probably the greatest catalyst in the transition to modern intonation standards was the advent of recordings, which made it more essential to sing and play in tune'.[26] In addition, modern professionals may have performed canonical works such as Bach's *St Matthew Passion* many hundreds of times, whereas in the composer's day they were only given a few times, with implications for the nature and necessity of rehearsal then and now.

As well as these components of modern performance precision, which may have significantly affected modern (as compared to historic) rehearsal practice, even elements as fundamental as historical tempo may have been misunderstood from the sources.[27] This is potentially significant, as the conduct and technical demands of a rehearsal where accuracy-at-speed is a goal may well be different. One specific example comes from 17th century England, where a tempo-measurement instruction from Thomas Tomkins' posthumous *Musical Deo Sacra* collection (London, 1668) equates to a pulse which David Wulstan described as 'far too slow as the basic beat for Tudor music';[28] nearly all scholars and performers have agreed with him in ignoring it as a performance practice instruction or guide.[29] At the very least, experimentation along these lines is warranted for the modern

musician, and consideration of how such performance decisions might have affected rehearsal practice.

In respect of historical understanding of their own notational practices, Rob Wegman posits simple rules of thumb that must have made practical interpretation of the complexity of 15th-century English polyphony possible; he also suggests that changing note values over the period have implications for performing tempo.[30] Tudor English scribes (and presumably performers too) were also sometimes tripped up by the mensural complexities of their own music,[31] and Giovan Tomaso Cimello tells a story of the composer Jean L'Heritier being mocked by his master Josquin for not understanding the notation of one of the latter's works.[32]

Etymology

In English, the word 'rehearsal' comes from Middle English, with a sense of 'repeat aloud', while comparison of the Old French term *rehercier* (perhaps from *re-* 'again' + *hercer*, 'to harrow', from *herse*, 'harrow') also conveys the idea of repetition, as in their modern term *répétition*. However, in Italian (*prova*), Spanish (*ensayo*) and Portuguese (*ensaio*), the term is more related to the idea of a 'test'. This is true in German (*Proben*) too, but it can also be translated as *Einübung*, which is closer to the idea of 'practice'. In non-Western traditions, for instance Chinese, *Páiyǎn* is also associated with the idea of repetition ('row' … 'into play'). In any case, to 'rehearse' seems to be associated with the idea of repeating a process in order to improve it. This repetition element is explicit at Wells Cathedral in the 17th century, for example, where the teaching of the choristers was to be by 'manifold repetition as often as, when and whenever the doing so is of profit'.[33]

The earliest music dictionary in English offers this definition: 'REHEARSAL, an essay or experiment of some composition made in private, previous to the representation or performance in publick, to habituate the actors: or performers, and make them ready or perfect, in their parts; we say there is a new tragedy in *Rehearsal*, or the *Rehearsal* of a new Anthem, but for the latter we more usually say *Practice*'.[34] In 1755 Dr Johnson was more concise: 'Rehearsal. 2. The recital of any thing previous to publick exhibition',[35] again the key components being a preparatory act to a public performance.[36] However, in the history of the subject neither the 'private' first part nor the 'public' second part are always true. The working definition used in the discussions below makes a distinction between individual ('practice') and collective ('rehearsal') live music preparation for a subsequent event.

The word 'rehearsal' might also comprise some individual training, not for an ensemble but for someone to take part in an ensemble: at a grand Leipzig wedding of the mayor's son in 1618 (later censured for its extravagance by the town council) cantor Samuel Schein arranged a performance of his grand double motet *Singet dem Herrn*. This required large forces, but the

visiting Naumburg town pipers were evidently unable to supply a timpanist and the records show that a local boy was trained up specially: 'a schoolboy who had been rehearsed by the cantor played the drums in this piece'.[37]

It should be remembered that some performing traditions, including areas of early polyphony, involve improvised or unwritten music rather than notated works, and the notion of 'rehearsal' in that instance acquires a completely different meaning. However, improvisatory techniques can still be collectively rehearsed in order to increase their coherence and chance of aesthetic success.

It is also possible that there were brief 'instruction-only' rehearsals, at which performers were reminded of the running order of a concert or service just before it began,[38] told to watch out for problems that were likely to occur on the basis of previous experience, and solos were allocated,[39] but with no actual music-making taking place.

Very rarely indeed, helpful written rehearsal (or possibly performance-reminder) notes are found for the singers. Two cases from the papal choir in October 1568 remind the choir to listen out for an unusual entry, and for a canon: a motet by Jean Mouton 'called *Benedicamus Domino* has a part over the tenor which waits for two beats then begins a step higher than the tenor', and in the Agnus Dei of the Missa *L'homme armé* by Pipelare 'there is a contralto over the bass which duplicates the bass at the tenth'.[40]

The limits of historical reconstruction

Finally, a reminder that filling in any gaps in the historical record, however plausible this may sometimes seem, can take us in the wrong direction entirely. This is shown by an intriguing project where artist John Conway and his colleagues reconstructed modern animals from their bones, in the same way as dinosaurs are presently depicted in paleoart.[41] The results were alarmingly inaccurate, and provide a cautionary tale for early music performers of today, as they try and reconstruct the sounds of history from the musical bones in the archive.

SOURCES AND MATERIALS

Historical descriptions

There are about a dozen contemporary descriptions relating to early rehearsals surviving, and not all of them appear to reference an actual event. The earliest come from a pair of satirical poems by composer John Redford (d.1547), organist of St Paul's Cathedral. They describe the pains of musical study from a singer's point of view, and the historian's difficulty is

knowing how seriously to take these, either as complaints or descriptions. The first is the lament of choristers learning 'prick-song' (polyphony) under their 'cursyd master', presumably Redford himself: 'We shall pray to Cryst to amend hym'. The refrain is 'We lytle poore boyes abyde much woe', and the verses explain how they are beaten for their errors, even though they fear any replacement of their master would be even worse: 'Yet for to hang hym I wene it be not best, / For yf he were gone, we shold have another gest / As yll as he, for nowght they be all the hole nest'. Most interesting is the reference to the conductor's unreasonable standards: 'He sayth we syng starke nowght, when we make a ryght good noyse'.[42]

The second Redford poem is the narrative of a 'singyng man', who 'sondry partes oft have I soong', and is in praise of the Mean voice, the second voice down in a five-part texture and which is 'Above all partes most to excell'. The Mean must 'must make our melodye', and all must 'tyme and tune our songe / Unto the meane, where all partes lene, / All partes ar kept from syngyng wrong'. It also helps keeps alignment when the notes are 'To low, to hye, to lowde, to softe, / … To swyft, to slowe, to sealde, to oft' and when the voices are 'To few, to many at a part'.[43] The components mentioned are the music's range (or possibly performing pitch), the dynamics, the tempo and the size of the choir, showing the type of concerns present in a Tudor choir rehearsal.

Lully's careful operatic rehearsal practice was reported by Le Cerf de la Viéville in 1705, some two decades after the composer's death: 'However experienced Lully's singers might have been from previous operas, whenever he gave them a new & difficult part he began by going over it with them in his room, before the full rehearsals. This is the way, following his example, that Beaupui played the character of Protée in *Phaëton*, which Lully had taught him gesture by gesture. Finally rehearsals began. He only allowed in the essential people: the author, director of machines and so on. He had the freedom to criticise & instruct his singers; he would come & peer down his nose at them, one hand raised over his eyes to help his short sight, & would not accept anything from them which was of poor quality'.[44]

A fourth source comes from 1738, and is none other than a theatrical (but fairly plausible) description of a Bach rehearsal - or possibly performance - written by Johann Matthias Gesner, director of the Thomasschule: Bach is 'singing with one voice and playing his own parts, but watching over everything and bringing back to the rhythm and the beat, out of thirty or even forty musicians [*symphoniaci*], the one with a nod, another by tapping with his foot, a third with a warning finger, giving the right note to one from the top of his voice, to another from the bottom, and to a third from the middle of it - all alone, in the midst of the greatest din made by all the participants, and, although he is executing the most difficult parts himself, noticing at once whenever and wherever a mistake occurs, holding everyone together, taking precautions everywhere, and repairing any unsteadiness, full of rhythm in

every part of his body - this one man taking in all these harmonies with his keen ear and emitting with his voice alone the tone of all the voices'.[45]

Johann Kusser adopted a similar painstaking approach as Lully (above), according to Mattheson (1739): 'He was tireless in teaching; he would invite to his home all those under his supervision, from greatest to least; he would sing & play to them every single note as he wanted it performed, & he did all this for each person individually, with such gentleness & charm that everyone loved him & became deeply indebted to him for his dedicated teaching. But when guiding turned to playing & to public performance or rehearsal, then nearly everything trembled & quaked before him, not only in the orchestra but on stage'.[46]

Burney's description of a rehearsal of Niccolò Jomelli's new opera *Demofoonte* at the Teatro di San Carlo in Naples in November 1770 gives some sense of what might be expected at an initial reading: 'This was the first rehearsal and the instruments were rough and unsteady, not yet being certain as to the exact time or expression, but as far as I am able to judge the composition is perfectly suited to the talents of the [singing] performers, who tho' all good, yet not being of the very first and most exquisite class are more in want of the assistance of instruments to mark the images and enforce the passion which the poetry points out'.[47] In Vienna in three years later Gluck told Burney about his experiences in preparing his *Orfeo ed Euridice* (1762) for performance, but did not give any details: 'Gluck recounted to me the difficulties he had met with in disciplining the band, both of vocal and instrumental performers, at the rehearsals of Orfeo'.[48]

At a Covent Garden rehearsal of Thomas Carter's opera *The Castle of Andalusia* in 1782, the composer, who was not directing, breached etiquette by jumping onto the stage, and 'began to direct the band, applauding, grimacing, shutting his ears, and running backwards and forwards along the whole front of the orchestra – it being a rehearsal [with] full band. "That horn too sharp – very well, oboe – that passage again – piano Mr. Tenor –bravo Crescendo!"'.[49] Director Samuel Arnold left in disgust. This vivid description of chaos is paralleled by that of François Raguenet (1702) on opera in France nearly a century earlier: 'How many times must we practice an opera before it's fit to be performed; this man begins too soon, that too slow; one sings out of tune, another out of time; in the meantime the composer labors with hand and voice and screws his body into a thousand contortions and finds all little enough to his purpose'.[50]

A further description comes from Anton Stadler's 'Musick Plan' of 1800, which includes a brief outline of how a rehearsal should proceed, from a primarily educational perspective. Each student, first having checked the tempo, time signature, key signature of the work and 'tuned his instrument properly' in preparation, needs to 'learn his part correctly by himself and practice it with his teacher', after which it can be combined with those of the other players, repeating the composition 'as long as it takes to attain the tempo and correct

intonation', with the student perceiving 'where he has the dominant part or simply the ripieno', determining 'dynamic markings . . . and finally, if the opportunity permits, introduc[ing] him first to simple, well-sounding ornaments, for whose harmony and prompt arrangement one has likewise to give him comprehension and insight'.[51]

Probably the most alarming rehearsal tale is of one involving Haydn that was interrupted, as recounted in London's *Morning Chronicle* in the summer of 1791, where royal permission to use the new Haymarket opera house (the previous King's Theatre having burned down two years earlier) was not forthcoming at the last minute: 'The Theatre now stood, completed, and the orchestra was gathered together to rehearse the opera *Orfeo*. Haydn had distributed the parts, and hardly were forty bars played through, when persons in authority entered and in the name of king and parliament forbade the opera to take place in any fashion whatsoever, not even in the form of a rehearsal. *Orfeo* was, as it were, declared to be contraband, and the worst of it was that the performance of *all* operas in the Theatre was forbidden for the future'.[52] Haydn was sanguine, having already been paid his fee in full; and the opera was not actually premiered until 1951.

That there were troublesome ensembles that directors had to deal with is certain: Georg Christian Friedrich Schlimbach (1805) complains of overworked town musicians who, after a few days of playing at peasant weddings, 'use Saturday morning for lugging their instruments home, often several miles. Then the cantor has to lead them in the afternoon rehearsal! Their heads are full of haze, their eyes full of sleep, their instruments full of dust. They are irritable and surly. Woe to the cantor if he - which under such conditions is unfortunately all too often necessary - is forced to remind them about tuning their instruments and playing in tune (never mind good execution)'.[53] Composers would always have needed to be aware of the state of their ensemble, and an instance of rehearsal planning (particularly in the composer's absence) can be seen in a letter Mozart wrote to his father from Salzburg in early 1781 about *Idomeneo*: 'I trust that the rehearsal of the three acts which took place today, January 13th, went very well. It will have been a long one, the more so if Act III was rehearsed for the first time. Act III ought to have been rehearsed by itself or at least at the beginning, before the orchestra got tired'.[54] Similarly, in the early 16th century Cardinal Wolsey allowed the smaller communities of Austin Canons to use organs (likely *alternatim*)[55] in order to spare their voices and support their devotions.[56]

One late 18th-century source strikes a curiously modern note in respect of 'why' rather than 'what' a rehearsal is, seeing it as the place 'where the music director makes the players aware of the "hidden intentions of the composer"'.[57] What sort of 'hidden intentions' composers might have had at that particular point in musical history is unclear, and it is not certain whether the writer Johann Samuel Petri (1782) was imagining these in analytical or interpretative terms. While the idea of the conductor as artistic interpreter of another composer's musical ideas seems new, a reference by Claudio Merulo in 1566 to the way

Philippe Verdelot 'wanted [his madrigals] … to be performed' shows these ideas have a longer history than is usually realized.[58]

Audiences at rehearsals

Rehearsals could also be announced or reported on in the press, not so much with a view to encouraging public attendance (venue and time are rarely given) but as a trail for the event: for example, rehearsals for Handel's celebratory *Utrecht Te Deum* (1713) were noted in the London press,[59] as were those for his Fireworks Music (1749).[60] However, invited audiences did attend rehearsals, such as the 'many Persons of Quality of both Sexes' at the 1713 event, or the 'splendid Assembly' at the rehearsal of Handel's new Dettingen *Te Deum* at Whitehall Chapel in November 1743.[61] Rehearsal of Boyce's court odes in London 'usually took place at the Turk's Head Tavern in Greek Street or Gerrard Street, "to a crouded audience", according to one newspaper report' in 1763.[62] Such occasions cannot have had the stop-start structure of a professional musical rehearsal, and must have been in the nature of a dress rehearsal, or pre-performance of a nominal premiere or event: Handel's virtuoso Italian oratorio for Easter, *La Resurrezione*, was rehearsed on 1, 2 and 7 April 1708, 'the last being a "dress rehearsal", held in the evening and probably in front of an audience';[63] the performance took place the following day.

Some such occasions were actually fundraisers, as in May 1747, where a collection at the rehearsal for the Festival of the Sons of the Clergy at St Paul's Cathedral, in the presence of the Prince and Princess of Wales and a 'very numerous and splendid Appearance of Gentlemen and Ladies', netted over £480, 'being the largest Sum ever made on the same Occasion'.[64] This was taken further in Dublin that December, in a rehearsal that was actually ticketed: a benefit for Mercer's Hospital with music by Handel allowed those who had bought half-Guinea tickets to attend the 'Grand Performance' three days later, to be admitted, with 'a Part of the Tickets will be torn off' at the rehearsal, and the remainder retained for the concert.[65] The purpose may have been to allow patrons to hear some rarely-performed music twice.

It is likely that musicians and visitors would have been able to arrange to attend such events, as when Leopold Mozart went to a Milan opera rehearsal in June 1770.[66] At other times, invited attendance was much more exclusive: in December 1780 Mozart wrote to his father from Munich of *Idomeneo* that the 'rehearsal went off extremely well. There were only six violins in all, but we had the requisite wind-instruments. No listeners were admitted except Count Seeau's sister and young Count Sensheim'.[67]

A little before the English Civil War, Puritan politician's wife Lucy Hutchinson recorded that composer Charles Coleman hosted semi-public rehearsal meetings with his colleagues at Richmond: 'the rest of the king's musicians often met at his house to practice new airs and

prepare them for the king; and divers of the gentlemen and ladies that were affected with music, came thither to hear'.[68] Such events may have helped originate the idea of the public concert, which emerged in late 17th century England and spread all over Europe during the 18th century. From the late 1730s individual concerts started being advertised in the British press,[69] as opera had already been, and such announcements of specified repertoire and performers now demanded that the rehearsed music was available and ready for the paying public on the date and time specified, as cancellation brought the risk of both financial and reputational damage – Haydn's cancelled *Orfeo* in 1791 (see above) may have cost the promoter £20,000.[70]

Materials for rehearsal and performance

The physical medium of music changed greatly from the Middle Ages to the early Romantic period, especially after the invention of printing. The question of what was suitable also changed: 'late-medieval notation, with respect to both pitch and rhythm, was conceptually unsuited for use in score … composers neither had nor needed the visual control of simultaneities that modern scores give us',[71] and the growth of musical literacy (for example, at the Tudor court), changed practice from forms of vocal improvisation mainly to the reading of composed music.[72]

Manuscript copyists are subject to the quality of their exemplars, and the limitations of their own accuracy, skill and understanding; in general, errors are more likely to be introduced than corrected.[73] How copies were used is not always now understood, especially with regard to part-sharing: while two or three singers might be able to read from the same voice part in a Bach cantata,[74] it seems highly unlikely that twelve people could have read one piece in that number of parts from the tablebook format (parts facing outwards, to be read by performers gathered around it lying on a table) of British Library 31390.[75] Choirbooks, which could be very large indeed in order to be seen by all the members of an ensemble of up to 30 strong when placed on a lectern,[76] present their own particular difficulties and limitations for performers in terms of rehearsal techniques.[77] For all early formats, effective display and lighting is a concern.

Producing manuscript music is very labour intensive, so it normally contains the content sufficient for a performer, but no more.[78] The apparent difficulty of using some early sources has led a number of modern scholars to suggest that there were alternative and different versions (all now lost) for actual use, an improbable concept at scale. Hugh Benham wonders whether some surviving choirbooks 'were library copies rather than "performing editions"; and indeed the few signs of actual use would seem to re-inforce this';[79] while Roger Bray notes 'Nearly all the manuscripts which survive today must have been library- or presentation-copies … Performing manuscripts must have been destroyed at some stage by

religious zealots'.[80] These suggestions say more about our lack of understanding of historical rehearsal processes than they do about any purported missing sources.

The survival of sources to the present might have depended on their value (a highly decorated parchment choirbook would have been regarded as worth keeping as an artistic object even when the music in it was outmoded), on the type of binding, and the way in which it was stored. Single sheet copies did exist (see for example the late 15th century painting *Mary, Queen of Heaven*, by the Master of the St Lucy Legend)[81] but were exceedingly fragile. Scrolls and rolls[82] are little better, and binding sewn pages in leather-covered boards is far safer, as the survival numbers attest.

Choirbooks and partbooks

Choirbook format was standard in a number of places in the early 16th century:[83] 'in 1524 all the polyphonic music at Magdalen College, Oxford was contained in choirbooks, nine of which had been bought between 1518 and 1524'.[84] King's College, Cambridge – the sister institution to Eton – had in 1529 '5 great bokys wyth rede lether conteynynge the most solemne anthems off v partes' which sound very similar to the Eton Choirbook ('a grete ledger of pricke song ii folio'), but it also had numerous sets of partbooks (both paper and parchment) in sets of three to six.[85] In other words, there was only one book per voice part to share, so (as with a choirbook) the 16 choristers would all have had to crowd round one volume, probably on a small lectern (by comparison, the choirbook now at Caius College, Cambridge, is an enormous 72 x 49 cm).[86] None of these pre-Reformation Cambridge sources have survived, but as partbooks tend to be relatively small (two manuscripts of c.1590 from the Petre collection now in the Essex Record Office are rather larger than usual, but are still only about A4 oblong)[87] how they can have been used collectively in rehearsal and performance is unclear. Memorization at some level (see below) seems a likely part of the solution.

Choirbooks were very valuable, but how they were stored when not in use is unknown - at Madgalen College, Oxford, six printed hymnals were 'chained in the choir',[88] which is one way of securing material from loss, if not damage. Despite the practical limitations of choirbooks, these English sources contain some of the most complex music of the period, from the esoteric *Musica Speculativa* tradition, such as Lloyd's *O quam suavis* and Fayrfax's *O quam glorifica* (his 1511 Oxford DMus exercise) and *Albanus* masses.[89]

Illus.2 Franchinus Gaffurius, Practica musicae *(Venice, 1512); this frontispiece engraving appears in the Venice edition but not the 1496 Milan original*

Paper partbooks (individual musical parts, usually gathering groups of pieces by composer or genre) were the most common format, and were relatively cheap to make, as well as being

easy to manage in performance and convenient to store. Unlike choirbooks, their downside is that individual volumes from a set could be damaged or lost, rendering the whole set unusable. This has happened many times before the present (most 16th and 17th century sets are now incomplete) but was recognized as a danger at the time too: at Trinity College, Cambridge in 1664, when George Loosemore (organist 1660-82) found that a manuscript set of 'Grace-songs which wee use upon our Solemne Feast-daies' by his predecessor Robert Ramsey (organist 1628-42) was incomplete he composed new settings of the same texts, noting in a handwritten dedication that 'by the unhappie losse of one book, or part, [Ramsey's] acurate parries, and labours, is lost and become uselesse'.[90]

One of the principal practical difficulties in working with separate parts is that while the ear can confirm that a player or singer *is* or *is not* aligned with the harmony and rhythm of the other parts, listening to find out where one *should be* in the latter case is very difficult without seeing the music of the other performers (and assuming *they* are all in the right place).[91] Much rehearsal time can be spent 'learning' the sound of the whole work in order to understand the harmonic and other context of a performer's own part, and this is especially important where there is no score to consult.[92]

Renaissance composition itself usually occurred via temporary physical formats,[93] and very few early scores have survived. A 1570 letter of Palestrina to the Duke of Mantua noted that he had scored up a motet in order to 'examine it more closely' (*per meglio contemplarlo*);[94] but the idea of creating a score from parts in order to rehearse or help understand it for performance seems to be nowhere else mentioned in the period, although this must have been an essential part of compositional study for students. A 1555 competition between Andrea Festa and Benedetto Spinone to see who had composed a better additional voice to two five-voice madrigals by Willaert and de Rore (and judged by Willaert himself, together with singers from St Mark's, Venice) took place through performance audition rather than scoring up of the supplied parts, even though the composing itself must have occurred through such scoring up.[95]

Musical sources and mistakes

Inaccurate manuscripts in circulation were regarded both as unfair on the reputation of a composer, and a (traditional) justification for publication: Byrd notes that previous copies of motets in his *Cantiones Sacrae* I (1589), 'owing to the carelessness of scribes in making copies, had suffered a certain amount of error',[96] while Handel's preface to his Eight Suites for keyboard (1720) complains that 'Surrepticious and incorrect copies of them had got abroad'.[97] The level of care that could be taken over accuracy is shown in two letters from composer Benedetto Pallavicino, who had agreed to proofread a set of (now-lost) Magnificats published by Angelo Gardane in Venice in 1586: 'I will go over the manuscript and printed copies minutely, and will not fail to correct all the important errors'.[98] With some

manuscripts, such as *Will Forster's Virginal Book* (London, 1624), the copyist went over his work carefully and made a very large number of corrections from the exemplars.[99]

Where source errors were located during rehearsal, it is not known what was done to correct or understand these; corrections to manuscript and print copies that look as though they are performer additions seem rather rare, and that may be because writing materials (whether pencil,[100] or pen and ink)[101] were not available in the rehearsal space, especially if that was also the performance venue, for example a cathedral. Nor it is certain who would have been responsible or have had the authority for annotating material in this way, if it was even permitted. Some errors (for example, inaccurate numbers of bars' rest in a long sectional votive antiphon,[102] as can be found in the Eton Choirbook) would have made the work unusable - at least without musicians being able to discover the exact nature of the error, and remember the correction - but source indexes rarely contain any annotations which might indicate to future users that there were 'unperformable' works in a collection. Modern editors of course make all such corrections in their published scores, thus erasing the traces what must have been a very real problem for musicians of the past.

In respect of errors in Bach's cantata sources, Alfred Dürr ponders whether 'In view of the number of extant mistakes, we must, in fact, raise the question of whether there were any rehearsals at all'.[103] Martin Geck and Alfred Mann suggest that Johann Abraham Birnbaum's published 1738 defence[104] (possibly partly drafted by Bach) against the criticisms by Johann Adolph Scheibe of the excessive difficulty of Bach's vocal compositions is related to the composer's own experience of inadequate performances ('lack of an able presentation').[105] While Bach manuscript sources do indeed indicate that notated 'corrections were rarely or never made in rehearsal',[106] Dürr is in error supposing that necessary corrections could not have been mentally marked for the performance, rather than actually written in.

Finally, a musician would have to know or judge whether something unusual in the performing material was actually a mistake or not (consider a 17th-century performer working with what Burney called 'Dr Blow's crudities'):[107] are such things to be judged by a performer as an intentional composer decision, a composer error or miscopying,[108] or a copyist's error?

Archives and storage

Storage space for valuable musical manuscripts was likely to have been a concern. The choirbook lectern in Gaffurius' 1512 engraving (illus.2) appears to have a (lockable?) cupboard below, paralleled in the St Omer accounts for 1494/5, which refer to payment for making 'an oak cupboard bearing a lectern, placed at the end of the choir on the side of monseigneur the provost, [in which] to place the books of discant that are in the choir'.[109] Care and storage (and cataloguing) of music is also mentioned in the draft instructions for

Haydn (1765), fairly newly arrived at Esterházy, from Prince Nicolaus: he was to 'deliver the necessary music for each service to the schoolmaster Joseph Diezl, put it in their proper order after the service, and have it returned to, and stored in, the cupboard wherein it belongs, so that nothing will be taken away or miscatalogued'.[110] It is not clear from this whether the music was provided in advance for the performers; a reference to Diezl (a tenor in the choir, and responsible for it) having to appear 'in the choir-loft a quarter of an hour before the service begins' might suggest not. However, in respect of Boyce's court ode rehearsals in London at about the same time, Fiona Smith suggests that performer names on the wrappers of sets of parts indicate they could have received their music for distribution to their colleagues in advance.[111] This additional key level of pre-rehearsal preparation is almost entirely absent from the historical record (see Stadler, above); however, Handel (1744) is recorded as wanting to get the vocal parts (at least) out early, to 'give them their parts in time to be perfect in every one of them'.[112]

Source collections and performing repertoire

With rare exceptions, for the earlier periods it is not possible to link musical sources with the working repertoire chosen from them; there are few markings or corrections that indicate actual use, and no music lists to correlate. Some institutions had far more music copied than they would have been able to use, or in some cases been capable of singing, as in the collection of some 300 works compiled from the 1630s for the small new chapel choir at Peterhouse, Cambridge.[113] The majority of source collections do not therefore represent a known performing repertoire, and must be considered with care when considering issues of rehearsal or performance practice.[114]

Rehearsal letters and bar numbers

Navigating within a movement or section in rehearsal is both difficult and slow without clear points of reference, yet it seems that historical performers either had no choice but to repeat sections from the beginning each time there was a problem, or else had some other methods of negotiating the content in the absence of a score for consultation. In the latter case, there are a number of options for finding one's way around shorter works, none of which seems ideal: singers who knew a text well (for example, mass or antiphon sections) might have been able to pick up from the first appearance of a new word phrase; performers without barlines in their partbooks could have counted forward from the start or back from the end in breves, for some distance; repeat or refrain sections (for example, recapitulations or da capos) could have been located; and distinctive passages (significant changes of key or dynamics, or the beginning of imitative passages) could have been referenced.[115] This would have become much more difficult where a performer's part (for example, the horns) had long passages of rests intersecting with any such start point. In Pliny the Elder's *Natural History* (77 AD), being able to locate something in a longer document is the very definition

of an index: 'They will not need to read right through … but only look for the particular point that each of them wants, and will know where **to** find it'.[116] It is curious that musicians did not think in the same terms for millennia.

The origins of actual rehearsal letters in orchestral parts comes surprisingly late, and one wonders how performers had previously managed to navigate substantial Romantic symphonic movements in rehearsal without such cues. The first use of cue letters in music is found in Enriquez de Valderrábano's *Libro de musica de vihuela* (1547), which link sections of the vocal part at the top of the page with the vihuela accompaniment at the bottom.[117] However, the idea was not followed up again until Beethoven's *Grosse Fuge* (1827), where rehearsal letters were 'added by Beethoven's friend Karl Holz at the request of the composer and his publisher Mathias Artaria … Rehearsal letters can be found in orchestral scores by Mendelssohn and Spohr from the early 1830s, but none are known from the 1820s in scores by these or other composers'.[118] Actual bar numbers in chamber or orchestral parts seem to be a 20th-century practice.[119] All such rehearsal aids are now seen as essential: Thomas Lloyd writes that 'There is nothing more important for an efficient rehearsal than making sure the parts, choral scores, and full score have uniform rehearsal numbers'.[120]

Rehearsal for auditions and proof-reading

One further purpose for rehearsal was interim feedback for a composer: a test-reading of the music. One characteristic Josquin anecdote describes the process: 'Whenever he had composed a new song, he gave it to the singers to be sung, and meanwhile he walked around, listening attentively whether the concordant sound came together well. If he was dissatisfied, he stepped in: "Be silent," he said, "I will change it!"'.[121] Handel, a frequent reviser of large-scale works in particular, made numerous revisions in his oratorios and operas. For the former, these tended to arise after performances, or were dependent on the availability of particular soloists each time (consider the different versions of *Messiah*), but for operas these are more likely to have occurred during the longer rehearsal process - where Handel was also subject to the whims and demands of his diva soloists: arias deleted, replaced or inserted, and so on. The working scores of works such as *Tamerlano* (1724), *Poro* (1731) and *Belshazzar* (1744), for example, contain some cuts that may have been a response to experience in bringing the work to stage, such as the length of incidental music required to cover a scene change, or the appropriate dramatic purpose of a *da capo*.[122]

A different type of 'audition' process is described in a letter Mozart wrote to his father from Paris in September 1778 about a potential new opera commission, for which he wanted a guaranteed performance, because 'What happens in Paris, as you probably know, is this :- When the opera is finished, it is rehearsed and if those stupid Frenchmen do not like it, it is not performed – and the composer has had all that trouble for nothing'.[123]

Another and more unusual purpose of a rehearsal is mentioned in a letter from Leopold Mozart in Milan in December 1770, where Wolfgang's new opera *Mitridate* had its 'first rehearsal with instruments … held in order to discover whether the score had been copied correctly'.[124] This presupposes that the ensemble could sight-read the music more accurately than the copyist could copy it, so it may instead refer to a test as to whether all the parts were complete and in the right order; either way, it seems a very inefficient way of proceeding. It also reinforces Leopold's general worries about the accuracy of professional copyists, as shown in a letter to his son from Salzburg seven years later: 'It is far too laborious to have your compositions copied from the score, and a thousand mistakes will creep in unless the copyist works the whole time under your supervision'.[125]

Finally, there is also the possibility that some works were created for the private enjoyment of musicians in rehearsal, rather than for actual performance: Elizabeth Eva Leach imagines of the ingenious double-texted song *Je me merveil/J'ay pluseurs fois* by the late 14th-century composer Jacob de Senleches, featuring two singers complaining about the state of contemporary music-making: 'So are we left thinking that this song, for all its cleverness, did its greatest cultural work in the rehearsal room? Did it serve only the social interaction of its singers? Is it just some kind of singers' in-joke?'.[126] And in the 15th century, Tinctoris records having silently read ('inspected', 'examined') vocal polyphony on his own, for enjoyment and education.[127]

INSTITUTIONS AND EMPLOYMENT

Ensemble sizes

Documents such as account books, payment lists, registers and statutes sometimes indicate the nominal sizes of ensembles, which could range from just four singers (as at one small 16th-century Oxford college),[128] to an opera orchestra of 60 or more. In the earlier periods, the meaning of lists of singers need to be understood with great care; they may include (or omit) minor canons who could have been contributing to the music;[129] they may name both choristers and adult singers who were no longer active, or absent or ill or even dead (for example, three choristers at King's College, Cambridge died in 1532 alone);[130] and they may not include additional voluntary performers such as instrumentalists[131] or indicate whether a person on the books for one role was actually undertaking a different one (a Lay Clerk playing the organ, for example). The full lists therefore indicate a theoretical maximum number of performers, which likely often fell short - there is even an archival reference to three men singing Palestrina's four-part motet *Nos autem*.[132] The impact of this on rehearsal and performance effectiveness would have depended on the quality of those absent relative to the quality of those present, but it is safer to assume low numbers than high. One partial exception to this idea of lower numbers are the lists of performers actually present at an

event, such as for livery payments for royal funerals,[133] though even here it is not certain what part some of the older and quasi-retired musicians might actually have undertaken.

The idea of instrumentalists 'within' a choir, or singers able to do double duty, who might be invisible in the records, may require further investigation. An engraving in Tylman Susato's *Liber primus missarum quinque vocum* (Antwerp, 1546) shows a solitary sackbut accompanying a choir,[134] and the tradition of a bass instrument combined with voices is also found in Spain, with the *bajón* (dulcian). This seems an excellent solution to the problem of providing a fixed pitch and a firm bass line, and was also found elsewhere. It may have been more widespread than the documentation and iconography at first suggests: one of the Gonzaga chapel choir 'basses' in 1586 was actually a trombonist;[135] a bass singer at the German College in Rome in 1589 used to send a trombonist as a deputy;[136] and the 17th-century Chapelle-Musique in Paris employed 'basses able to play the serpent'.[137] However, for Tudor England John Stevens argued that there were musical status issues between vocalists and instrumentalists which would have prevented such practice there: 'the very idea of a singing-man playing, say, a shawm is ludicrous … the instrumentalist was of considerably lower rank'.[138]

Numerous cathedral and collegiate choir personnel or office lists survive for the Tudor and Stuart period, showing sizes varying between six choristers and a dozen or so adult singers to 16 choristers and at least as many adults (the number of active musicians is often unclear, with some priests possibly being part of the choirs, as noted above).[139] However, all that can be inferred from this is that the numbers were intended to be sufficient to carry out their musical duties. Sometimes small ensembles operated a rota system to cover their numerous services: the pre-Reformation lists of voices and organists for Leconfield Castle choir indicate a maximum of 17 singers: 6 boys, and ATB disposed 4/4/3 (several lists are given, but the numbers do not agree exactly). The daily Lady Mass was sung by four men, and the full choir appears to have been needed daily for Matins, High Mass, Evensong and Compline.[140]

Stipends

Payment for professional performers was very variable over the period, but was often subject to a decline in real value over time - inflation was a major problem in Tudor England, for example - and the (insufficient) remuneration often provided almost certainly had an impact on the performers' attitude to their work, both professionally and musically: '*Pitifull-poor-Wages*' led to '*Dead-heartedness, or Zeal-benumb'd-Frozen Affections*', according to Thomas Mace.[141] In the worst case, a 16th/17th century Lay Clerk's salary in an English cathedral might be at the lower end of a labourer's wages[142] – so all the documented complaints about poor behaviour and absenteeism could be read in this light. Because of financial hardship, some musicians took on extra work, which could be musical,

administrative or even from an 'inferior trade' (Mace mentions barbers, shoemakers and tailors).[143]

Practice schedules

Some sources give reasonable detail in respect of the musical responsibilities of the director of music: in 1477 the Chapter Acts of Lincoln Cathedral noted that William Horwood was to instruct the choristers 'in the science of singing', which is listed as 'playnsonge, pryksonge, faburdon, Diskant, and cownter as well as in playing on the organ, and especially those whom he shall find apt to learn the clavycordes',[144] while James Crawe's Lincoln appointment in 1539 as Song Master and Organist uses almost the same terms: he was 'duly and diligently to instruct chorister boys, both in the science of singing, viz. playnsonge, prykyd songe, faburdon, diskante, and counter, and also in playing the organs in the Cathedral'.[145] These choristers were (and are) a source of future organists in Britain, the instrument being rarely available outside church environments until the Civil War.[146] It is interesting to note that the requirement for lay clerks to be sufficiently proficient in 'pricksong' (polyphony), at Lincoln (1483), Ripon (1503) and York (1507),[147] for example, ties in with the newly-complex multi-voice and large-scale counterpoint of the contemporary Eton Choirbook-type repertoire. Whether these musical demands required better singers, or whether better-trained singers made such new musical demands possible, is uncertain.

Choristers' music lessons

A regulation from Durham Cathedral notes that choirmaster Thomas Ashwell was to give the boys music lessons 'carefully and adequately four times a day on all ferial days, that is twice in the morning and twice in the afternoon, and shall hear their renderings, keeping from them nothing of his knowledge in these matters'.[148] Perhaps this represented a a choristers' rehearsal before each sung service in the pre-Reformation liturgy, or a mixture of theory lessons and rehearsals. Comparison can be made of Anglican practice a century later, as at Chichester Cathedral in 1610, Master of the Choristers Thomas Weelkes was instructed to 'bestow three hours at the least in every day of teaching the choristers'; a 1616 regulation made clear this was now extended to two hours before Matins at 10 am and two hours before Evensong at 4 pm, but it returned to being two hours and one hour a year later.[149] However, whether this represents three/four hours of purely musical tuition and rehearsal is uncertain, as the choristers would also have learned grammar and some of the other material familiar to Jacobean schoolboys, and this might have been included in the teaching remit. At King's, Cambridge, the boys at one stage went to a grammar school in town for two hours each morning for separate instruction in the 1590s; their education within College was probably therefore exclusively musical.[150]

Records from the Thomasschule in Leipzig 1574 show that music classes took place for an hour after lunch four days a week, though whether this was theory or actual repertoire is unknown.[151] The 18th-century regulations for Cambrai note the choristers' daily programme from getting up until bedtime, with the 'Rehearsal of the pieces for the Mass' after breakfast, a music lesson before supper and after supper a 'Rehearsal for Matins and the daily office, the obits, and the Office of the BVM for the next day';[152] such rehearsal of the services for the following day was also found in Tudor institutions (see below).[153] The same was true of some concert performances: Dittersdorf, describing Gluck leading a band in Vienna in 1753, reported that at such private academies, 'a rehearsal was always held the previous evening so that everything, especially new items, would be orderly & accurate'.[154]

John Lilliat, an 'irreverent, turbulet spirit', who succeeded Thomas Weelkes at Chichester, did not teach the choristers 'to sing true, neither to time true, tune true, or vowel true, nor yet for the true wyndinge of the note … which is to the great annoyaunce to them that heare them in the Churche of God'. In other words, the boys could not sing in time or tune, breathe correctly or pronounce words properly.[155] That this list of requirements for the choristers was standard is seen from William Bathe's *A Briefe Introduction to the Skill of Song* (1600): his 'Ante Rules of Song' are '1. To prepare for Naming the Notes: Practise to sunder the Vowels and Consonants, distinctly pronouncing them according to the manner of the place; 2. To prepare for Quantitie: Practise to have the breath long to continue, and the tongue at liberty to run; 3. To prepare for Time: Practise in striking to keep a just proportion of one stroke to another; 4. To prepare for Tune: Practise to have your voice clear, which when thou hast done, learn the rules following: The skill of song doth consist in four things - Naming, Quantitie, Time, Tune'.[156] It is interesting that breathing technique is mentioned, 'to have the breath long to continue', as this rarely mentioned in early choral contexts (with regard to actual breath marks in wind music, the earliest examples seem to be by Michel Blavet (1700-68)).[157]

Rehearsal spaces

One interesting question is whether rehearsals took place in the same space as performances. Then as now, a variety of practice certainly existed; in some cathedrals today the full rehearsal is in the quire, whereas with others it is in a drier Song School or smaller room. Preparing to perform in a large building by rehearsing in a small room is a challenge, but the clarity of the latter may be an advantage in rehearsal. Historically, many large churches and cathedrals were so busy with a continuous round of services that previous access would not always have been possible. In terms of the qualities a resonant space gives, Roger North summarizes it well: an advantage for 'Church Musick' is 'a spacious church, repleat with eccho, the very extent of which gives liberty to the sounds, as well as to soften, as to intermix'. Further, he says this kind of music would not 'be so good in a chamber, for there the harmony would appear more broken, and all the roughness and defects of the voices be

perceivable than in the church'.[158] Quantz (1752) was also aware of these differences, and gave advice on repertoire selection and performance style, depending on whether the performing space was resonant or not.[159] Writing two centuries earlier, Giovanni Camillo Maffei (1562) took a different view, that resonance enables a singer to hear themselves back: 'Select a practice area with a good echo so that you can judge the quality of what you have just sung'.[160] Those who misjudged the spaces suffered, as Leopold noted to his daughter in a letter of March 1785: singer Madame Lange's loud notes were excessive for a room but her 'delicate passages' were too quiet for the theatre.[161]

Sometimes, as with a Song School, institutional spaces were set aside for music practice and rehearsal: at Douai in 1620, 'Four rooms in the college were set aside for music. Notably—and with some implications for Facy's later work at Douai—three of these rooms were used for instruction in singing (of which two were set aside for instruction in psalmody and plainchant)'.[162] This is unusually specific in terms of musical types, and the reason may be the specific educational materials (instruments, scores, blackboards,[163] charts and so on) located in each room.

Lastly, private houses (as in illus.1) were also used for rehearsals, space permitting,[164] and there are records of such at Handel's own Brook Street house in January 1744 (when Mary Delaney was a guest), March 1749 and April 1749, among others. Two were for oratorios and the last for the Fireworks Music, so clearly the full ensembles could not have been present.[165] A contemporary description of the house of the early 17th-century Florentine nobleman Jacopo Corsi says it was 'always open, like a public academy, to everyone who had intelligence or talent in the liberal arts „„ Entertainments with parade floats (*cocchiate*), celebrations and ballets accompanied by music were arranged and rehearsed there. Recitative style for use on stage was born there through the labour of Ottavio Rinuccini, celebrated poet, and Jacopo Peri, great master of harmony'.[166]

Environment and lighting

The choice of actual performing space would have been determined by liturgical, commercial or practical concerns, but their associated rehearsal spaces and times might sometimes have been selected for reasons of good light. The tradition of monastic or quasi-monastic night services would have accustomed musicians to sometimes working with relatively little or no light: 'The psalter and canticles, which the boys were to have memorized, were chanted without the aid of written sources, often in total darkness'.[167] The effect on the eyesight of musicians is not known - the history of pre-modern eye problems does not appear to have been written, although spectacles were an (expensive) medieval invention[168] - but it is likely that many events, such as the evening antiphon at Eton College, were held at times when candles were needed to compensate for the absence of daylight. This was a significant expense, whether tallow or the more expensive wax candles (sometimes called 'church

candles') were used, and the cost of lighting large rooms such as theatres could be quite considerable.[169] Reading at a distance hand-copied music by flickering candles would have posed particular challenges in complex music, such as the Eton repertoire, with its bi-coloured text underlay.

It is also possible in some places that the temperature, either high or low, at different times of year affected what was done and where. In Manila in 1665, 'They do not sing the pater-noster nor the *Pax Domini* nor even the Preface, because it is very hot in this country';[170] while in the colder parts of northern Europe in winter, a freezing church may have led to truncated rehearsals or even services.

Employment, recruitment and requirements

An institution's musical resources, in terms of staff and materials, must have been determined by a combination of music requirements and funding, as well as liturgical need in the case of church music (for the latter, adult singers were likely drawn from the ranks of former choristers, they being almost the only ones with the specialist musical knowledge necessary). Ensembles, whether cathedral, opera or orchestral, grew and shrank over the decades depending on the desire of the authorities to fund music, of wealthy individuals to support expensive cultural projects, and on external circumstances such as wars. The change of a monarch or duke could result in the instant dismissal of an entire musical department, or the creation of one where there had been none. Musicians must always have felt at the mercy of such circumstances, though possibly less so in those ecclesiastical environments where statutes determined both employment numbers and duties.

It must be remembered that the nominal choir sizes reflected in financial and other accounts represent a numerical maximum, as singers might have been absent (see below), ill, or busy with other duties: in pre-Reformation practice in England, 'At High Mass on Sundays and festivals a substantial proportion of the choir was engaged about the ceremony of the service and thus unable for much of its duration to participate in the singing'.[171] In 1515 Ramsey Abbey needed at least fourteen monks at High Mass in order that two were available to sing the chant. Chorister numbers in Britain increased towards the end of the 15th century, which Roger Bowers sees as reflecting a move to five-part polyphony,[172] and costly changes like this determined by purely musical needs are likely to have received mixed responses from the authorities at times.

A principal difficulty in recruitment was the advertising of vacancies; the arrival of newspapers towards the end of the period made this easier, but previously an institution would have had to let potential musicians know of a vacancy by local word of mouth (easier in a large city, where the musicians knew each other), or by writing to organizations elsewhere. At the Sistine Chapel, for example, 'When a place became vacant, usually on

account of a death, the maestro had to organize the recruitment of the new singer. Advertisements were printed, and displayed in the main churches of Rome and the main Italian cathedrals. In 1652 those selected were Bologna, Florence, Naples and Venice. Any unmarried singer could apply; there were various auditions, with a special programme devised by the maestro, the Dean of the singers and a few senior members of the cappella. The whole college voted for each candidate; to be admitted, a singer needed to gain two-thirds plus one of the votes cast'.[173] Singers were sometimes specifically invited, or international diplomatic networks used for talent spotting. In one case this created a serious diplomatic incident, with singer Jean Cordier spirited away from Naples to Milan.[174]

Where there was difficulty getting voices, choirs could be seriously under strength for periods of time: in 1558 Exeter Cathedral had three instead of ten Lay Vicars, although the number was restored fairly soon afterwards.[175] A sense of declining quality during the early Elizabethan period was registered by composer Thomas Whythorne in 1567; he thought that the stock of competent church musicians would 'soon be worn out'.[176]

Agreement between institutions and musicians became increasingly formalized over time, at least as far as surviving documentation implies. For example, a detailed set of 16 regulations survives from the important church of S. Petronio in Bolgna in 1658: these *Ordinari* were drawn up by the incoming *maestro di capella* Mauritio Cazzati (1626-78), and actually printed.[177] They specified the activities of the 35 musicians (22 singers, disposed SATB 4/6/6/6, eight strings, two trombones, a theorbo and two organists)[178] at the church. In summary, they were required to 'give of their best in divine service', be present as required, obey the *maestro*, and pay a series of graded fines for absence or lateness. The new regulations proved contentious with some of the undisciplined musicians already in post, and one of those excluded under the new arrangements took his revenge by initiating a decade-long polemic argument about numerous contrapuntal 'errors' he identified in a published Kyrie by the *maestro*; by 1671 Cazzati had had enough of all this and departed to work for the Gonzagas in Mantua.

Iin 1691 the Scuolo dello Spirito Santo in Venice created a job specification for a five-year music director post, and their priorities in terms of giving exact numbers of singers and instrument types, but not repertoire, are interesting: the 'maestro di cappella is obligated to have sung, entirely at his expense, on the three days of Pentecost, at the usual hours, mass and vespers on each day. On the first day [this should be done] with twelve singers [selected] from the best of the Cappella di San Marco, that is, three sopranos, three altos, three tenors, and three basses, [and] with three organs, a violone, two violas da gamba, four violins, four violas, two cornetti, a theorbo, and a trumpet, and also these instrumentalists shall be among the best of the said Cappella. And on the two subsequent days, there should be one eighth fewer singers and one third fewer instrumentalists than on the first day. In each of the said masses there should be motets and sonatas as is usually done'.[179]

The statutes of Charles V's and Philip II's chapels note contractual regulations for the singers which suggest there had been previous difficulties, as in item 14: 'the verse and the Alleluia must be sung every day from now on as it was done on holy days until today, and the children's master has to make them sung by each singer, and they have to stand in order without mixing up, and none of them can refuse to sing the said duet or trio, or anything that suits the said service, when the master asks them, at the risk of receiving the given punishment, unless they have a legitimate reason'.[180]

Paid rehearsal would have been a given for full-time musician employees, but records from the early 18th-century Haymarket Orchestra in London provide rare evidence of contractual payments for freelancers' rehearsals: those leading musicians who got 25 shillings per performance also received '5 shillings per Practice'.[181] The additional costs for rehearsal attendance perhaps explain the restricted numbers of such events.

At some institutions a singer's role might involve additional tasks, as at Chichester Cathedral in 1589, where the Chapter saved on copyists' fees by giving paper to each of the Lay Vicars to copy their 'owne parte'.[182]

Professional auditions

At the audition for the organist's position at Málaga Cathedral in 1552, the candidates were examined through practical tests: 'a choir-book was placed before each, opened at random, and the sight and score-reading ability of each was tested'.[183] With regard to the latter skill, Bermudo confirms that it is possible and indeed desirable to be able to play polyphony at the keyboard by reading all the voices from separate partbooks simultaneously.[184] The greatest professional challenge that survives is in the remarkable Twenty Tests for Applicants for the post of Choirmaster at Toledo Cathedral in 1604, as successor to Alonso Lobo:[185] candidates had to improvise free counterpoint on a plainsong and on any voice of mensural music; add an additional improvised voice to music in two, three and four parts; be fluent in the Guidonian hand to indicate pitches, while singing a different voice; add a cantus firmus, and in syncopation; add imitation at the second, fourth and the fifth; direct singers from a choirbook, being able to demonstrate all the voices; give cues to the singers for correct entries instead of them counting rests; notice when a voice is missing in the texture; and understand canon, fugue and composition. The four named candidates were Francisco de Bustamante (from Coria), Juan Sisear (Valladolid), Diego de Bruceña (Burgos) and Lucas Tercero (León); none was appointed.

Auditions for instrumentalists are also recorded, though less frequently; for example, members of the Bassano family at Queen Elizabeth's court were appointed to "'try and examine" which of two candidates was "the more skilful and efficient musician in all manner

of musical instruments'".[186] In 1769 one Pfaffe, auditioned for the rank of *Stadtpfeifer* in Leipzig by Johann Friedrich Doles, played 'the following either passably or well: A piece for horn; A trio on the violin; A *concertirenden* chorale on the *Zugtrompete*; A simple chorale on the discant, alto, tenor and bass trombones; The *concertirenden* chorale again on the double bass'.[187] Both of these accounts are a reminder that single-instrument specialization is a 19th-century phenomenon, and earlier apprenticeship processes might involve mastering (to some extent) many different instruments.[188] Quantz reported that 'The first instrument I had to learn was the violin, for which I appeared also to have the most desire and capability. Then followed the oboe and trumpet. These three instruments occupied most of my efforts during my years of training. But I was not exempted from learning the other instruments, such as cornett, trombone, Waldhorn, recorder, bassoon, German double bass, violoncello, viola da gamba, and who knows how many others that a true town musician must be able to play. Because of being spread so thin with all these different instruments, it is certainly true that one always remains a bungler on each. Nevertheless, one does come to learn their characteristics, which is almost indispensable knowledge for composers, particularly those working with church music'.[189]

Performer attendance regulations

Attendance is a crucial aspect of ensemble efficiency, and numerous records attest to singer absences in particular. What arrangements were made for deputies (as in modern practice) is hardly known,[190] nor whether in some traditions missing voices might be replaced by instruments (as mentioned above) or covered by an organ accompaniment.

One piece of evidence does exist for proportion of attendances, which Rob Wegman has calculated from payment records for the Guild of our Lady at Bergen op Zoom: the singers Jacob Obrecht and 'Reynier with the hump' averaged attendance at 75% of services in 1483/4.[191] However, because these were per-service payments and not a salary, it is not possible to say whether this level of attendance was what had been agreed, or represents any level of non-attendance (Obrecht's career disciplinary record was by no means exemplary, rendering the latter a distinct possibility). The question of what to do when not enough singers were available was also raised at Bergen op Zoom in 1499/1500: the high-profile evening *Salve Regina*, 'commonly attended by all the noblemen and foreigners who are staying in the city' was regularly short of the agreed number of singers Obrecht was supposed to bring with him, so the authorities suggested that it would be better for reputational reasons not to perform the *Salve* at all than have it done in 'great confusion'.[192] Some institutions seemed to respond to such problems more casually: at San Rocco in Venice a 17th-century document records a request for an additional soprano, as their only one was 'often missing at the offices and other services, leaving the oratory without a soprano ... especially in processions and other important occasions ... with an extra soprano, if one is missing the other can supply'.[193]

In England, the New Foundation cathedral statutes issued by Henry VIII prohibited absence from residence for the choirmen even for a single day or night without permission. Attendance at every service was also compulsory, although some institutions like Norwich Cathedral (1566) allowed 40 days' holiday per year, and the regulations seem to have been widely breached.[194] At Wells Cathedral in 1597, Vicar Choral Richard Mewe was eventually dismissed, having been absent for more than six months.[195] Absenteeism was rife at Chichester Cathedral at the end of the 16th century, both of choir and clergy, and in 1595 they could not always muster enough singers even for the Sunday services. Vicar Choral John Mead missed no fewer than 183 services in late 1618, so clearly someone was keeping careful score; in 1610 a per-service absence fining system (ii*s* vi*d*, a significant amount) had been instituted by the demanding new bishop Samuel Harsnett, evidently to little effect.[196]

Fines or threats in respect of absenteeism were also common on the continent: at St Omer in June 1483 'the vicars Guillaume Didier and Gerardus de Vledrezelle were admonished to be present by the day of the next patronal feast or be sacked',[197] València chapel records for 1644 note an unspecified fine for non-attendance by a cornett player ('if he misses any date he will be fined from his salary of 90 pounds'),[198] while in response to 'obvious proof of negligence of duty among certain members of the band', in 1802 Prince Nicolaus II at Esterházy specified a fine of 'one Gulden per person' for any of his performers absent without a 'proper excuse'.[199]

Length of Service, and Pensions

Frequent rehearsal and performance by a team of musicians who worked well together was understood to produce better results: Bottrigari (1594) mentions the excellence of the San Vito musicians, saying 'perfection of concord in an ensemble is born in the long association of singers and players'.[200] Some surviving payment records can be used to calculate lengths of service for English cathedral musicians: at Durham the Lay Clerks averaged about 19 years between 1558-1637, and the numbers for Ely (1561-1655) were similar. The recorded maximum service was 33 years, although this was very rare. The Westminster Abbey numbers (1558-1645) are much lower, averaging 8 years with a maximum of 13, perhaps suggesting that alternative musical opportunities were more easily found in London.[201]

At Eton College, during the critical time when the Eton Choirbook was being compiled, there were increasing numbers of long-serving singers: William Yong, Thomas Kendall and William Ketyll all appear in the early 1490s, and left in around 1517-19, 1525 and 1526-28 respectively: Magnus Williamson notes that 'Clerkships lasting between 28 and 35 years (Ketyll's possibly as long as 40 years), were exceptional' but 'by the mid-1500s, half of the clerks or more had worked alongside each other for five years or more. In this sense, it is possible to talk of the clerks as a team, with a particularly long-serving and experienced

nucleus: an important advance on the situation, pre-1490'.[202] It is important to remember that while extended periods in a role would have increased both musical experience and repertoire familiarity, it was no guarantee of aspiration towards increased standards by the Lay Clerks, as Morley specifically complained: 'for the most part, you shall find amongst them, that let them continue never so long in the church, yea though it were twentie years, they will neuer studie to sing better then they did the first day of their preferment to that place'.[203]

Long service was likely to conclude with ill health, a decline of the voice or hearing problems, as the archives attest: at the Scuola di San Marco in Venice in 1460, it was recorded that the 'singers are worn out like old men … these men are weakened and unsuitable',[204] while one of the York Waits dismissed in 1584: as well as being 'oft drunk and is at diverse times troubled with the falling sickness', he suffered from 'hearing imperfect or almost deaf as that he is not sufficient to serve his place'.[205] Palestrina also had sight problems at the end of his life, although it does not appear to have affected the quantity of his composing.[206] Bass Ugo Miglietti moved from Margaret of Parma's ensemble to San Giovanni in Laterano in Rome; but according to Scipione Gonzaga (1586), he was 'not a man to be counted on, because he has a ruptured vein in his chest'.[207]

The absence of formal pension schemes before the 20th century sometimes led to musicians being either paid off, or else kept on without doing the duty. One example of the former was the dismissed York Wait mentioned above who, being 'a poor old man', was pensioned off at 26 shillings and eight pence annually.[208] Remarkably, the Durham Cathedral records indicate that Lay Clerks Nicholas Hobson and William Murray were still nominally in office at more than eighty and ninety years old respectively.[209]

There was also an informal and occasional 'pension' scheme in England for choristers whose voices had broken: as their voices went much later than modern boys and as university starting age was usually lower, it was sometimes possible to keep a few on the books (known informally as 'dry choristers') to bridge this gap, even though they were no longer singing. This included at least eleven boys at King's in the 1580s and 90s.[210]

Within an institution, success could lead to promotion that even straddled music and other professions: Craig Wright lists no fewer than 13 positions an ambitious young musician might eventually work his way through on his way from choirboy to Canon at St Aignan in Paris.[211] The York statutes noted the possibility of a progression from chorister to thurifer, sub-deacon, deacon and vicar,[212] while at Eton, singer George Kendall was successively a clerk (1496-), then organist (1502), Informator (1506) and finally chaplain (1509).[213] At Oxford, Richard Davy moved from Master of the Choristers to ordained priest to chaplain of the Boleyn family.[214] Music offered a form of social mobility, and some lucky sons of Tudor workmen and craftsmen could rise very respectably through music within the

hierarchies of the early modern class system.[215] William Crane, successor to Corynsh as Master of the Children in Henry VIII's Chapel Royal, acquired significant additional roles outside music and became a rich man.[216]

Musicians' behaviour

Tensions between clergy and musicians have a very long history, and surviving written texts usually derive from the former, often as hostile witnesses and referencing animal noises by way of mockery. One early account paints a vivid picture of the performance of polyphony (and apparently including a falsettist): in a sermon by Augustinian monk Johannes Hübner in around 1400 but derived from a 12th-century text, the preacher asks, 'whence so many monstrous songs in church? This one sings under, that one sings against, another sings above, yet another divides and chops certain notes in the middle; now the voice is strained, now cracked, now battered, now broadened in a more dispersed noise, and sometimes, I am ashamed to say, it is forced into horse-like whinnying; and at times, having lost its manly vigour, it is sharpened with the thinness of a woman's voice. Meanwhile, the whole body is moved about with histrionic gesticulations, the lips are twisted, the eyes rolled about; they play with their arms, and curlings of fingers accompany all single notes'.[217] In 1496 Savonarola described 'a singer with a big voice who appears to be a calf and the others cry out around him like dogs, and one can't make out a word they are saying'.[218] The poor sound of one 17th-century Exeter Cathedral Lay Clerk gave rise to a tale recorded about a 'countrey woman' found crying after a service, who told him to his face that 'when she heard him sing, she called to mind her mare that was lately dead & dying made just such a noise as he did in his singing'.[219] In view of these descriptions, the question may be asked whether an ensemble's director had much control of the sounds individual singers made, or saw vocal blend and balance as part of a rehearsal goal? Was rehearsal just for learning pieces to a sufficient level of accuracy, or for training (in the modern sense) an ensemble too?

As well as such dislike of music in church itself, complaints about the behaviour and morals of singers they employed have a long history. Erasmus called them the 'dregs of humanity', one of his contemporaries objected to them actually being paid (1523),[220] while reformer Martin Bucer complained that choirs sang too quickly, part of a catalogue of errors indicating their lack of devotion.[221] Such rushing is also referenced in a Cambrai Cathedral document from February 1504, where 'The deacon, scholaster, and sires Brillet, Bacheler and Dumont, along with the master of the grand mestier, are appointed to urge both the great and lesser vicars to sing and psalm more slowly'. The problem continued, and similar comments about tempo were made in 1514, 1544, 1547 and 1551.[222]

The idea of the necessity of dignified behaviour by singers in church appears repeatedly in the early modern period: according to notes made by papal Master of Ceremonies Johannes Burckard in around 1500, the duties of the *Magister capellae* were, in summary, to 'diligently

see to it that the singers sing the canonical hours nocturnal and diurnal at the due times and with due reverence and silence'.[223] On Christmas Day 1553, the traditional ceremony of the Boy Bishop took place in Gloucester Cathedral and chorister John Stubs preached the sermon, taking the opportunity to scold the bad behaviour of his own colleagues, the boy singers: 'rashly thei cum into quire without any reverence; never knele nor cowntenaunce to say a prayer or Pater-noster, but rudely squat down on ther tayles and justle wyth ther felows for a place; a non thei startes me owt of the quire agayne and owt agayne, and thus one after an other, I kannot tell how oft nor wherfor, but only to gadd and gas abrode, and so cum in agayne and crosse the quere fro one side to an other an never rest'.[224]

At Chichester Cathedral the singers' offences included threats of violence, drawing a knife in a brawl, quarrelling, drunkenness, slander, absenteeism, bringing dogs into church, and going bowling instead of attending the service.[225] The Chapter books at Wells Cathedral from the 1590s to 1609 bear out these same complaints about fornication, indiscretion, absenteeism, frequenting taverns, gambling and so on,[226] while at Salisbury in 1454 they played tennis and went drinking.[227] The nefarious activities of Thomas Weelkes at Chichester are well known, and finally being officially declared a 'common drunkard and a notorious swearer and blasphemer' in 1616 he was dismissed the following year. However, he seems to have been readmitted despite not mending his ways at all, dying in 1623.[228]

It was easier to identify a problem than to persuade the musicians to improve, as Thomas Harrold at St Paul's Cathedral lamented to Bishop Bancroft in 1598: disciplinary 'disorders have been most of them complained at every visitation, and yet continue in their old irregularity'.[229] In 1628 John Earle (Fellow of Merton College, Oxford, and Bishop of Salisbury after the Restoration) complained in his book *Microcosmographie* of drunkenness among church singers: 'The Common singing-men in Cathedral Churches are a bad Society, and yet a Company of good Fellowes, that roare deep in the Quire, deeper in the Taverne'.[230] John Brown (1763) took the view that having low-class lay singers rather than clerical voices (as in France) resulted in a lack of 'Dignity of Character' in cathedral music, instead having a 'Band of Lay-Singers, whose Rank and Education are not of Weight to preserve their Profession from Contempt'.[231]

Discipline and dismissal

Bad behaviour, whether musical or disciplinary (absenteeism, alcoholism, fornication) is recorded in many places besides Britain, and the Cambrai Cathedral documents called the *monitiones vicariorum* list consequent punishments, ranging from bread and water to imprisonment.[232] Another form of punishment is recorded in the Cambrai archives: when tenor Adam le Grand came to Matins of Epiphany 'attired as a woman' in 1508 he had to stand upright during all the canonical hours for a certain number of days.[233] At Wells in 1504 John Braddon had to process into the cathedral with a candle and say the penetential

psalms,[234] while in 1601 Vicar Choral Richard Marwood was punished by having to copy out church music for months, under the direction of the Precentor.[235] Chapel Royal countertenor Thomas Loughton murdered his wife in 1638, 'for which he was deprived of his place in ye Chappell';[236] it is not known whether he received any further criminal sanction.

Discipline of the boys often involved a tradition of physical chastisement: the early 10th-century monk Odo of Saint-Maur said 'if the boys commit any fault in the psalmody or other singing, either by sleeping or such like transgressions [let them be beaten] with pliant and smooth osier rods'.[237]

While those in employment could be dismissed in the case of serious disciplinary infractions, rather than just punished or fined, some institutions also made allowance to remove those who were no longer of sufficient standard: a Cambrai Cathedral document from August 1544 notes that 'those unsatisfactory singers who lose their voices should be dismissed',[238] while at the Scuola di San Rocco in Venice in 1531, the players of harp, lute and viol 'who served very badly' were replaced.[239] At another institution in the city, the Scuola della Misericordia, the entire choir was dismissed in 1540, 'because of their bad manner of singing, without any harmony and sweetness, singing in contempt of all rules, and with great dishonour in general to all'.[240] The Waits of Nottingham. Ipswich, Leicester, Manchester and Coventry were also dismissed wholesale by their employers between 1578-1635, mostly for reasons of fractiousness or incompetence.[241] It might be assumed that threats of dismissal would have helped musicians to take their rehearsal and performance duties more seriously, but how this sanction was viewed is uncertain. Correct institutional appointment processes also needed to be followed in the first place: in 1571 three papal singers were fired for having been improperly admitted.[242]

Opera rehearsal traditions

Opera existed both as commercial public entertainment, and – for wealthy aristocrats who could afford to build or maintain their own theatres - at court or in palaces.[243] The latter venues were private, but court functionaries and guests presumably combined to provide sufficient audiences for the series laid on by, for example, Haydn at Esterházy from 1763-1788, where there were as many as 150 performances a year.[244] Both public and private opera seasons saw productions given in rotation: the surviving lists for Covent Garden and the King's Theatre in London for 1734-35 show the lengths of a run, and the gaps between revivals.[245] The tradition on parts of the continent may have been more demanding, and similar to Elizabethan theatre practice (see below): writing from Munich in December 1774 Leopold Mozart notes that they had the same procedure there as in Salzburg – works 'cannot be performed more than twice in succession, for otherwise attendance would be poor. So for two or three weeks other operas have to be performed and then the first one

may be trotted out again, just as is done in the case of plays and ballets. Thus the singers know the parts of at least twenty operas which are performed in turn, and at the same time they study a new one'.[246] During the Venetian 1701-2 Carnival season, at a time of war and with many opera venues closed, there were a 'mere four operas' staged in 24 days.[247] In France, by contrast, Diderot claimed in *Rameau's Nephew* (and with some with literary exaggeration) that opera runs could last far longer: 'In the past, pieces like *Tancrède*, *Issé*, *Europe galante*, *Les Indes*, and *Castor* or *Les Talents lyriques*, used to run for four, five, six months. There was no end to the performances of a piece like *Armide'*.[248]

Letters from Milan between Mozart father and son in late 1770 about the latter's new opera *Mitridate* enable a partial reconstruction of the preparation order and content of an Italian opera, extracted from dateable comments such as 'The second rehearsal of the recitatives is taking place today … the first went so well'.[249] Recitative rehearsals (of which three may have been usual)[250] were likely for the performers only, although Leopold (1780) on a later occasion implies to Wolfgang that even there listeners were present: 'It is true that at a rehearsal where the eye has nothing to engage it, a recitative immediately becomes boring; but at the performance, where between the stage and the audience there are so many objects to entertain the eye, a recitative like this is over before the listeners are aware of it'.[251] It is possible that a three- rather than two-week preparation process is indicated (the recitative rehearsals may not have been the starting point), although there must have been instances where this was truncated and adjusted, as in the same city in January 1773: Leopold wrote that the *primo tenore* was 'only engaged a week before the performance'.[252]

8 December	Second recitative rehearsal
15 December	'first rehearsal with instruments', with 16 instruments, the 'small orchestra'
17 December	'first rehearsal with full orchestra', 60 players, in the *sala di ridotto*
21 December	Recitative rehearsal
19 December	'first rehearsal in the theatre'
22 December	second rehearsal in the theatre
24 December	dress rehearsal
26 December	first performance, to 'general applause'
27 December	second performance

As well as separate recitative (and probably soloist, and chorus) rehearsals, sectional instrumental rehearsals also took place in Italy for the concertino; they are described as being later discontinued.[253] While some production information can be gleaned from surviving scores and parts, even very rare documents such as prompt copies provide relatively little additional information, and say nothing about the rehearsals that made the productions possible.[254]

PERFORMERS AND THEIR TRAINING

Listening and hearing

For much of the early modern period, musical traditions were relatively local, and even professional musicians were not always aware of the standards and styles that existed elsewhere. This both deprived them of good models, and the knowledge of how things might be done differently (and better) elsewhere. In 1780 Johann Adam Hiller lamented that 'The poor condition of our church and theater music is related to yet another disadvantage … Talented young people never have the opportunity to hear something excellent, which could serve as a model for imitation'.[255] However, travel was to become easier the following century, and the newly-appointed organists of Norwich (1821) and Salisbury (1869) cathedrals each undertook considerable national tours to hear and learn from other institutions. The latter, John Richardson, even published an account of his travels, including many comments praising the choirs and organs he heard.[256]

How people thought about and described music varied according to time, place and tradition. While some modern studies of the historical listener provide useful perspective,[257] for the earlier periods the idea of performance criticism or description is essentially absent: Christopher Page points out that 'very little medieval writing has yet been discovered which records a personal or impressionistic reaction to music',[258] Craig Wright asks, 'How much in specific terms do we truly know about tempo, dynamic levels, pitch, and, perhaps the most important, vocal production - about the nature or quality of the sound of the voice of a court or cathedral singer?',[259] while Nikolaus Harnoncourt suggests that pre-20th-century audiences were more interested in the work itself than its performance.[260] This latter observation seems plausible for a pre-canonical era, though Quantz was certainly aware of the reverse: if audiences 'listen more for the sake of judging the performer than of enjoying the music, they voluntarily deprive themselves of the greater part of the pleasure that they might experience'.[261]

Performance descriptions

One actual description of a music event, the consecration of Florence Cathedral in 1436, for which Dufay composed his motet *Nuper rosarum flores*, is notable both for its florid language and its lack of musical detail: 'everywhere there was singing with so many and such various voices, such harmonies exalted even to heaven, that truly it was to the listener like angelic and divine melodies; the voices filled the listeners' ears with such a wondrous sweetness that they seemed to become stupefied'.[262] Such generalizations tend to be produced by non-expert listeners or non-musicians, and their value as evidence is very limited. In January 1483

one listener at the Abbey of Saint Aubert in Cambrai noted the monks 'played the organ and sang more splendidly than I had ever heard',[263] while the English Chapel Royal was described by the Venetian ambassador Pasqualigo: 'We attended High Mass which was chaunted by the Bishop of Durham, with a superb and noble descant choir'; in 1515 his colleague Sagudino was at Richmond Palace, where 'High Mass was sung by his majesty's choristers, whose voices are really divine than human: they did not chaunt but sung like angels (*non cantavano ma jubilavano*), and as for the counter-bass voices, they probably have not their equal in the world'.[264] In Italy, the Duke of Ferrara said of the Christmas High Mass of 1591 that he 'had never heard a more beautiful mass than this one'.[265]

Reports from professional musicians are not always much more specific, but carry more weight: Mozart (a severe critic of others' performances), writing to his father from Vienna in April 1784 about his just-completed Piano Quintet K452, was able to give full credit to the unnamed performers of 'the best work I have ever composed … how beautifully it was performed'.[266]

In general, it seems easier to find praise of individual solo singers than of ensembles,[267] and perhaps standards and expectations were different in each case. Precentor John Borne of Canterbury (d.1420) had 'the most excellent voice of any monk in the kingdom',[268] while in 1455 in Venice, visitors heard a 'young English woman who sang so sweetly and pleasantly that it seemed not a human voice, but divine'[269] and Thomas Coryat (1577-1617), visiting the same city, also noted the quality of the solo voices: 'there were three or foure so excellent that I think few or none in Christendome do excelle them, especially one, who had such a peerless and … supernaturall voice … that I think there was never a better singer in all the world'.[270] In Rome in 1770 Burney heard a daughter of the fashionable painter Pompeo Bartoni, who 'sings divinely with more grace, taste and expression than any female in public or private I ever heard'.[271]

Music education

The use of young musicians in the Medieval church meant that educational responsibility was held by local monasteries, cathedrals and churches, who created formal and informal schools for music and other education. In addition, training could be provided for the adult, as in vocal and notational training provided for some nuns, using the Guidonian hand.[272] A further group of young musicians were orphans, and music could be a significant part of the activity of orphanages such as the Santa Maria della Visitazione degli Orfani in Rome[273] or the Ospedale della Pietà in Venice; the Italian music conservatoire tradition appears to have later emerged from these.[274] Burney (1773) notes that the musical directors of such Italian orphanages (which had included distinguished musicians such as Legrenzi, Rovetta, Vivaldi and Hasse) saw their roles as compositional and administrative: 'the maestro di capella only composes and directs … and attends all the rehearsals and public performances'.[275]

From the end of the 18th century there were formal music conservatoires in Italy, followed by Paris (1795), Prague (1811), Graz (1815), Vienna (1817), London (1822) and so on. Other projects included Anton Stadler's 'Musick Plan' of 1800, which was unusual in that the curriculum was designed from scratch by one person.[276] The spread of such institutions provided a model of good practice (seen, for example, in the very influential teaching material generated from the Paris Conservatoire in the early 19th century). However, Nikolaus Harnoncourt has argued that the conservatoire system has since then produced some pernicious effects with regard to the freedom and local traditions available to earlier musicians.[277]

While the possibility of a musical career would have entirely depended on musical talent, allied with education (only those who could read, read music and had access to musical instruments for study, for example), it is interesting to think what proportion of the population as a whole this number might have represented. It is possible that this was not large, perhaps thousands in a population of several millions, and therefore the availability of trained talent to fill vacancies in choirs, cathedrals and orchestras across Europe may at times have been severely limited.

Standards and competence

Given the patchy historical record of early modern performers, and the extreme difficulty of some of the music they played, modern writers have taken a variety of views about the technical standards of the past. Harnoncourt suggested that 'We must assume that leading musicians of all periods have been able to perform the most difficult works of the composers of their own times',[278] while Jerold notes that 'Today's historically-informed performances mirror the view that eighteenth-century musicians were our equal in technique and musicianship, and that they performed with great refinement. To all appearances, this has not been documented, but simply presumed'.[279] Clearly, those with the talent, time and inclination (and expert tuition) could achieve extremely high standards individually, and Quantz's recommendation for a beginner flautist to practice for four hours a day - which is 'neither too much nor too little' - should give modern musicians pause for thought.[280]

The standards of historical choristers certainly 'varied widely, for while some institutions strove to engage boys from far and wide with pure voices, others sought to educate the poor of the surrounding region'.[281] Similarly, their social status is likely to have varied considerably between traditions, countries and centuries; the anonymous early Elizabethan author of *Praise of Musick* describes cathedral choristers as being 'of the poore and beggerly sort, whose parents are not able to pay any thinge for their learninge'.[282] Viadana (1602) also had a poor opinion of young singers: 'boys, for the most part, sing carelessly, and with little grace'.[283] The choristers at Salisbury Cathedral in 1602 were 'by reason of their want of knowledge and

practice in the church songs and music' unable 'to sing surely and perfectly but [did] often miss and fail and [were] out in their singing',[284] while of the quiristers (choristers) at Winchester College in 1631, it was said 'Only two or three can sing'.[285] Nevertheless, some virtuoso Tudor music written for trebles, such as the five-part Magnificat (c.1510) by William Cornysh, shows that there must have existed choristers of a high standard.[286]

Where detailed institutional records exist, the picture they paint can be alarming: the proportion of substandard singers in the 16th-century papal choir may have approached 40%, according to Richard Sherr, with individual voices described as 'terrible', 'harsh, 'hoarse', 'dissonant', 'almost bearable' or 'has no voice'; however, some 'do not have good voices but are good musicians'. In terms of their moral character, one singer is 'the worst kind of heretic', one a 'gambler' and another has 'fled because of debts'. The highest vocal praise in a 1565 list made for the Cardinals' Commission is the single laconic word 'acceptable', although a 1573 list is more generous to one tenor at least: Mattia Bianco has 'a very good voice'.[287]

Monteverdi's letters include comments about his auditions of singers that make it clear be believed musical reliability to be crucial: 'he sings his part very surely in motets' (1610); 'as a singer he is very reliable' (1627).[288] The quality of training must always have been very important, and students were dependent on the skill, experience and affordability of their teacher, if they even had one. Mozart writes from Mannheim in November 1777 about the composer Cannabich's daughter Rosa, whose left hand has been ruined, and she does 'what she does, because no one has ever shown her any other way'.[289] However, certain places were very well equipped with music teachers, of whatever quality, and Leopold Mozart (1778), stated that 'in *Naples alone* there are at least three hundred maestri'.[290]

The standard of singers on the continent (apparently generally poor) often comes in for criticism: choral singing 'was filled with screaming from the most wretched voices' (Reichardt, 1785);[291] while in Italy 'all the *musici* [castrati] in the churches at present are made up of the refuse of the opera houses, and it is a very rare thing to meet with a tolerable voice upon the establishment of any church in Italy' (Burney, 1770).[292]

Professional instrumentalists could also be poor: in October 1777, a letter from Mozart describes a concert including the Munich violinist Charles Albert Dupreille (1728-1796) 'who could not play four bars in succession without going wrong. He could not find his fingering and he knew nothing whatever about short rests',[293] while Jean-Jacques Rousseau's satirical *Letter of a Symphonist to his Comrades in the Orchestra* (1753) notes the decline of orchestral playing in France, now that 'we do not play much in tune or stay together very well'.[294] The question of overall ensemble standard relative to the quality and ability of individual performers is an interesting one; Burney's remark about the Mannheim orchestra being 'an army of generals' may represent an ideal rarely achieved[295] - but note that an anonymous

account from 1785 of a crushed and noisy audience busy playing cards and wandering around while the Mannheim band played is hard to reconcile with the ideas of performing precision.[296]

Instruments

The use of instruments in church varied from denomination to denomination, and clergy and others that objected to either their sound or cost found plenty of evidence from centuries of past ecclesiastical authorities to censure their use: writing before the Civil War, Puritan lawyer William Prynne wondered why 'hath the church so many organs and musical instruments? To what purpose, I demand, is that terrible blowing of bellows, expressing rather cracks of thunder than the sweetness of the voice?',[297] while John Vicars complained of '*Roaring-Boyes*, tooting and squeaking *Organ-Pipes*'.[298]

Elsewhere, at about the same time but very different in its appreciation of the mix of voices and instruments, the complex interplay of voices and instruments was even contractually specified for specific services, as in the *Constituciones of the Real Colegio* at València: 'in the Salve sung on Saturdays, after the organ has played a little, the service will begin with the antiphon *Ad honorem* in polyphony, followed by the Salve, one verse on the organ, and the other sung by the choir in plainchant, and then the *gozos*, Gaude Virgo, etc.,with the organ playing one verse, and the other verse with the choir in polyphony; then the instrumentalists will play, immediately followed by the organ, and then a polyphonic motet for the feasts of our Lady will be sung. When the motet has finished, the cornetts will play, bringing the Salve to an end with the verse *Monstra te esse matrem*, which will be chanted by the two *capiscoles* and the responses will be chanted'.[299]

Other practical factors about instruments and instrumentalists may have had a significant impact on rehearsal practice. For example, were instrumental doublings of voices determined by the conductor in advance or in rehearsal?[300] Were such choices made for musical decisions, for practical ones (supporting the choir) or just in order to make sure all the lines were covered? How were different tuning systems and pitch differences accommodated? Who owned the instruments (for example, was the very large royal collection of Henry VIII to an extent a 'loan' set?),[301] where were they kept, who moved them about, who maintained them[302] and how were they accessed for individual practice? Were there separate rehearsals for instrumentalists? Who (if anyone) was responsible for choices about technical matters such as bowing?[303] Was uniformity of ensemble tone, volume or articulation a concern?

Keyboard accompaniment

The prevalence of keyboard accompaniment also varied during the Renaissance and Baroque; at some times and places this involved a simple doubling of vocal parts that was

suitable both for rehearsal and performances,[304] whereas elaborated examples were intended primarily for performance.[305] Keyboard accompaniment material from the pre-Civil War era can be very sketchy in nature, such as in the early 17th-century Batten organ book (Tenbury 791), outlining the highest and lowest voices rather than providing a keyboard reduction of all the vocal parts.[306] The information provided is usually sufficient to infer the harmony (and therefore to support the singers in rehearsal in performance, even where their inner voice was not included), whereas 18th century formats sometimes also provide cues, registration, ornamentation or figured bass to assist the player further. Thomas Mace (Lay Clerk of Trinity College, Cambridge, for many years) approved use of the organ in terms of helping with both ensemble and tuning: 'the *Organ* stands us in stead of a *Holding*, *Uniting-Constant-Friend*; and is as a *Touch-stone*, to try the certainty of *All Things*; especially the *Well-keeping* the *Instruments* in *Tune* &c'.[307] Viadana (1602) supported keyboard accompaniment for his music too: 'If anyone wants to sing this kind of music without organ or clavier, the effect will never be good; on the contrary, for the most part, dissonances will be heard'.[308] The implication of the second phrase may be that an accompaniment prevents (or covers) singers' errors.

However, whether manuscript organ parts were intended for rehearsal, or both rehearsal and performance, is not always certain, and this relates to rehearsal venues and to whether (for example) cathedral song schools even had keyboard instruments in them.[309] In Britain during the 16th and 17th centuries the matter is also complicated by varying pitch standards between (for example) a rehearsal keyboard and a church organ (based on 10' not 8' pitch).[310] In 1549 Eton had 'one litle paire of orgaynes in the Scholem[rs] Chamber' in addition to the main chapel organ, while Magdalen College, Oxford had a second small organ in 1488-89,[311] as did New College, Oxford in 1488,[312] and likely a Dallam chamber organ in the 1660s.[313] It does seem likely that stringed keyboards or small organs were kept in at least some rehearsal venues, but the recorded presence of an organ did not mean that it was actually usable: at Durham Cathedral in 1589 the quire organ 'had not worked for many years', but was repaired by William Smith (c.1550-1604).[314]

Modern performance of Renaissance polyphony is almost entirely *a capella*, but this probably did not reflect general historical practice, and some like Beverly Jerold have suggested that some form of accompaniment was in fact common.[315] The Sistine Chapel did not use organ at that time (although one was installed later),[316] but that unaccompanied choral practice did exist sometimes within the Anglican tradition is shown by Roger North's complaint about psalmody, that 'where the organ is not used which keeps the quire upright, the chanting is scandalous, such a confused din as no one living not pre-instructed could guess what they were doing'.[317]

Another form of keyboard accompaniment was provided by score reading, and Albrechtsberger (1790) provides an early published discussion of this skill,[318] which must

always have been necessary for composers and players rehearsing an opera from a full manuscript score. The importance of this was to diminish with the creation of cheap printed vocal scores from the end of the 18th century, the orchestral parts having been reduced to a keyboard accompaniment.[319] For expert keyboard players, the same skill of condensing scores at sight obviated the need for notated figured bass. A few references exist of implied or specified keyboard-only accompaniment in initial opera rehearsals: a letter from Leopold Mozart in Milan in September 1772 mentions of a newly-completed Wolfgang work that 'The choruses were rehearsed yesterday, but without the instruments',[320] while in London in the 1820s the accompanying instrument was named as 'the composer's piano-forte'.[321]

Playing by ear

Even with accurate source material, musicians needed to understand incomplete parts, such as unfigured bass lines: Giovanni Piccioni (1610) expected expert organists to play from an unfigured bass 'correctly by ear and by art';[322] this is perfectly possible with experience, but initially will result in the right-hand chords lying behind the beat.

Memorization

Socrates, as reported by Plato in the *Phaedrus* (c.370 BC), was concerned about the use of writing, as 'it will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. The specific which you have discovered is an aid not to memory, but to reminiscence',[323] and he was correct in that memorization abilities diminish with lack of use. In historical societies where literacy was not universal, the role of memory was far more important than it is today, and the Tudor school system, for example, was built on 'colossal amounts of memorization'; John Donne would routinely compose his very lengthy sermons on paper, then memorize them for delivery.[324] Musicians were also able to commit substantial amounts of repertoire to memory by design - or by accident.[325] For example, Fray Motolinia's *Historia de los Indios* describes how an old friar taught young indigenous boys numerous prayers through Gregorian chant, noting that 'if the pages get mixed up or the books fall while they are singing this does not prevent them from singing on without the slightest error'.[326] At Notre Dame in Paris (1313) singers were expected to know the antiphoner and psalter by heart.[327] However, it was not until the 19th century that musicians (especially soloists) outside the church or opera house routinely began to memorize repertoire.[328] In terms of locating rehearsal start points, memorization of course makes matters even more cumbersome.

Where memory did fail, assistance could be found: in November 1498 the choir of Cambrai Cathedral were not able to sing the *Salve Regina* chant uniformly, so the music was 'painted on a tablet that was affixed to the wall of the chapel of the Trinity' so that they could see it: 'Because the vicars are frequently discordant when singing the Salve regina, one is to be

made in large notes and placed against the wall following the example of the Alma that is before the horologe'.[329]

A large memorized repertoire was obviously an unusual matter of note in classical music: the *Concerto delle donne* in Ferrara could perform more than 330 madrigals 'by heart';[330] while writing from Paris in May 1778 Mozart mentions a composition-pupil daughter of the Duc de Guines who played the flute and harp, 'has a great deal of talent and even genius, and in particular a marvellous memory, so that she can play all her pieces, actually about two hundred, by heart'.[331]

Performer errors

The principal purpose of rehearsal today is the elimination of individual and collective mistakes: Mary Ellen Cavitt calculates that 'error correction may consume almost half (49%) of all rehearsal time'.[332] In the entirely 'live' music environment of the past, performance errors (as in wrong notes) passed by very quickly, and it cannot be assumed that players would have had the same text-critical attitude to accuracy as today. In addition, few institutions seem to have specifically punished musical errors (the Sistine Chapel being the obvious exception, see below), as the 'rituals' of performance were not inviolate. This is in stark contrast with Aztec sacred music traditions: 'Training of an extremely rigid kind was prerequisite to a career in music since music itself was always thought of as a necessary adjunct to ritual, absolutely perfect performances - such as only the most highly trained singers and players could give- were constantly demanded … Imperfectly executed rituals were thought to offend rather than to appease the gods, and therefore errors in the performance of the ritual music - such as missed drumbeat - carried the death penalty'.[333]

In the monastic tradition, those making errors had to kneel and acknowledge their mistakes, according to the Benedictine rule, and at Syon Abbey there was even a categorization of such errors in reading or singing: 'light', 'grievous', 'more grievous' and 'most grievous'.[334] The acknowledgement of rehearsal errors by individual singers is still common choral practice in British cathedrals, where 'a finger or hand [is raised] to acknowledge his or her mistake so long as it is not catastrophic enough as to have caused a complete breakdown in the musical texture'.[335]

Remarkably, Luigi Zenobi gives as one of his eight qualities needed to be a 'secure' singer the ability to, 'on meeting with an error on the part of the composer or the copyist, [know] how to improvise a remedy to the error while singing and find his way back without help from others'.[336] A example of this process might be found in the very curious earlier description of Stephano Vanneo (1531), who invites his reader to admire and 'observe the parts of an accomplished singer, who when he feels that he is producing a dissonant progression, at once little by little and so discretely, that it can scarcely be recognized and

detected, either flattens or sharpens it, until a consonant and sweet progression strikes the ears'.[337]

The fining-for-mistakes system of the papal choir described by Richard Sherr and others is a remarkable source, because it sometimes specifies the musical error that resulted in the fine. Not coming in during polyphonic entries was one infraction, as well as getting the pitch wrong or having a voice missing. In November 1583, for example, one singer called Bellucius was fined 'because Cesare Bellucius in the Gloria in excelsis which he was supposed to sing, did not sing, and because of the dissonance was the cause of great subversion'.[338] In 1594 'at Mass the sopranos allowed a three-part section to begin, the Benedictus qui venit, which started with an alto, and they allowed the alto to sing for about 20 beats before any of the sopranos decided to start'.[339] In 1700 the four-part *Missa paris vocibus* by Vincenzo Pellegrini (c.1562-1630) was put on the music list but with the wrong set of solo singers present (STTB), and 'Great disharmony came from this mistake, it never having occurred that a mass was sung without the contralto part' (this implies the work had not been rehearsed, otherwise this would have been noticed). Four singers were fined in 1728 for 'having altered the pitch taken from the senior singer in the motet, which caused much disharmony'. Later two singers simultaneously began the motet *O magnum* a tone apart, 'which caused the senior singer to stop singing, which caused certain confusion'.[340] These are familiar sorts of transgressions in choral singing today, even with scores being used, but the question of whether these Sistine Chapel mistakes occurred *after* the music had been rehearsed correctly, or whether they were a result of no rehearsal having taken place, is unknown. Fining singers would have seemed fairer in the first instance.

A parallel English instance of error penalties can be found in the Acts of the Dean and Chapter of Westminster 1560-1609 (chapter minutes of 12 October 1561): 'Item it is decreed that everie Saterdaie their shalbe a quire chapitor wherat shalbe one of the prebendaries, before whom all the quire shall appere for redresse of faultes in the weeke before committed'. Whether these 'faultes' were purely musical or also included behaviour issues is unknown. The *Book of Perditions* mentioned in John Strype's *Annals of the Reformation* was more explicit in the latter respect, covering the 'Default of such as were absent, or negligent in the Week before'.[341]

It is interesting to consider the possible 'catch-up' mechanisms that singers of complex polyphony working from parts had at their disposal when they became lost through miscounting or other errors. These include the location of recognizable harmonic features (for example, structural points such as cadences), distinctive melodic turns, imitative and sequential passages and, of course, referring to the text. These resources would have become more effective if the piece was already known or had already been rehearsed, which is one additional reason why rehearsals might have been important: not to prevent mistakes, but provide a 'safety net', given that there will always be some errors. All of these resources are

more effective if the ensemble's rhythmic precision is maintained, so that the underlying beat can be quickly identified.

The necessity of rehearsal partly depends on the regularity of performance, as well as the size of repertoire, without even taking into account the ability of performers. In Vienna in the early 1770s, Burney reported that 'there is hardly a church or monastery in Vienna where a musical mass is not performed each morning … the churches are very full every day'.[342] As can be seen from the very rare 1680 music list surviving from Durham Cathedral,[343] full choral services there took place twice daily, and this seems to have been normal practice in the major Anglican cathedrals until the 20th century. Two centuries after the Durham list, singers' reminiscences of the legendary Norwich Cathedral organist Dr Zechariah Buck (1798-1879) show that choir sang twice daily on every day of the year but one; and although there were no full choir rehearsals, the men had no fewer than 229 separate rehearsals in 1869.[344] In these circumstances, core repertoire would be known very well, the 'house style' of performance was a given and there would be no need to rehearse standard material such as responses and psalms.

Performance anxiety

One of the modern purposes of rehearsal is to give confidence to players that they know the music well enough to play it creditably in public. However, the actual concepts of stage fright and musical perfectionism may be relatively modern: remarkably, the first published discussion of this former problem was by Adolph Kielblock in 1891, in a book called *The Stage Fright or How to Face an Audience*.[345] Andrew Steptoe notes that performance anxiety's 'cognitive disturbances centre around worries concerning potential catastrophes, performance quality and exaggerated beliefs about the importance of any particular musical performance',[346] and it is likely that musicians of the past would have recognized at least some of these as issues. For example, Quantz (1752), in his advice to a flute player preparing for a public concert who is 'timorous, and as yet unaccustomed to playing in the presence of many people', suggests ignoring the audience, 'never turning his eyes to those present'.[347] Anxiety may also relate to the phenomenon of stuttering in public speaking, for which there is a very long historical record.[348]

Selecting repertoire

Secular patrons, especially those with household musicians, such as Frederick the Great and Prince Esterházy, were in a position to determine what was performed, or even composed, for their court's entertainment.[349] Similarly, senior church dignitaries or officials could request or demand certain repertoire. Otherwise, the resident director of music would have been expected to select appropriate music and have it prepared in time. However, there could be limitations to this, as when the Sistine Chapel Choir in 1616 were given the right of

refusal: 'it was resolved and decreed that the maestro di cappella for the time being may not cause any works to be sung in cappella unless they are first heard by the college of singers and they deem them to be good'.[350] Eight years later, the repertoire choices seemed to be allocated by rota, and choir librarian and alto Pietro Antonio Tamburini 'was responsible for choosing the week's music and the preparation of the music-books'.[351]

Sight-reading

The ability to read music accurately at sight (*a prima vista*) is a very important rehearsal skill, and can greatly reduce the amount of time needed to learn a new work. Early writers thought that the basic skills could be taught very quickly: Odo of Cluny (d.942) asserted in his *Enchiridion musices* that boys can be taught to sight-sing 'without hesitation' in a few months by using the monochord; he also claimed that students could be taught to sing (it is not clear whether he means vocally, or using notation) in as little as three days.[352] A century later Guido of Arezzo (d.c.1050) was even more ambitious with his method, the *Epistola de ignoto cantu*, saying boys could be taught to sight-sing in two days.[353]

The skills extended into secular music traditions later: Edward, Lord Herbert of Cherbury, wrote in his Autobiography, 'During the time of living in the University or at home . . . I attained also to sing my part at first sight in music,[354] in 1664 Samuel Pepys reported that former Chapel Royal chorister Tom Edwards could 'sing anything at first sight',[355] while Anton Stadler's 1800 'Musick Plan' notes that after two years' training, 'the student should be able to read most music at sight'.[356]

More complex music demands a higher level of skill, and musicians like Mozart were evidently proud of their sight-reading skills; in one of his letters he mentions playing all the music in one Longotabarro's collection in Augsburg on 'a good clavichord by Stein', and accepting – on being told 'No one could tackle that' - with faux-modesty the challenge to play a difficult fugal sonata (1777).[357] Interestingly, he provided in 1778 a description of the art of sight-reading, which included as one goal to play in a way that it sounded like 'the performer had composed it himself'.[358] Mozart evidently had a natural talent for this from a very early age, as in 1768 his father reported that people were unable to believe his skills; the following year he performed 'a very beautiful concerto' at sight.[359] What is missing from these descriptions is a sense of the actual accuracy of the result, but this comes in his description of Mlle Weber's clavier playing (1778): ' What surprises me most is her excellent sight-reading. Would you believe it, she played my difficult sonatas at sight, *slowly* but without missing a single note!'.[360] That same year, Mozart expressed concern about excessive speed when reading at sight: one Vogler played both too fast and too sketchily, for 'nothing is possible at that pace, for the eyes cannot see the music nor the hands perform it'.[361] In actual performance, matters could be quite different: from Vienna in August 1782 he wrote

to his father that the finale of the Haffner Symphony K385 must be played 'as fast as possible'.[362]

Bach was also a legendary sight-reader, and is reported to have said that playing the organ was not difficult: all you had to do was 'hit the right note at the right time'.[363] A sight-reading anecdote in Forkel's 1802 biography was clearly derived from Bach family lore: at Weimar he told an acquaintance that he 'really believed he could play everything, without hesitating, at first sight'. Nemesis came when the friend deliberately supplied a score with an unplayable passage, to which Bach responded, after failing to negotiate it successfully: 'one cannot play everything at first sight; it is not possible'.[364]

Another instance of fluent reading being a professional skill likely to enhance a performer's reputation comes in a story about the Czech composer and harpsichordist Ernest Vanzhura (1750-1802) arriving in St Petersburg in 1779: very soon he 'became famous and popular here for his unusual skill playing the harpsichord. He plays not only everything from sight accurately and delicately, but also his tasteful fantasies and various very difficult concerts of his own composition, among which is one that he wrote for his own special fingering system and, surprisingly, performed with specially played passages at the octave. Balshau [Palschau], who heard him play, tried to play it as well, but had to admit that he couldn't have done it if he hadn't got a few days to rehearse'.[365]

While there has been considerable modern research on sight-reading skills,[366] references from the past suggest that high-level ability was sometimes regarded as an innate skill, rather than one that could be methodically taught. Nevertheless, as an advanced form of music notation comprehension, it was expected to some degree in certain societies, as the fictitious story of the shamed amateur gentleman that opens Thomas Morley's 1597 treatise *A Plain and Easy Introduction to Practical Music* shows: 'supper being ended, and Musicke bookes, according to the custome being brought to the table: the mistresse of the house presented mee with a part, earnestly requesting mee to sing. But when after manie excuses, I protested vnfainedly that I could not: euerie one began to wonder. Yea, some whispered to others, demaunding how I was brought vp: so that vpon shame of mine ignorance I go nowe to seeke out mine olde frinde master *Gnorimus*, to make my selfe his scholler'.[367] Henry Peacham's *The Compleat Gentleman* (1622) also asserts the necessity to 'sing your part sure, and at the first sight, withall, to play the same upon your viol'.[368] At this point these descriptions begin to sound more like social aspirations than educational or cultural obligations, and it is not possible from them to judge actual levels of musical literacy at the time.

There must have been many occasions, especially in church music, where good sight-reading was essential: Viadana (1602) speaks of 'when it is necessary to play concerted music on the spur of the moment', and recommends the organist take a 'preliminary look … since he will always make his accompaniments better for understanding the music'.[369] While accepting

that it could be and was done, William Byrd's preface to this *Psalmes, Songs, and Sonnets* of 1611 reminds readers that, 'the best song that ever was … is seldom or never well performed at the first singing or playing'.[370] However, by the end of the 18th century, Dr Burney found Renaissance polyphonic notation (a Josquin mass in particular) impossible to conceive of being sight-read: 'these compositions must have been studied, and frequently rehearsed, before their performance; for though no rapidity of execution is required, yet, as there are no bars, and the value of the notes is frequently changed by position, as well as by the modal signs, upon very short notice, this, joined to the difficult solution of the canons, must have made it impossible for them to have been sung at sight, even by those who were accustomed to the notation'.[371]

It was the view of the French that the Italians had more advanced reading skills. and François Raguenet (1702) makes positive comparison of Italian sight-singing to French practice: 'To sing at sight with them is no more than to read so with us … our singers are forced to con it over and over before they can make themselves perfect'.[372]

One interesting view about the repetition that is learning can be found in the preface to Dario Castello's *Sonate Concertante in Stil Moderne, Libro Primo* (1621), where performers were advised, with respect to his new-style sonatas, 'that although at first sight they may appear difficult, their spirit will not be destroyed by playing them more than once, and in so doing they will become practised and this will render them very easy, since nothing is difficult when pleasure is derived'. In other words, Castello is hinting that sight-reading results in a form of spontaneity that actually learning a work might not.

Two letters from Monteverdi indicate the necessity of a work being 'looked over' (presumably, tried out) before a performance, in order to give it a fair hearing: in 1607 he instructs a new work is to be passed to musician Bassano Casola, 'so that he can rehearse it and get a firm grasp of the melody together with the other gentleman singers, because it is very difficult for a singer to perform a part which he has not first practiced, and greatly damaging to the composition itself, as it is not completely understood on being sung the first time', while in 1615 he says, 'if you could let the singers and players see it for an hour before His Highness hears it, that would be a very good thing indeed'.[373] Gluck also complained that 'insufficient rehearsals and bad preparation' had harmed reception of his *Alceste* (1769), the performance thus being unfair to the work.[374]

Perhaps the most interesting historical sight-reading reference concerns choral rather than solo music-reading skills: in 1518 Henry VIII arranged a competition between the Chapel Royal and Cardinal Wolsey's choir, set as a sight-reading test, and the latter ensemble won, the piece being 'better and more surely handlydde'.[375]

In the 19th century, virtuoso sight-reading skills continued to impress audiences and listeners, as when Goethe heard Mendelssohn aged just 12: 'What this little man can do in extemporizing and playing at sight borders on the miraculous'. Ten years later the composer came to the conclusion the public improvisation, although demanded by his audiences, was too much of a circus act: 'it is abuse and nonsense simultaneously'.[376]

While expert sight-reading skills were obviously regarded with admiration, even awe, it is interesting that a single literary example finds Shakespeare turning it into a negative metaphor for female sexual incontinence: in *Troilus and Cressida* (c.1602), Ulysses says of Cressida. 'She will sing any man at first sight'.[377]

Improvisation skills

The ability to discant and improvise[378] was an essential part of ear training in some times and places: 'the technique of improvising polyphony on psalm tones and other liturgical chants *super librum* was practiced throughout the period 1475-1550, and possibly well before and after. All lesser vicars were expected to be skilled in this art, and it constituted a principal mode of performance at the canonical hours, at least on festal days of duplex rank'.[379] Such abilities would have assisted a singer who had lost their place, and would have been fundamental to their understanding of both polyphony and performance: 'the art of discanting was in all likelihood taught and transmitted as a living practice, possibly without the use of a single treatise. What mattered was the practical skill of singing correct successions of consonant intervals: the rules were internalized, not by learning them from Latin manuals, but by applying them in lessons as well as in communal music making. At most, instruction would have involved books or slates with monophonic tunes, with the master singing the written melodies, and the pupils improvising (either by turns or together) counterpoints of increasing floridity'.[380] Similarly, fluency in solmization techniques would have been invaluable in creating an 'aural map' of a polyphonic work for a singer.[381] Thomas Morley noted that discanting was no longer common practice in 1597 Anglican England: 'As for singing vppon a plainsong, it hath byn in times past in England (as euery man knoweth) and is at this day in other places, the greatest part of the vsuall musicke which in any churches is sung'.[382] However, in 1564 'squares' (probably meaning a cantus-firmus-based composition) were still being sung liturgically, while at Ludlow Parish Church in 1581 and Norwich Cathedral a decade earlier the weekday service was sung in 'plaine song' or to 'playne note',[383] likely using Merbecke's 1550 *Booke of Common Praier noted*.[384]

Compositional timetable pressures

There are a number of instances in music history of works being composed at great speed, and this may well imply imminent performance, and thus serious constraints on rehearsal time. Richard Davy's 15-minute Eton Choirbook antiphon *O Domine coeli terraeque creator* of

c.1490 was composed in just one day in Oxford (*hanc antiphonam composuit Ricardus Davy uno die Collegio Magdalenae Oxoniis*); while Mozart, finding himself short of music in Linz in Autumn 1783, wrote to his father on 31 October that 'On Tuesday, November 4th, I am giving a concert in the theatre here and, as I have not a single symphony with me, I am writing a new one [K425] at breakneck speed, which must be finished by that time'.[385] The most famous case of speed is found in the anecdote concerning *Don Giovanni*, for which Mozart wrote the overture during the night before the premiere in October 1787: 'The copyists were only just ready in time for the performance, and the opera orchestra, whose skill Mozart well knew, played it excellently *a prima vista*', according to the 1798 *Life of Mozart* by Franz Niemetschek.[386]

Rehearsal after performance

Whether a (recent) successful performance obviated the need for further rehearsals to improve standards further is not known, but this is hinted at in a letter from Leopold Mozart in Salzburg in September 1777, with the story of a Michael Haydn horn concerto 'which has been performed once already': some players did not turn up before the concert and the angry composer said that 'the rehearsal was quite unnecessary and why should they wait for those Italian asses?'.[387] Mozart (1778) noted that Herr Ramm 'played for the fifth time my oboe concerto written for Ferlendis, which is making a great sensation here',[388] as if that number of performances was relatively high. In respect of rehearsal of his own music, Mozart did not agree with Michael Haydn, and after some frustrating soloists' errors in the second performance of *Die Entführung aus dem Serail* in July 1782 he insisted on a 'short rehearsal for the singers' to put things right before the next outing.[389]

CONDUCTING AND REHEARSAL STRATEGIES

The origins of conducting

The first ever reference to a conductor comes from Ancient Greece: in 709 BC Pherekydes of Patrae was described as the 'giver of Rhythm' to a gathering of some 800 performers, 'seated on a high seat and waving a golden staff so that "the men begin in one and the same time", moving "his stave up and down in equal movements so that all might keep together"'.[390] The baton did not come into common usage until well into the 19th century,[391] but references to such a device can be found occasionally. In the early 14th century, a miniature from the Manesse Codex (1310-30), now in Heidelberg, appears to show Heinrich von Neissen with a baton as a conductor,[392] while Ercole Bottrigari, in *Il Desiderio* (Venice, 1594), describes the music of the San Vito convent in Ferrara, where the female conductor used 'a long, slender, and well-polished wand'.[393] The story of Lully's fatal long-baton

stabbing is well known, but a recent re-examination of the evidence suggests that this often-misunderstood story may have referred to a rehearsal, not a performance, event.[394]

A further method of controlling the tempo of singers was through physical contact. Some early illustrations of choir directors sometimes show them with their hand in contact with a singer, and this tradition is described by Giorgio Vasari (1568) in respect of a marble relief carving, one of ten made by Luca della Robbia (c.1400-1482) for Florence Cathedral's *Cantoria* (singing gallery) in 1431-38. It shows a choir, with 'the musical director beating his hands on the shoulders of the younger singers', who are holding a bound book(illus.3),[395] while another panel illustrates three singers sharing from a scroll of music.[396]

Illus.3 Luca della Robbia, Cantoria relief carving (1431-38) (Creative Commons).

In 1512 Venceslaus Philomathes complained about poor time-beating techniques, which suggests that such skills may well have been self-taught: 'There are those whose habit it is to lead songs with unsightly gestures, thinking that they know distinguished customs and a special manner of the singers. Some mark the tactus with both palms widely spaced, as if in the quarrel of the two of them one could not attack the other's hair with his nails, and the extended palm threatens lethal battle to its unarmed double'.[397]

18th century practice in Britain (and indeed elsewhere) could involve the directing musician beating time with a roll of paper (as can be seen in a number of illustrations),[398] and Maurice Greene and William Boyce are both recorded as doing this at St Paul's Cathedral from the mid-1740s onwards. However, Peter Holman cautions that the musical director and the time-beater may not have been the same person.[399] A 'Handel' rehearsal etching from 1740 shows the composer apparently listening rather than actively directing or participating at that moment,[400] and Holman suggests that Handel's principle was to select the best musicians he could find, rehearse them carefully but give them freedom in actual performance, leading from the keyboard.[401] A comparison with Italy may be instructive, where a time-beater could be unnecessary if the players were good enough: the court orchestra of Turin, which included leading players such as Pugnani, Veracini, Somis (all violinists) and the Besozzis (oboe and bassoon), performed 'symphonic music' in the Chapel Royal every morning for an hour before noon, distributed between three galleries 'at some distance one from another. The understanding between them was so excellent that they had no need of anyone to beat time'.[402] By contrast, the two sides of the choir of Cambrai Cathedral evidently had some difficulty singing together, as a complaint made in December 1535 records: 'The vicars of the left side of the choir should be admonished to observe and be attentive to the harmony of the singers of the right side'.[403]

One further type of time-beater was the 'relay conductor' who helped keep dispersed groups of musicians together: in mid-16th century St Mark's, Venice, the beat of the *maestro di cappella* on the floor was relayed by the *maestro de' concerti* to the instrumentalists in the organ loft; in 1601 this was Giovanni Bassano.[404]

What a conductor with a full score at his disposal might have done is not known, as marked-up copies which include information as a reminder to himself (as is seen in modern practice, indicating for example entries, dynamics, tempo changes etc) do not exist at this early date. One might have expected the conductor to assist the performers by at least indicating entries, working as they were from parts, but Peter Holman suggests that written comments for the choristers like 'Lead away' in Boyce's performing material indicate they were left to their own initiative.[405]

Burney, visiting the rather neglected Sistine Chapel in November 1770, took in the musician's gallery and noted 'only a large lectern or wooden desk for the score book of the maestro di capella and a marble bench at the back and sides'; he seems to assume a conductor directing from a score, which may just be his assumption of actual practice, but the other details of his visit that day suggests he was shown round by an expert guide.[406] Earlier that same year, Burney's report from Milan suggests that choirbook practice had not changed much for nearly three centuries, although the nature of the description suggests that

he thought the reader would need a precise explanation as to what a choirbook was and how it was laid out:

While at Milan in July 1770, the English traveler attended a service at the Duomo, and was shown a book printed in a very large note, on wood, in four parts, the cantus and tenor on the left side, and altus et bassus on the right, without bars. Out of this one book, after the tone was given by the organist [Jean Corbeli], the whole four parts were sung without the organ. There was one boy, and three castrati for the soprano and contr'alto, with two tenors and two bas[s]es, under the direction of Signor [Jean Andrè] Fioroni, who beat the time, and now and then sung. These services were composed about one hundred and fifty years ago [1619], by a Maestro di Capella of the Duomo, and are much in the stile [sic] of our services of that time, consisting of good harmony, ingenious points and contrivances, but no melody.[407]

The music is specified as ancient ('about one hundred and fifty years' old), and performed by eight singers, with a director who alternated time-beating with occasional singing (possibly to keep the parts accurate).

Lastly, Coryat at San Rocco in Venice (1608) described the person who kept the 'sixteen or twenty men [singers] together' as 'their master or moderator to keepe them in order';[408] perhaps he was not aware of the usual terms for a conductor.

Leadership roles and social hierarchies

Assignment of musical leadership sometimes left an archival trace, with a summary - sometimes more - of the duties and responsibilities of an appointee. This was sometimes drafted by a functionary with limited understanding of musical terminology and procedure: for example, under Henry VIII's New Foundation cathedral statutes, 'The Precentor was chosen from the Minor Canons, and was "handsomely to direct the singing men in the church and as a guide to lead them by his previous singing that they make no discords whilst they sing"'.[409] For a model musical director of the earlier Tudor period, a letter from the Dean of Cardinal College, Ipswich to Cardinal Wolsey of c.1529 praising one Lentall, Master of the Children at Wolsey's short-lived Ipswich institution, is indicative: 'but for M^{r} Lentall we cowde in a maner do nothing in oure quere. He taketh very great paynes and is always present at Mattens and all Masses w^{t} evyn song, and settith the quere in good ordre fro tyme to tyme and fayleth not at eny tyme. He is very sober and discrete, and bringeth up your Choresters very wele: assuring your Grace there shall be no better children in no place of England then we shall have here, and that in short tyme'.[410] This panegyric may need to be read with a pinch of salt, as the purpose of the Dean's letter was to reassure Wolsey that all was going well at his new institution.

Musicians themselves also recorded the abilities they understood as necessary, and these are sometime curious. Luigi Zenobi states that a director must be able to act as a safety-net for

the individual performers; he must be able to 'anticipate in a certain way anyone about to lose his part rather than waiting for him to lose it'.[411] In reality, this must often have meant following the choristers' line (or that of the least experienced or able part) with them, in order to stop them straying.

In large-scale musical environments, divided responsibility was known (see above), and was even explained in practice, as at the Académie Royale de Musique (1713/14), where 'the *maître de musique* coached and supervised the singers and "stood in the wings with a [roll of] paper in his hand, ready to set the choruses in motion and keep them in time"; the *maître de ballet* was in charge of the dancers and the dances; and the *batteur de mesure* was "not only to beat time in both performances and rehearsals but also to supervise the members of the orchestra, ensuring that they present themselves for duty punctually and that they do not leave their places and instruments during the opera"'.[412] Such assignment of specialist tasks raises the question of the way in which overall 'artistic direction' (in the modern sense) was undertaken; the Paris regulations give the composer of the work such a right, but how this might have been exercised effectually, given the three formal directors already present, is an interesting question.

One very under-studied environment is that of the military musician (the 'musical warrior'), and surviving British archives from the Napoleonic Wars provides evidence that 'Officers' concern for musical education went hand in hand with their insistence on continual practice, an ambition made possible by the full-time nature of service in the professional forces. Standing orders stipulated that musical warriors attend rehearsals regularly and, in most cases, daily, with additional practices scheduled for beginners. Ample evidence suggests that these assiduous rehearsal schedules were widely observed'.[413] Contemporary diaries and letters provide complaints from onlookers as to the duration and volume of these practices, and beginning drummers might be expected to spend four to six hours daily at their instrument. The value of this effort was noted, and extended practice time 'was critical to the military's dissemination of musical skills, as contemporaries fully understood. Recalling his past membership in a sacred music society, a contributor to *The Atlas* [1829] contrasted the easy-going ineptitude of the civilian amateurs with the simultaneous progress made by a militia band rehearsing in a neighbour's garden. Although the dozen raw performers initially made the "most insufferable brattling and belching with their horns and trombones", they became a polished ensemble through "regular practice" under a capable instructor'.[414]

Outside such ridig structures, past arrangements for musical control and decision-making had to take account of different layers of social hierarchy, and concepts of class, status, education and seniority may have affected the interactions of musicians in a way that they now do not. For example, Quantz (as the emperor's flute teacher) was the only one allowed to comment on his master's concert performances, and that with the word 'bravo' – which he could also withhold.[415] Given that the professional musicians of the past were by

definition not drawn from the upper ranks of society (otherwise they would not have become musicians), but yet mixed personally and sometime intimately with kings, popes, bishops and lords, a refined understanding of the etiquette of cross-social interaction would have been necessary, as seen in the deferential form of address of Bach's concerto dedication to the Margrave of Brandenburg.[416]

Appointments

Within musical institutions (principally ecclesiastical, but some at court and household level), appointments to leadership roles were not made by musicians, but by church or aristocratic authorities. Such processes might lead to the appointment of those of distinguished reputation as musical organizers, performers or composers, as the desire to seek out musical talent to create or maintain local musical reputations was obvious. On the continent, diplomatic functionaries sometimes operated as talent scouts, looking to poach musicians (such as Josquin) with international reputations,[417] and these musicians therefore had real negotiating powers as regards salary, terms and conditions - at least until they were in post. Similarly, Handel toured Italy in search of opera soloists: 'New Singers must be sought, and could not be had any nearer than Italy. The business of chusing, and engaging them, could not be dispatched by a deputy … After a short stay in Italy, he returned with STRADA, BERNACHI, FABRI, BERTOLDI, and others'.[418]

Traditional patronage processes operated everywhere in the early modern period, with appointments made as part of wider exchanges of favours between churchmen, royalty, aristocrats, court functionaries and others: as Iago says in Shakespeare's *Othello*, 'Preferment goes by letter and affection'.[419] In 17th-century English cathedral visitations, enquiry was made as to whether singing appointments were made on the basis of skill, or because of 'friendship, rewards, or money'.[420] This problem is one reason for Monteverdi's satisfaction with the artistic control given to him by his employment conditions, as expressed in a letter of 1620: 'no singer is accepted into the choir until they ask the opinion of the director of music'.[421] Such musically verified auditions were not unusual for obvious reasons; at Chichester Cathedral in 1610 it was decreed that, 'no Clerk, vicar or chorister be actually admitted to his place until he first make public trial of his voice and skill in the presence of the Dean and Chapter, together with the Master of the choristers or the Subchanter';[422] similar words were used at Worcester Cathedral in 1589, where incoming musicians were to be 'fit and sufficient both for voice and knowledge in song', and again in 1635.[423] However, clerical authorities sometimes sidelined their own musical experts even when making auditioned appointments, as in late medieval Paris.[424] The variable results of such systems may well be imagined: when in the early 15th century choristers were being directly appointed by the Dean of Newalke Collegiate Church in Leicester, some were described as 'totally unteachable'.[425]

Claudio Annibaldi provides a table of papal singers hired by audition or by 'motu proprio' (the personal decision of the pope) between 1600-1700, and the latter outnumber the former 88 to 49.[426] It is possible that this tendency fundamentally represented a move away from ordained singers to virtuoso soloists, but the records of increasing infractions clearly show the process was damaging to the discipline of the Sistine choir, with more 'negligent or irreverent behaviour during divine services, and the unprecedented number of singers involved in scandalous, and even criminal, activities'.[427]

Non-meritocratic promotions (and the modern concept of 'meritocracy' is not one that would have been understood at the time) must sometimes also have led to choirs and ensembles being placed under the control of those of inferior skill and ability. In one 1511 complaint in the Sainte-Chapelle of Paris, it was said that the previous Master of the Choirboys, Dreux Prieur, 'doesn't know how to read or sing and doesn't understand anything he says while reading'.[428] At King's, Cambridge from 1578 the choir was run for a time by a chaplain rather than a Master of the Choristers.[429] Conversely, the appointment of a person who was skilled in one particular area (for example, composition,[430] or keyboard performance) was no guarantee of their ability to recruit, train and manage singers.

Musica ficta

Music ficta (unwritten accidentals added for performance) is now the province of the editor or conductor, inserted as a result of harmonic analysis, but the historical process for doing this would have been different, and achieved by ear in the absence of a score. While some *ficta* (for example, sharpened leading notes at cadences) are straightforward,[431] there are two overall issues to address. First, are *ficta* additions intended to be consistent, as Karol Berger asks: should implied accidentals be considered part of the 'domain of the musical text (which, for any given work, had to remain invariable from one performance to another if the work was to retain its identity), or to the domain of performance (which might vary from one realization of the text to another without endangering the identity of the work)'.[432] That *ficta* might have been a matter of difference between composer and performer is shown by a poem of 1504 attributed to William Cornysh and called *A Parable betwen Informacion and Musicke*. This is set as a debate between the two, with the performer mentioning the 'many subtel any subtel semetunes most me[e]t for this song', and the composer responding that 'I kepe be rounde and he be square, / The one is bemole, and the other bequare'. However, the latter admits that 'the plain keyes . . . marred al my melody', and this story may portray a transitional moment in sound from modal towards tonal; the words 'subtle semitones' certainly imply a positive view of added *ficta*.[433] Thomas Morley also allowed individual taste to be an arbiter, at least at times: 'because I thought it better flat than sharp, I have set it flat. But if anie man like the other waie better, let him vse his discretion'.[434] Second, who decided which *ficta* were to be added,[435] the conductor or the individual singers, and in the latter case who had the authority to make a choice when there was more than one singer on a part?

Both of these questions lie in the domain of rehearsal, not performance. When accidentals are added by ear rather than from examination of a score, which is now rather rarely done, the results can be grammatically curious but musically acceptable.[436]

Text underlay

Text underlay is another feature now under the control of an editor or conductor, where original sources do not provide unambiguous alignment of musical notes and text syllables. In some cases, it is not even certain as to which 'phrases of text belong with which phrases of music, or even about the basic question of which voices should be sung with text'.[437] Modern performers need these decisions to be made, but it should not be assumed this was of equal concern in the past. From one particularly interesting later 15th century source of polyphony, where 'the copyist of the *Missa Ecce ancilla Domini* in Brussels 5557 was unusually painstaking in his precise placing of syllables under what he considered were the appropriate notes',[438] Gareth Curtis inferred seven rules of text underlay. Whether such rules were or could be taught to and internalized by singers to allow for consistent 'live' text underlay is an open question; in particular, the breaking of ligatures to accommodate syllables is not straightforward. In all this, the modern editorial assumption that text was to be performed in a uniform and aligned manner, and that all singers on each part – including a dozen or more choristers - would (or even could) lay out the syllables and melismas in exactly the same way and at exactly the same time, needs to be seriously called into question; neither composers nor performers of the time may have seen such consistency as necessary, or even possible. Multiple manuscripts from England show the different ways in which scribes variably interpreted text underlay: Peter Le Huray gives an example from Edmund Hooper's anthem *Behold it is Christ*, where the same four bars in just one voice appear in a dozen different ways in the sources.[439] Such variants might be explained by copyists expanding summary or partial texting (in some very syllabic canticle settings of the period, only the first word is given for the singers, for example), but singers aligning note and syllable live in performance are likely to have been even less consistent than were the copyists.

Numbers of rehearsals

The number of times musicians met in order to prepare for a performance seems to have varied greatly, although the figures '3 or 4' do seem the most common. Elsewhere, rehearsals are sometimes defined as over a period (for opera, this would be several weeks), but regular practices outside church environments are rarely specified. One example is found in the London Waits' rules of c.1625, which determine that they were to assemble at 8 am every Monday morning 'to continue their practice upon several sorts of instruments until noon'; that the venue was not specified is implied by a provision that the city chamberlain would decide if they could not.[440] Although this sounds like a full weekly rehearsal, it might also have been a repertoire-selection gathering, or even a collective individual practice session of

the type that so surprised Burney at the Conservatorio of S. Onofrio in Naples on his visit in October 1770, where each student worked on their own different pieces simultaneously, in the same room: 'Out of 30 or 40 boys who were practising I could discover but 2 that were playing the same piece … The violoncellos are in another room and the wind instruments, such as flutes, hautbois etc in a 3rd. - The trumpets and horns either fag on the stairs or top of the house'.[441]

In August 1802 Prince Nicolaus II Esterházy instructed Haydn (still nominally in charge there as *Kapellmeister*) that 'the whole band – male and female singers, without exception – is to hold a weekly rehearsal; their superiors will decide on which day it is to be held'.[442] Later in the document both church and chamber music are mentioned, although the rehearsal stipulation is probably aimed at the former.

Sometimes a special event demanded a large number of rehearsals, as when Benvenuto Cellini joined an instrumental ensemble performing motets for the Pope's annual feast in Rome in 1524: 'for a week leading up to the August feast, we played together every day for two hours, so that on the festival we went to the Belvedere & while Pope Clement was dining we played those carefully rehearsed motets in such a way that the Pope admitted he had never heard music played more sweetly or with greater unanimity'.[443]

In 1631 the Rector of the Thomasschule in Leipzig complained that lessons were neglected as the boarders 'usually rehearse for weeks' for events such as St Gregory's Day; in 1733 a limit was placed on this rehearsal time, six to eight afternoons. These 'street singing' events were a valuable opportunity for the students to collect money by singing around the town.[444] In 1723 Vivaldi had a formal agreement with his Venice employers at the Pièta to supply two concertos per month; when away, he would post them, and when he was present he would direct three or four rehearsals of the new works;[445] the same number is mentioned by Haydn in a detailed 1768 letter about the premiere of his *Applausus* cantata, to be prepared in his absence ('Since I cannot be present myself at this *Applaus* I have found it necessary to provide one or two explanations concerning its execution … I hope for at least three or four rehearsals for the entire work').[446] In England in the later 18th century, even for large-scale public events the number of rehearsals could be minimal, with Charles Burney implying that a full-scale choral and orchestral concert might have just one 'general rehearsal'.[447] However, Stephen Storace's 'afterpiece' opera *Lodoiska* had a month of rehearsals in 1794, even though not all were music rehearsals.[448]

Mozart's letters sometimes mention the number of rehearsals, and there seems to have been a usual maximum of three: in Paris in March 1778, of the concerto for three keyboards K242, 'we had three rehearsals of the concerto and it went off very well';[449] while in Munich in December 1780, *Idomeneo*'s 'second rehearsal went off as well as the first. The orchestra and the whole audience discovered to their delight that the second act we actually more

expressive and original than the first. Next Saturday both acts are to be rehearsed again'.[450] For a concert of Mozart's K466 on 22 March 1786 in Salzburg, with a rehearsal on the day, pianist Heinrich Marchand played 'from the score' (Haydn was page-turner), and 'We rehearsed it in the morning and had to practise the rondo three times before the orchestra could manage it, for Marchand took it rather quickly'.[451]

Rehearsal etiquette

While the social etiquette of the rehearsal process is rarely mentioned, Anton Stadler makes a point of noting it in his 'Musick Plan' of 1800, likely as a result of personal experience: instrumentalists should not 'publicly censure another musician's chance mistake, nor make him ridiculous', while conductors are told that players 'are not to be shouted at when they make a mistake, or made [to look] ridiculous, or treated with sarcasm, because then [they] lose their composure; their attentiveness is lost even more because their heart is put to shame or [they] become embittered'.[452] An example of a demanding opera conductor is given by Mattheson (1739), with respect to Johann Kusser: 'he knew how to reproach many a one for their errors in such a sharp manner that they often burst into tears. On the other hand, he calmed down again immediately and sought hard for an opportunity to bind the inflicted wounds, through exceptional courtliness. In this way he managed things so that nobody could have impugned him'.[453]

Like Stadler, Quantz (1752) also advocated a supportive approach, with individual players being coached into good habits: 'Should there be some among the ripienists whose execution differs from that of the others, the leader must undertake to rehearse them separately'.[454] Such uniformity begins to become more important with the rise of public concerts; Johann Adolph Schiebe's *Critische Musicus* (1745) notes that 'The conductor must see to it that all the violins use the same ornaments as their leader',[455] thus assigning both leadership and rehearsal responsibility to the director, rather than individual performers. Some sense of the social and musical tensions of rehearsals can be seen in the wording of the 'Petition' that his employer obliged Leopold Mozart resentfully to sign up to in September 1777, to 'conduct himself calmly and peaceably with the Kapellmeister and other persons appointed to the court orchestra'.[456]

Fear must often have been an incentive for younger musicians to meet the standards set by conductors, as described by Johann Friedrich Rochlitz, a former chorister at the Thomasschule in Leipzig: 'Already as a schoolboy (since 1782) I had to take part in performing Bach's eight-part motets ... Heaven knows that I only learned to sing them securely out of fear of severe punishment'.[457]

Performance styles

Instructions to musicians sometimes include brief information about performance styles, which can relate to consistency of tone, style, dynamics or other aspects: the 12th-century Bishop Ethelred complained about inconsistent plainchant singing, where 'one while the voyce is strained, anon it is remitted, now it is dashed, and then againe it is enlarged with a lowder sound';[458] the chantress at Syon Abbey in the early 16th century was to 'start the song smoothly and moderately, neither too high nor too low, but steadily and reverently after the due ceremony of the feast or day';[459] while a 1568 Sistine Chapel note says 'Remember that the Vespers of Epiphany should be intoned very softly'.[460] Elsewhere, the will of former St Omer chorister Robert le Fevre seems to specify the style of musical performance within a dramatic representation of the Annunciation, to be funded from his 1535 will: 'a little choirboy vested in an alb and dressed as an angel as one does on the day of the resurrection, instructed by the master of song to do this, is to sing with fine tone and at the same time in a natural manner all that follows in the said gospel by the said angel, and this at the left-hand side of the high altar and below.[461]

Mentions of excessive volume and lack of control of the voice suggest that conductors had limited ability to determine actual performing results, regardless of what was said in rehearsals: Giovanni de' Bardi (c.1580) describes singers who 'sing so loudly in the high register that they seem like criers auctioning off the pledges of the unfortunate',[462] while Luigi Zenobi (1601), as summarized by Beverly Jerold, notes that 'instrumentalists restrain their volume in chamber music for princes; but in church music and in large concerts, everyone plays as loudly as possible, which creates a great din and hides all the blunders and poor intonation'.[463] The confusion caused by excessive loudness is also commented on in Jean le Rond d'Alembert's *De la liberte de la musique* (1759), with a description of the Paris Opéra orchestra: 'The rage of our French musicians is to pile up parts upon parts. They make the effect consist of noise; their accompaniments cover and suffocate the voice ... So great is the lack of ensemble in our harmony that we think we are hearing twenty different books read at the same time'.[464]

While various early theorists, such as Nicola Vicentino (1555), by contrast wrote on the subtleties of expression, particularly mentioning the changes in dynamics and tempo used to reflect the meaning of texts, especially those in the vernacular,[465] such comments should be understood as applying only to the date, country, genre and musical style in question. The concept of 'expression' cannot have meant the same thing, or been the same musical goal, at all times and places, to judge by contemporary descriptions of performances.

National styles

Travel made possible the exchange not only of music from different countries and traditions, but also of performing styles, and this could lead to problems. At Southwell Cathedral in 1484-86, one Thomas Cartwright, who 'does not conduct himself in a way becoming a priest especially in choir and singing', was also admonished because he did not 'observe the custom of the choir in psalmody and singing faburdon', but made 'great discord in singing having a foreign fashion not used among the choir'.[466] Some musicians had sufficient international knowledge to be able to describe these different international styles: 'The late fifteenth-century theorist Guillelmus Monachus, in his *De preceptis artis musicae*, presented an orderly account of the discant idioms of the English, the French, and "apud nos," probably the Italians'.[467]

Some references suggest that 17th and 18th century musicians also needed help across musical borders, as when Weckmann travelled to visit Froberger in the 1650s in order to learn in person how to play the latter's keyboard music, Corelli admitting he did not understand the French style,[468] or Couperin (1717) observing that certain performing information was notated in one style and not another: 'we write a thing differently from the way in which we execute it; and it is this which causes foreigners to play our music less well than we do theirs'.[469] Aside from such varying national and local traditions, there is also the matter of individual taste; Quantz pointed out that a diversity of musical taste also depended on one's own temperament, and even a beginner flautist 'must acquaint himself with the pieces characteristic of different natures and provinces, and learn to play each in the style appropriate to it'.[470]

Finally, music from completely different cultures would usually be greeted with incomprehension: in 1481 Tinctoris heard Turkish prisoners-of-war at Naples consoling themselves with music, and considered their songs 'in truth so crude and absurd that it alone was quite sufficient to demonstrate their barbarity'.[471] Such cultural chasms worked both ways, as when the King of Siam thought the French Baroque opera airs he heard in 1687 not 'grave enough'.[472]

Tuning

Documentary references to tuning (many of which have been collected by Beverly Jerold) tend to be of the critical type, and it is not possible to determine whether this means intonation elsewhere was either generally good, acceptable or poor. A number of these accounts make it clear that good tuning was part of the rehearsal process, and that it was the responsibility of the musical director or leader.

Comments praising tuning are relatively rare, but this does not mean it was exceptional, as in Bottrigari's 1594 mention of the 'sonorous and just intonation of the notes' of the San Vito convent ensemble in Ferrara.[473] The problem of non-standard pitch levels between instruments (see below) must have caused problems, regardless of the aural acuity of the actual performers,[474] and where tuning matters were inadequate, Stadler (1800) suggests events could be cancelled: 'often an out-of-tune instrument is the reason which prevents many from pleasure in entertaining or in studying, since one often has to perform … chamber and church music on out-of-tune instruments or even postpone the performance'.[475]

Reports of tuning problems either refer to individuals, ensembles or traditions. The former tend to be found later in the period, as in newspaper reports from 18th-century London, which could forcibly criticize performance deficiencies, naming individual instruments (or sometimes players) that had offended.[476] One story has a 'ridiculously out-of-tune' bassoon player being mocked by continuo player Muzio Clementi, who played the parts bitonally on the keyboard during a 1779 London rehearsal,[477] while the eminent violinist Ignaz Schuppanzigh (1776-1830), founder of the first professional string quartet, was described in print by Reichardt (1810) as able to 'play the most difficult passages clearly, although not always quite in tune'.[478]

General references to tuning difficulties include the 1553 John Stubs sermon mentioned above, where physical sanctions awaited offending choristers: 'Yf a scoler of the song scole syng out of tune, he is well wrong by the ears, or else well beatyn',[479] Pier Francesco Tosi's 1723 comment that 'I can in all truth say that (aside from a few singers) modern intonation is very poor',[480] Fux's belief (in his *Gradus ad Parnassum*, 1742) that instruments are needed to help keep choirs in tune - 'Intonation is difficult for the voices when they have no help, not even from other instruments'[481] - and there is Alessandro Scarlatti's comment (made to Quantz in 1725), 'you are aware of my antipathy for wind instruments; they are never in tune'.[482] Charles Butler (1636) made a similar reference to string instrument tuning, noting that this could go awry in the middle of a piece: strings 'are often out of tun; (which soomtime happeneth in the mids of the Musik; when it is neither good to continue, not to correct the fault)'.[483]

In terms of ensembles, a most surprising piece of previous bad practice in Italian opera houses – tuning *after* the work had begun! - was reported by Francesco Maria Veracini in his manuscript *Trionfo della pratica musicale* (c.1760): 'Tuning the orchestra should be done *quickly*, *softly* and correctly before the beginning of the opera overture. We should abandon our predecessors' perfidious custom of beginning untuned and the making a continuous buzzing while a recitative is being sung'.[484] Perhaps this is what Haydn is satirizing in the comic Finale of his Symphony No.60 in C, '*Il distratto*', where the violins pause to audibly retune. Equally alarmingly, Daniel Gottlob Türk (*Wichtigste Pflichten*, 1787) tells of an orchestra where

the organ and oboe were correctly in E^b, the violins were a semitone too high and the horns a semitone too low; as Jerold laconically notes, 'then someone noticed the blunder and one after the other retuned'.[485]

The issue of different instrument tuning systems was of concern to a number of writers: mixing fretted and keyboard instruments led to tuning problems due to temperament differences, a matter which Giovanni de' Bardi (c.1580) noted had previously 'gone unnoticed, or if noticed, unremedied'.[486] The issue of performing with tempered instruments is also mentioned by Johann Mattheson in his 1731 *Grosse General-Bass-Schule*, in the context of a cappella singing: 'Nowadays no one sings like the itinerant choirboys without instruments or accompaniment, for from that derives a much greater degree of poor intonation, out-of-tuneness and flattening of the voices than through all the false intervals in well-tempered instruments'.[487]

The ability of an ensemble to play well in tune will also have been dependent on the skill of those who tuned the instruments. Giovanni Maria Artusi, in *L'Artusi* (1600), gives eight rules necessary for an excellent ensemble, the last of which is that all the instruments (he mentions, strings, harps, lutes and keyboards) be 'tuned by the same person',[488] which seems impractical. As an alternative way of ensuring uniformity among the strings, violinist Giovanni Battista Farinelli (as reported by Mattheson in his 1739 *Volkommene Capellmeister*) took his correctly tuned open strings round to the other players, in turn and in silence.[489]

How often organs were tuned is not known, but records of payments for tuning visits likely correlate with overall fees rather than any frequency of visit, as in the 12*d.* paid annually for the maintenance of the organ at Eton in the 16th century.[490] John Howe was paid for 'tewnyng of both the orgaynes' at Westminster Abbey, and in 1568 was receiving 13*s.* annually for this,[491] while Thomas Dallam received 40*s.* per annum from the Earl of Salisbury 'for the tuning of his Lordship's instruments for a year' in 1608, a steep rise in prices.[492] Comparison can be made to the Registers of visitors to the convents of Ferrara in the 1590s, which include much more specific information about the frequency of visits to these closed communities regarding the installation, inspection, repair and tuning of organs;[493] however, these do not give any impression as to their normal tuned state. Some institutions employed a 'tuner', probably for the keyboard instruments: tuner Michel De Morancy (or Michel Memoransi) was listed just below the organist in the 1559-67 accounts for the chapel of Margaret of Parma in Brussels.[494]

There is no general evidence as to whether organists themselves had the skill or knowledge to make minor tuning adjustments, for example, to the less stable reed stops; some early Parisian contracts do suggest this.[495] However, Burney's regular mentions of poor organ tuning encountered on his continental travels indicate this may not have been the case by the late 18th century. For example, at the Dominican church in Antwerp the organ was 'so

miserably out of tune, as to give more pain than pleasure to the hearer', and the organist monk told him that 'they could afford to have their instruments put in order but seldom, on account of the expence'.[496]

Pitch

Information about pitch standards up to 1800 exists in scattered and incomplete form, but it is possible to estimate and sometimes measure instrumental pitches, using surviving instruments and documents. The result shows great variation between country, century, tradition and instrument, although there do appear to have been instances where some form of standardization or partial standardization is evident, as indicated by both historical instruments (17th-century cornetts, for example)[497] and by consistent compositional compasses.[498] Other examples show great variety, including the seven relative keyboard pitches used by the Ruckers family,[499] the *chiavette* system for polyphony, the dual *chorton/kammerton* standard of Bach's Germany or the interchangeable *corps de rechanges* joints of a Quantz flute from 1740, ranging from about A387-414.[500]

With reference to rehearsal issues, the precise actual pitch now thought to be appropriate for any given repertoire by modern performers may be less significant than how such pitches were historically sounded, and especially how they were transferred between performers, and between spaces in venues. There do exist examples of instructions for the giving of a relative pitch, such as the annotations (in Spanish) in the Paston lutebooks, which name a pitch for the singer to enter on by reference to the pitch given by the fret of a particular string,[501] but this is relative not absolute, as the precise sounding pitch of a historic gut-strung lute cannot be known.

Where a rehearsal and a performance venue were not the same (a cathedral, and its song school, for example), some method of transferring a reference pitch between them must have been possible, and this is unlikely to have been simple human memory. The possible options for reference pitch sourcing, especially for unaccompanied vocal music, are as follows: singers with perfect pitch;[502] the organ (which may not have been adjacent to the performers, and in any case required a physical organ-blower and a player) or other keyboard;[503] a small separate organ-type pipe functioning as a pitch pipe;[504] a suspended metal bar or tube functioning as a proto-tuning fork; a small bell or other pitched percussion instrument;[505] a recorder or other suitable wind instrument;[506] a monochord (capable of holding stable pitch for many days, although itself needing tuning from a known pitch source in the first place); or a glass instrument.[507] Only the first and second of these are now usually considered as options,[508] although the lack of examples, descriptions or iconography by no means rules out other possibilities; this is unlikely to have been a process considered worth recording or describing at the time. In all these cases, the sounding object needs only to produce a sufficient clear pitched note at a volume that the choirmaster or other leading

musician can hear, which can then be hummed or sung to the waiting ensemble. Usage could have varied hugely between country, date and institution. At València in 1683, for example, dulcian player Miguel Renart was instructed to 'enter the choir at the Gloria Patri of the first psalm of Sext to give the pitch for the *varillas*',[509] whereas in Manila in 1771 the *chantre* was to 'give the pitch of everything sung within the choir and in processions'.[510]

As well as the great variety of possible pitches in use across the period, there is also the issue of the level of accuracy required, or attainable, before the advent of technical pitch measurement systems such as those of Hertz. It is quite possible that a margin of error of as much as a semitone for fundamental pitch would have been considered acceptable, for example; and a drop in pitch during a twenty-minute unaccompanied Tudor votive antiphon might not even have been noticed.

Ornamentation

Extempore ornamentation was a very significant part of a number of historic music styles, although applied more in a solo than ensemble context, with the exception of standard ornaments such as Baroque cadential trills. The issues in rehearsal would have been: who was allowed or encouraged to ornament, and by who? What sort of ornaments were thought to be appropriate, in which musical styles, and how often? Were these to be practiced in advance, or inserted spontaneously in performance? Finally, how were the composer's views on their own music (where known), or other performing traditions to be considered? In 1727, Baron observed that custom dictated that for a performer, 'the piece belongs not to him alone but to others as well'.[511]

As well as there being local traditions, personal preference appears to have been important, and that even differed between master and student (some of Bach's pupils seem to have used far more notated ornaments in their copies of Bach than he did). Three historic references cover the 'perform as written' tradition: 'When Josquin was living at Cambrai [sic] and someone wanted to apply ornaments in his music which he had not composed, he walked into the choir and sharply berated him in front of the others, saying: "You ass, why do you add ornamentation? If it had pleased me, I would have inserted it myself. If you wish to amend properly composed songs, make your own, but leave mine unornamented"'.[512] John Hawkins said of Agostino Steffani that he 'would never admit of any divisions, or graces, even on the most simple and plain passages, except what he wrote himself',[513] while François Couperin absolutely insisted his music to be played as written: 'my pieces must be executed as I have marked them, and that they will never make an impression on those persons of real taste unless one observes to the letter all that I have marked without any additions or deletions'.[514]

However, many other musicians allowed performers much greater leeway, or even encouraged creativity, as in the story of Purcell and the young singer Jemmy Bowen: 'He, when practising a Song set by Mr. *Purcell*, some of the Music [the professional court musicians] told him to grace and run a Division in such a Place. *O let him alone*, said Mr. *Purcell*; *he will grace it more naturally than you, or I, can teach him*'.[515] One particular argument in favour of such freedom is the difficulty of accurately writing out ornaments in normal rhythmic notation, as Roger North observed: 'It is the hardest task that can be to pen the manner of artificial Gracing the upper part. It hath bin attempted, and in print, but with Woeful Effect . . . the Spirit of the art is Incommunicable by wrighting'.[516] For the same reason, performance subtleties like the *notes inégales* of the French Baroque seem to belong more to the rehearsal than the music notation process.[517]

Tempo

Thanks to a century of recordings, and an omnipresent soundscape of pop music with a backbeat, regularity of tempo rarely seems to be a problem for modern classical musicians, who have internalized accurate pulsing. Some of the performers of the past, with no experience of any *precisely* regular movements (except perhaps for dripping water or a large clock's pendulum or tick),[518] evidently found maintaining strict tempo a challenge: Giovanni de' Bardi (c.1580) warns of consort singers who 'disregard the time, so breaking and stretching it that they make it altogether impossible for their colleagues to sing properly',[519] Henry Purcell (1696) noted that there is 'nothing more difficult in Musick then playing of true time',[520] Quantz (1752) explained how to cope when a movement started at the wrong tempo,[521] while Anton Stadler (1800) advised instrumentalists not to 'hold back or press forward the tempo'.[522] Leopold Mozart's very simple ear test (October 1777) for a potential pupil - who he suspected 'has no ear and therefore no sense of time' - was to be played just two bars of music to see if she knows the names of the notes and can 'imitate the time'.[523] Most concerned was the amateur writer Roger North, who said 'as to time, no practise is usefull, or will ever make a consortier, but in consort itself'[524] – in other words, a solitary player was almost incapable of maintaining accurate tempo, in his experience. Where musicians did not have the skill to maintain time at all, the results could be very poor, as recorded by Sagudino (1515): 'Two musicians, who are also in his Majesty's service, played the organ, but very ill forsooth: they kept bad time, and their touch was feeble, neither was their execution good';[525] and by Haydn at a performance of William Shield's *The Woodman* at Covent Garden in December 1791: an unnamed opera tenor who was 'most unmusical … creates a new tempo for himself, now 3/4, now 2/4, makes cuts whenever it occurs to him'.[526]

Some performers evidently kept time physically with their feet, then as now regarded as poor practice, as noted by Quantz (1752).[527] In 1512 Philomathes objected to many who were 'marking the tactus with a stamping foot, like a sated pack-horse who, playing in the green,

stumbles in the grass and lustfully runs riot',[528] while Johann Samuel Petri (1782) describes town musicians keeping time 'with such ferocious stamping that we think ourselves in a paper mill or foundry'.[529] Even leading professional violinist Schuppanzigh had the 'accursed fashion, generally introduced here [Vienna], of beating time with his foot, even when there was no need for it' (Reichardt, 1810), although it is not clear whether audibly or silently.[530]

In matters of tempo precision, distinction needs be made between ensemble and solo music, between different styles of music, and between ordinary practitioners and experts, for as Thomas Mace (1676) said, 'when we come to be *Masters* … we can *command all manner of Time*, at our *own Pleasures*; we Then *take Liberty* (and very often, for *Humour, and good Adornment-Sake*, in certain Places) to *Break Time*'.[531]

Accent and diction

Regional accents would have been more pronounced in the past, with much less of a uniform sense of what an 'educated' or 'cultured' accent sounded like, in either English or Latin (compare 'BBC English' today).[532] This not only affected vowel sounds, but even the number of syllables in individual words: 'spirit' was pronounced with one or two syllables in the north and south of Elizabethan England respectively. Many choirs would have included singers trained (or never trained) differently in different places, and who approached both Latin and their vernacular in a variety of ways, so it seems unlikely that the high standard level of present-day 'singers' vowels' would have been possible. However, Bathe's 'Rules' of 1600 (see above) do recommend that singers 'sunder the Vowels and Consonants, distinctly pronouncing them according to the manner of the place', suggesting some uniformity of regional usage could and should be achieved. This would presumably have been a matter for the director of music.

Diction was also a concern, and writers like Thomas Elyot, in *The Governor* (1531),[533] were concerned that upper class children were brought up to speak English that was 'clean, polite, perfectly and articulately pronounced, omitting no letter or syllable', and avoiding any rustic dialects that they might pick up from servants.[534]

In a rare instance of praise for singers' diction, Gregory Martin, who had lived in in Rome in the late 1570s, particularly commented upon the clarity of texts sung by the city's choirs: 'this is singular and much to be noted, that they deliver every word and everie syllable so distinctly, so cleane, so commodiously, so fully, that the hearers may perceave al that is sung'.[535] Earlier in the century, an example of what could go wrong in performance survives from Paride de Grassis, the senior Master of Ceremonies in the papal chapel, who reported in 1510 that a polyphonic creed 'was sung in such a confused manner that many did not understand the words',[536] while at the Feast of San Lorenzo in 1673 'the music was chaos, a Babel of all the musicians in Venice, five organs, all the instruments, trumpets, trombones &

everything there was in Venice, but there was nothing to enjoy except a constant murmuring, it being impossible to understand a word'.[537]

For the audience to understand the meaning of a text was equally important in opera, and Mozart (1778), having criticized the singer Meisner for his excessive vibrato, praised his rival Raaff for his 'excellent, clear diction'.[538]

Amateur music-making

The experience of rehearsal in an amateur environment may have been quite different, as the realities of both 'rehearsal' and 'performance' differed from professional practice. While standards may have still been high, the final level of expert polish may not have been regarded as necessary, as any listeners were there to enjoy the music rather than judge (or pay) the performers; and because the preparation goals were different, and perhaps less clear. For example, a domestic viol consort in Elizabethan England was likely made up of performers of varying ability and training, and probably also of different social classes (household servants could be drafted in). The play-through of a contrapuntal fantasia in the Long Gallery one evening may have counted as a 'rehearsal', but a member of the family coming in to listen would have made it a sort of 'performance'; such boundaries were likely rather blurred. At the other end of the amateur spectrum, an affluent and musical family like the Sharps, who organized domestic, public and water-borne concerts in London and elsewhere from the 1750s to the 1780s, put on ambitious events with the support of an enormous circle of musical friends and professional supporters. An early instance in Durham from May 1754 was described in the local press as 'a Concert of vocal and instrumental Musick, by several Gentlemen, for their own Amusement'.[539]

Those estates wealthy or interested enough could retain a resident musician, as for example Edward Johnson and John Wilbye at Hengrave Hall, Richard Mico at Ingatestone Hall,[540] John Jenkins at West Dereham or even Handel at Cannons. Various illustrations show domestic musical activity, as in the mixed group of cittern, bandora and two sizes of violin in a mural at Gilling Castle in Yorkshire.[541] These resident musicians would have been responsible for training members of the family and their staff as required, sourcing music, keeping the instruments in good order and composing as required.

Music lessons for the young could be quite demanding in terms of hours spent, but for the gentry were mostly left off when the children grew up, music being part of a cultured education rather than as professional preparation. In 1561 Sir Nicholas Bacon provided Sir William Cecil with his 'Articles devised for the bringing up ... of the Queenes Majesties Wards', which involved lessons in Music from twelve to two and again from eight to nine in the evening, interspersed with other subjects.[542]

One particular form of domestic (in fact, literally sometimes 'underground') music-making in England was as part of the illegal Catholic services held by recusants in the 16th century: for example, works by Byrd were performed as part of a forbidden mass with the Jesuit priests Henry Garnet (1555-1606) and Robert Southwell (1561-95) in the open air on the banks of the Thames in 1586.[543] One wonders who the musicians were taking such a potentially fatal risk, and what form of preparation they undertook - in situ rehearsal beforehand would have been impossible.

CONCLUSIONS

Rehearsal goals

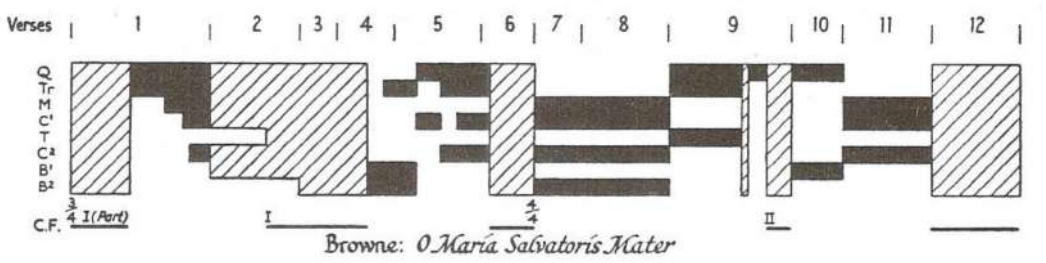
Modern rehearsal technique aims at efficiently preparing works for performance to the highest standard achievable in the limited time available. Artistic or practical goals need to be defined in order for this to be achieved, as in the eleven-step process devised by Arthur Williams a century ago: 'The first necessity is to determine the purposes for holding the rehearsal. They may be many and varied, but the important point is that SOME purpose MUST be determined. Without this, a rehearsal cannot be properly planned'.[544] However, such attitudes may not always have applied in all times and places in the past, and there is little evidence as to what defined rehearsal outcomes might have been, other than 'getting through' the piece more or less complete. The notion of performance quality may have been secondary in some circumstances, and it is possible to imagine circumstances in church where an objectively bad performance that included vocalization of the complete text (the crucial element, from a religious point of view) may have been acceptable liturgically, even if not musically: for example, one post-Civil War Fellow of Eton said that 'God was as well pleased with being served in tune, as out of tune'.[545]

Compositional structures for rehearsal

From an analytical point of view, it is easy to now regard those composers who included 'hidden' structures that could not have been perceived by their hearers, as in John Dunstable,[546] or applied balanced mathematical layouts, as Robert Fayrfax's *Regali* mass or John Taverner's *Playn Song* and *Western Wind* masses,[547] as using devices from *Musica Speculativa* for primarily structural or intellectual reasons. However, composers were also aware of their listeners (human or divine) as regards reception of their works, and also of actual or potential musicians in terms of performability. Thus, some of what appear to be sub-structural components may have had a further practical purpose: for rehearsal. This could have included formal features such as da capo arias, rondos, or binary repeat structures: early Haydn symphonies of a substantial twenty-five minutes' length comprising four binary movements with no separate first-time or second-time bars could not only be

composed in a mere two dozen pages of score, but (if necessary) be briefly rehearsed in half the time they took to play.[548]

More complex examples are found in the Eton Choirbook repertoire, such as John Browne's eight-voice antiphon *O Maria Salvator Mater*: the structural diagram Frank Harrison made of that piece lays out the sections in terms of scoring, alternating reduced-voice sections in black with shaded full choir sections; note that these do not exactly coincide with the text verses indicated at the top or the cantus firmus at the bottom (illus.3).[549] Some of these sections are demarcated by single barlines in the Eton manuscript (transcribed as double barlines in modern editions) and therefore represent potential start and stop portions for rehearsal; as with the Haydn symphony example, they can be regarded as defined 'Rehearsal Units'. Although of differing lengths, and sometimes including both full and reduced sections, in this antiphon they include no fewer than eleven divisions within a 353-bar piece of around 15 minutes' duration (in modern transcription and performance). Few sections are as long as two minutes in length, meaning that even repeating one of these from the beginning each time would represent a reasonably efficient method for sectional rehearsal of a difficult multi-voice work. It would also have been possible to rehearse the reduced-voice sections using solo voices (as is usually understood by the red-colour text underlay in Eton) separately and previously.



Illus.3 John Browne, O Maria Salvator Mater*, structural diagram by Frank Harrison*

It is also worth asking whether the success of some stylistic changes in music over time might sometimes have been aided by their practical utility in rehearsal, and therefore performance. For example, pervasive imitation in mid-16th-century music is actually very useful to performers working from original partbooks, as it is easy to hear repeated melodic material in the other voices,[550] which is both placed at predictable rhythmic distances and limited to clear pitch areas. This would also have helped create a clearer 'aural map' structure within which a performer who got lost could recover themselves, unlike in most 15th century polyphony.

For individual performers too, what look like purely compositional decisions may also have had a practice component: for example, some of Bach's longest organ fugues include very substantial episodes for manuals alone, with the pedals inactive for a third or even half of the

piece.[551] Given the practical difficulties of organ practice at that time (unheated churches, poor lighting, one or more additional people needed to blow the organ), making portions of the work accessible for domestic manuals-only practice would have made good sense.

Ensemble interpretation

In view of the limited historical record of ensemble rehearsal, and the questionable control likely exercisable by musical directors working with performers of mixed ability using imperfect source material, it is worth asking whether the baton-led nuanced interpretational styles familiar from all-powerful orchestral conductors from the end of the 19th century has any place in earlier music.[552] Reichardt (1791) certainly had low expectations of conductorial powers: 'The present director has only to beat time. These compositions [...] are of such dignity and power that they make a great effect, even with the most wretched execution imaginable. With their mostly miserable voices, worn-out castrati and some old clerics completely chop up this noble, majestic composition … One might weep when hearing masterworks bungled so wretchedly, yet one still experiences the great power and majesty'.[553]

While soloists and chamber musicians would have been able to achieve any level of refinement they chose, it is not so certain that the idea of 'interpretation' in the modern sense, as opposed to straight performance, was conceptually part of earlier ensemble music-making. If so, it has left little documentary trace.

Creative mistakes

While most rehearsal effort would have been directed at correctly reproducing the pitches provided by the composer, there must have been many error-laden occasions among musicians, of the kind satirized by Mozart is his *Musical Joke* of 1787. In particular, the sound of bitonal natural horns he notates, or 'cracked' brass notes, must have been familiar in rehearsals of the late 18th century. The most extreme example of such humour is found in the chaotically polytonal section of the *Battalia* a10 of 1673 by Biber, a work appropriately 'dedicated to Bacchus'. On other occasions, however, ambiguities in the notated musical content may have led to creative inspiration, as when an unfigured bass part was simultaneously realized slightly differently by a number of basso continuo players, giving rise to unusual chords. There are certainly instances in the composed music of Monteverdi,[554] Kapsberger, Purcell and others from the 17th century (and even as late as Beethoven)[555] which sound as if a rehearsal error has led to actual compositional inspiration, especially where technical rules are deliberately breached for apparently artistic ends.

Abandoned or substituted repertoire

There being comparatively few records dating from before the early 18th century of specific works on music lists for performance,[556] it is tempting to see the surviving manuscript and

printed sources themselves as representing a performance (or potential performance) repertoire. However, before the period of public concerts and operas, where works and performers were announced in advance, few audiences or congregations would have known exactly what they might be about to hear when attending any musical or liturgical event, and it is seems uncertain that many would (unlike now) have made their choices to go or not on the basis of the actual repertoire on offer. This meant that performers were in a position to offer last-minute 'backup' repertoire, should a rehearsal not go well; all experienced ensembles would have had pieces that were well known to them and could be immediately substituted.[557] For Latin liturgical repertoire, a plainchant version of the text would always have presented an acceptable alternative. From this point of view, the congregation attending Eton College Chapel during the early 16th century might sometimes have heard a plainchant (or *super librum*) *Salve Regina* replacing the failed rehearsal of a polyphonic work,[558] or one where complex music could not be performed that day due to absence or illness among the singers. While the statutes required a polyphonic antiphon every evening – as did those of King's College, Cambridge - this can hardly have been enforced, in these circumstances.[559] To what extent the Eton Choirbook collection even represents a 'performed' repertoire as a whole is open to question: of the fifteen polyphonic *Salve Regina*s and twenty-four Magnificats originally in the source, the choir might only have known and used a small number that were suitable for regular performance to a good standard. With all early sources, it must be remembered that some pieces that were copied, printed or circulated were likely never learned or performed at all, and this may even include a number of Bach's keyboard works.[560]

Performance practice and rehearsal

There are numerous records from before 1800 of rehearsals having occurred, and a great deal of associated evidence about some of these events, including where it happened, who was present, what the music was, what materials it was performed from, and for how long, but there is almost nothing that says what actually took place *during* any such rehearsal, or what the precise goal or outcome of it was. Nevertheless, examination of the circumstances surrounding all-important performance preparation processes can give insights into some aspects of why and how certain repertoire was composed, what the expectations of listeners might have been and what practical challenges the musicians of the past learned to overcome in their performing repertoire.

Acknowledgements

Our thanks go to a number of people, including Roger Bowers, Peter Holman, Kerry McCarthy, Eamonn O'Keeffe and Diane Winkleby, for conversations about aspects of rehearsal or for assistance with citations, and to Mark Statham for allowing us to inspect the Caius Choirbook. Thanks are also due for the vast amount of archival and source study work undertaken by Hugh Benham, Donald Burrows, Peter Holman, Beverly Jerold, Andrew Kirkman, Andrew Parrott, James Saunders, Richard Sherr, Anne Smith, Rob Wegman, Magnus Williamson, Craig Wright and

countless other scholars over many decades. Pablo Padilla would like to thank Clare Hall, University of Cambridge, for hosting a research visit in the Summer of 2021, and PASPA of DGAPA (UNAM) for financial support. Francis Knights would like to thank the numerous early music vocal and instrumental ensembles he has directed, or been a member of, for practical experience in rehearsal techniques – both good and bad – over many years, especially the Renaissance vocal consort Gradualia in Oxford.

Notes

[1] See, for example, Gary W. Harwood and Gregory W. Harwood, 'Robert Schumann's Choice of Repertory & Rehearsal Planning in his Career as a Choral Conductor', *The Choral Journal*, li/2 (September 2010), pp.32-39, 42-51.

[2] Leslie P. Hartley, *The Go-Between* (1953), p.1.

[3] John Morehen, 'The "burden of proof": the editor as detective' in John Morehen (ed), *English Choral Practice, 1400-1650* (Cambridge, 1995), pp.200-220 at 218.

[4] Rob C. Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', *Journal of the American Musicological Society*, xlix/3 (Autumn 1996), pp.409-479 at 442.

[5] Schumann specifically did not want his rehearsals 'reported in the public newspapers'; Harwood and Harwood (2010), p.36.

[6] These are illustrated and discussed in Peter Holman, *Before the Baton: Musical Direction and Conducting in Stuart and Georgian Britain* (Woodbridge, 2020), pp.222-227.

[7] See Francis Knights, 'Guidelines for the systematic evaluation of early music theorists', *National Early Music Association Newsletter*, iii/2 (Autumn 2019), pp.44-49.

[8] Emily Anderson (trans and ed), rev Stanley Sadie and Fiona Smart, *The Letters of Mozart and his family* (London, 3/1989), p.278.

[9] Alan Mould, *The English Chorister: A History* (London, 2007), p.106.

[10] See especially Richard Sherr, *Music and Musicians in Renaissance Rome and Other Courts* (Aldershot, 1999).

[11] Craig Wright, 'Performance Practices at the Cathedral of Cambrai 1475-1550', *The Musical Quarterly*, lxiv/3 (July 1978), pp.295-328 at 307.

[12] Andrew Parrott, 'Rehearsal time', in John M. Thomson (ed), *The future of early music in Britain* (London, 1978), pp.34-37 at 36.

[13] Cited in Robert Donington, *The Interpretation of Music* (London, 1989), p.118.

[14] Ernst Gottlieb Baron, trans Douglas Alton Smith*, Study of the Lute* (Apros, CA, 2/2019), p.111.

[15] Christopher Marsh, *Music and Society in Early Modern England* (Cambridge, 2010), p.199.

[16] See Rebecca Cypess, '"It Would Be without Error": Automated Technology and the Pursuit of Correct Performance in the French Enlightenment', *Journal of the Royal Musical Association*, cxlii/1 (2017), pp.1-29.

[17] A reference from the German College in Rome (1611) that 'the *maestro di cappella* trains [the students] in various types of singing' is ambiguous in that respect; Noel O'Regan, 'The performance of Palestrina: some further observations', *Early Music*, xxiv/1 (February 1996), pp.144–156 at 149.

[18] Stewart Gordon, *Mastering the Art of Performance* (Oxford, 2006), pp.6-7.

[19] See Paul Glennie and Nigel Thrift, *Shaping the Day: A History of Timekeeping in England and Wales, 1300-1800* (London, 2011) and Gillian Adler and Paul Strohm, *Alle Thyng hath Tyme: Time and medieval life* (London, 2023).
[20] Edmund Fellowes, *Memoirs of an Amateur Musician* (London, 1946), p.120.

[21] Such disasters can occur even today, as in the well-known case in 1999 of pianist Maria João Pires, who had prepared a different piano concerto by Mozart than the one the Amsterdam Concertgebouw Orchestra began playing in the concert; clearly, there had been no rehearsal beforehand. Fortunately she was able to play the other work from memory.

[22] Oliver Strunk, *Source Readings in Music History: IV The Classic Era* (London, 1981), p.164.

[23] Charles Burney, ed Frank Mercer, *A General History of Music from the Earliest Ages to the Present Period*, 2 vols. (London, 1935), ii, p.728.

[24] Anderson (1989), p.557. This was the day after his mother's death.

[25] Robert Philip, *Performing music in the age of recording* (New Haven, 2004), p.13. See also Beverly Jerold, 'Choral Singing before the Era of Recording', *The Musical Times*, cxlvii/1895 (Summer 2006), pp.77-84.

[26] Beverly Jerold, 'Intonation Standards and Equal Temperament', *Dutch Journal of Music Theory*, xii/2 (May 2007), pp.215-227 at 218.

[27] See the discussions in Ephraim Segerman, 'Tempo and tactus after 1500', in Tess Knighton and David Fallows (eds), *Companion to Medieval and Renaissance Music* (London, 1992), pp.337-344 and Ephraim Segerman, 'A re-examination of the evidence on absolute tempo before 1700', *Early Music* xxiv/2 (May 1996), pp.227-249 and xxiv/4 (November 1996), pp.681-690.

[28] David Wulstan, *Tudor Music* (Iowa City, 1986), p.188.

[29] Note that Tomkins gives a single tempo apparently suitable for all this music in his collection, not (as a modern musician would expect) a range dependent on mood, text, performing acoustics, performer ability or musical preferences. Some support for such tempi comes from an Oxford manuscript of c.1680, which includes works like Gibbons' Short Service with an ornate added organ part that implies much slower speeds than are usual today. See Francis Knights, 'A Restoration Version of Gibbons' Short Service', *Organists' Review*, lxxvi: 271 (June 1990a), pp.97-100 and 'Magdalen College MS 347: An Index and Commentary', *Journal of the British Institute of Organ Studies*, xiv (1990b), pp.4-9.

[30] Rob C. Wegman, 'Concerning Tempo in the English Polyphonic Mass, c. 1420-70', *Acta Musicologica*, lxi/1 (January-April 1989), pp.40-65. See also Rob C. Wegman, 'Different Strokes for Different Folks? On Tempo and Diminution in Fifteenth-Century Music', *Journal of the American Musicological Society*, liii/3 (Autumn 2000), pp.461-505 and Ruth I. DeFord, *Tactus, Mensuration, and Rhythm in Renaissance Music* (Cambridge, 2015).

[31] Roger Bray, 'Editing and performing *musica speculativa*', in Morehen (1995), pp.48-73.

[32] Rob C. Wegman, '"And Josquin Laughed...": Josquin and the Composer's Anecdote in the Sixteenth Century', *The Journal of Musicology*, xvii/3 (Summer 1999), pp.319-357 at 321.

[33] Jane Flynn, 'The education of choristers in England during the sixteenth century', in Morehen (1995), pp.180-220, p.181.

[34] James Grassineau, *A Musical Dictionary. being a collection of terms and characters, As well Ancient as Modern. Including the Historical, Theoretical, and practical Parts of Music* (London, 1740), p.196. There is no entry for 'Practice'. The earliest English dictionary, Robert Cawdrey's *A Table Alphabeticall of Hard Usual English Words* (London, 1604) omits 'rehearsal' as a term, and gives *practising* as the definition of 'practique'.

[35] https://johnsonsdictionaryonline.com.

[36] The *Oxford English Dictionary* summarizes 'rehearsal' (in the musical/theatrical sense, there being several other meanings) as a 'practice performance'; https://www.oed.com/dictionary.

[37] Michael Maul, trans Richard Howe, *Bach's famous choir: the Saint Thomas School in Leipzig, 1212-1804* (Woodbridge, 2018), p.45.

[38] See, for example, the table of services, actions and places in Frank Ll. Harrison, *Music in Medieval Britain* (London, 2/1963), p.106.

[39] Some institutions appear to have had traditions of which sections might be done in reduced scoring, such as solo voices; see O'Regan (1996), pp.146-149.

[40] Sherr (1999), IV, pp.91-92.

[41] John Conway, C. M. Kosemen, Darren Naish and Scott Hartman, *All yesterdays: unique and speculative views of dinosaurs and others prehistoric animals* (n.p., 2012).

[42] James Orchard Halliwell (ed), *The Moral Play of Wit and Science, and Early Poetical Miscellanies* (London, 1848), pp.62-65.

[43] Halliwell (1848), pp.80-82. For discussions of voice types and sonorities, see Ellen T. Harris, 'Voices', in Howard Mayer Brown and Stanley Sadie (eds), *Performance Practice: Music after 1600* (Basingstoke, 1989b), pp.97-116 and Andrew Parrott, *The Pursuit of Musicke: Musical Life in Original Writings & Art* (n.p., 2022), pp.306-309, and for modern 'early' vocal traditions, see Joe Bolger, *The disembodied voice of Early music singing*, PhD thesis (King's College London, 2021).

[44] Parrott (2022), p.395.

[45] Hans T. David and Arthur Mendel (eds), rev Christoph Wolff, *The New Bach Reader* (New York, 1998), pp.328-329.

[46] Parrott (2022), p.395.

[47] Charles Burney, ed H. Edmund Poole, *Music, Men and Manners in France and Italy 1770* (London, 1974), pp.185-186.

[48] Charles Burney, *The Present State of Music in Germany, The Netherlands and United Provinces* (London, 1773), i, p.286. Gluck also reportedly made his performers repeat passages twenty or thirty times; Parrott (2022), p.396.

[49] Holman (2020), p.288-289.

[50] Strunk (1981), iii, pp.124-125.

[51] Pamela L. Poulin, 'A View of Eighteenth-Century Musical Life and Training: Anton Stadler's "Musick Plan"', *Music & Letters*, lxxi/2 (May 1990), pp.215-224 at 220.

[52] Christopher Hogwood, *Haydn's visits to England* (London, 1980), pp.34-35. Opera had also been forbidden at the old Haymarket Theatre by the Lord Chamberlain in the winter of 1745, that time due to the Jacobite Rebellion; see Burrows et al. (2020), p.361.

[53] Cited in Jerold (2005), p.80.

[54] Anderson (1989), p.708.

[55] See Harrison (1963), pp.386-388 for this practice.

[56] Harrison (1963), pp.215-216.

[57] Johann Samuel Petri, *Anleitung zur praktischen Music* (Leipzig, 2/1782), p.181, cited in Bruce Haynes, *The End of Early Music* (New York, 2007), p.101. See also John Spitzer and Neal Zaslaw, *The Birth of the Orchestra: History of an Institution, 1650-1815* (New York and Oxford, 2004), p.386.

[58] See Cristina Cassia, 'Authorship in sixteenth-century Italian printed keyboard music', in Andrew Woolley (ed), *Studies on Authorship in Historical Keyboard Music* (Abingdon, 2024), pp.32-56 at 36.

[59] Donald Burrows, Helen Coffey, John Greenacombe and Anthony Hicks (eds), *George Frideric Handel: Collected Documents. Volume 1 1609-1725* (Cambridge, 2013), pp.264 and 269; Holman (2020), p.86. Fiona Smith, *Original Performing Material for Concerted Music in England,* c.*1660-1800*, PhD thesis (University of Leeds, 2014) lists numerous references to rehearsals, but there is no information other than that they took place.

[60] Donald Burrows, Helen Coffey, John Greenacombe and Anthony Hicks (eds), *George Frideric Handel: Collected Documents. Volume 4 1742-1750* (Cambridge, 2020), pp.662 and 677.

[61] Burrows et al. (2020), p.131.

[62] Smith (2014), p.212.

[63] Burrows et al. (2013), p.124.

[64] Burrows et al. (2020), p.483.

[65] Burrows et al. (2020), pp.527-529.

[66] Anderson (1989), p.141.

[67] Anderson (1989), p.677.

[68] Woodfill (1953), p.238; Parrott (2022), p.394.

[69] For numerous examples, see Donald Burrows, Helen Coffey, John Greenacombe and Anthony Hicks (eds), *George Frideric Handel: Collected Documents. Volume 3 1734-1742* (Cambridge, 2019).

[70] Hogwood (1980), p.34.

[71] Margaret Bent, '*Resfacta* and *Cantare Super Librum*', *Journal of the American Musicological Society*, 36 (1983), pp.371-391 at 376-777.

[72] David Price, *Patrons and musicians of the English Renaissance* (Cambridge, 1981), p.2.

[73] Formal checking procedures must usually have depended on the diligence of individual copyists, although some institutions may have had specific procedures, like those of the medieval English Chancery; see Michael T. Clanchy, *From Memory to Written Record: England 1066-1307* (Oxford, 2/1993), pp.130-131.

[74] See, for example, the practices outlined in Andrew Parrott, *The essential Bach choir* (Woodbridge, 2000), and the discussion in Andrew Parrott, *Composers' Intentions? Lost Traditions of Musical Performance* (Woodbridge, 2015), pp.317-320.

[75] John Milsom, 'Sacred songs in the chamber', in Morehen (1995), pp.161-179 at 171.

[76] There may also have been an alternative 'shelf' format, if that is the implication of the 'board in the nave from which the antiphon was sung' at New College, Oxford; Harrison (1963), p.159.

[77] See Francis Knights and Pablo Padilla, 'Issues in the Historical Rehearsal and Performance of Early Tudor Polyphony' (forthcoming).

[78] For example, manuscripts including *alternatim* polyphony usually omit the chant portions, or chant incipits in masses.

[79] Hugh Benham, *Latin Church Music in England* c.*1460-1575* (London, 1977), p.22. For a unique bass voice-part fragment on large-format parchment which has been proposed as a 'rehearsal' copy from a choirbook, see Roger Bowers, 'University Library, MS Buxton 96', in Iain Fenlon (ed), *Cambridge Music Manuscripts 900-1700* (Cambridge, 1982), pp.114-117. Note that some autograph choirbooks have survived on the continent, suggesting very close links between composition, notational format and performance; see Jessie Ann Owens, *Composers at Work: the craft of musical composition* (New York, 1997), p.111.

[80] Roger Bray, 'The Interpretation of Musica Ficta in English Music c.1490-c.1580', *Proceedings of the Royal Musical Association*, cxlvii (1970-1971), pp.29-45 at 33.

[81] Reproduced in Wegman (2002), p.48.

[82] For an early 15th century example see Roger Bowers, 'Trinity College, MS o. 3. 58', in Fenlon (1982), pp.88-90, and for a late parchment example from 1580, see Iain Fenlon, 'King's College, MS Rowe 1', in Fenlon (1982), pp.137-139.

[83] For a rare early example of c.1440, see Roger Bowers, 'University Library, Pembroke College MS 314', in Fenlon (1982), pp.103-106.

[84] Benham (1977), p.24, Harrison (1963), p.166; see p.431 for the 1522 inventory.

[85] Harrison (1963), pp.162, 432-433.

[86] Geoffrey Chew, 'The Provenance and Date of the Caius and Lambeth Choir-Books', *Music & Letters*, li/2 (April 1970), pp.107-117.

[87] Francis Knights, 'Observations on two 16th century music manuscripts belonging to Sir John Petre', *The Consort*, lxxv (Summer 2019), pp.22-41.

[88] Harrison (1963), p.167.

[89] Bray (1995), pp.48-73. In fact, some of the music is unperformable as presented in the surviving sources, and needs an 'edition' to be usable, as happened with the contemporary copy made of *O quam glorifica*. See also Roger Bowers, 'University Library, MS Nn. Vi. 46', in Fenlon (1982), pp.118-122.

[90] See Francis Knights, 'The historic chapel music manuscripts at Trinity', *Trinity College Annual Report* (2007), pp.55-59 at 56.

[91] For one experiment working with facsimile material, see Floris Schuiling, '(Re-)Assembling Notations in the Performance of Early Music', *Contemporary Music Review*, xxxix/5 (2020), pp.580-601.

[92] Technology is now making it possible for individuals all to have just such an overview. For example, the Britten Sinfonia now perform from iPads, meaning everyone can see the score, there are no physical page turns and full overhead lighting is not needed; the principal gain is that less rehearsal time is needed. See Jessica Duchen, 'Who needs a conductor?', *Sunday Times*, Culture magazine (16 July 2023).

[93] The most thorough explanation of the process can be found in Owens (1997), ch.5.

[94] Cited in Edward E. Lowinsky, 'On the Use of Scores by Sixteenth-Century Musicians', *Journal of the American Musicological Society*, i/1 (Spring 1948), pp.17-23 at 17. See also Owens (1997), p.292 and Anne Smith, *The Performance of 16th-Century Music* (Oxford, 2011), ch.9.

[95] Owens (1997), p.55.

[96] Alan Brown (ed), *Byrd: Cantiones Sacrae I (1589)*, Byrd Edition 2 (London, 1988), p.xxi.

[97] Burrows et al. (2013), p.519.

[98] Sherr (1999), XVII, p.124.

[99] Jon Baxendale and Francis Knights (eds), *Will Forster's Virginal Book* (Tynset, 2023).

[100] Pencils were likely rather rare: the earliest mass-produced graphite pencils came from Nuremberg as late as 1662.

[101] See Owens (1997), pp.135-136 for writing materials.

[102] See Harrison (1963), pp.81-88 and 295-344 for the votive antiphon tradition. Examples of a composer's own rest-counting errors by Cipriano de Rore are noted by Owens (1997), p.249.

[103] Alfred Dürr, 'Performance Practice of Bach's Cantatas', *American Choral Review*, xxix/3-4 (Summer and Fall 1987), pp.25-34 at 29. Martin Geck and Alfred Mann, 'Bach's art of church music and his Leipzig performance forces: contradictions in the system', *Early Music*, xxi/4 (November 2003), pp.558-571, also worry about the practical utility of Bach's source materials, but without coming to any firm conclusions.

[104] David and Mendel (1998), pp.338-348.

[105] Geck and Mann (2003), p.569. See also Beverly Jerold, 'Bach's Lament about Leipzig's Professional Instrumentalists', *Bach*, xxxvi/1 (2005), pp.67-96.

[106] Dürr (1987), p.28.

[107] Burney (1935), ii, p.353.

[108] See, for example, Robert Carver's motet *O bone Jesu* a19, where he was working at the limits of his technical ability in that many voices; Harrison (1963), p.344. For a story about a singer having difficulty reading a composer's own manuscript corrections, see Owens (1997), p.163.

[109] Kirkman (2020), p.133.

[110] Robbins Landon (1959), p.5.

[111] Smith (2014), p.260.

[112] Parrott (2022), p.395.

[113] Anselm Hughes, *Catalogue of the Musical Manuscripts at Peterhouse Cambridge* (Cambridge, 1953); Francis Knights, 'Thomas Wilson, Organista Petrensis', *Early Music Performer*, l (April 2022), pp.16-29.

[114] See Morehen (1995), p.212.

[115] Location by text or counting breves is mentioned in one theory source (see Bonnie J. Blackburn, Edward E. Lowinsky and Clement Miller (eds), *A Correspondence of Renaissance Musicians* (Oxford, 1991), pp.119-120), and may have been quite common; Owens (1997), p.54.

[116] Dennis Duncan, *Index, A History of the* (London, 2021), pp.5-6.

[117] Illustrated in Owens (1997), p.53. Cue letters in Vivaldi's 'Four Seasons' (Op.8/1-4, 1725) are actually references to the lines of the poems associated with the music.

[118] Barry Cooper, 'Rehearsal Letters, Rhythmic Modes and Structural Issues in Beethoven's Grosse Fuge', *Nineteenth-Century Music Review*, xiv/2 (August 2017), pp.177-193.

[119] Bach and some other composers certainly counted bars for structural reasons, but did not indicate them as a way of negotiating the rehearsal content; see Ruth Tatlow, *Bach's numbers: compositional proportion and significance* (Cambridge, 2016).

[120] Thomas Lloyd, 'When the Orchestra Arrives', *The Choral Journal*, xl/5 (December 1999), pp.35-46 at 39. This article provides a very useful practical guide to the realities of modern rehearsal.

[121] Cited in Wegman (1999), p.330.

[122] See J. Merrill Knapp, 'Handel's *Tamerlano*: The Creation of an Opera', *The Musical Quarterly*, lvi/3 (July 1970), pp.405-430, Graham Cummings, 'Handel's Compositional Methods in His London Operas of the 1730s, and the Unusual Case of "Poro, Rè dell'Indie" (1731)', *Music & Letters*, lxxix/3 (August 1998), pp.346-367 and David Ross Hurley, 'Handel's Recomposed Return Arias and Romantic Attraction in Alexander Balus', *Journal of the American Musicological Society*, lxix/3 (Fall 2016), pp.651-698.

[123] Anderson (1989), p.613.

[124] Anderson (1989), p.174.

[125] Anderson (1989), p.319.

[126] Elizabeth Eva Leach, 'Nature's forge and mechanical production: Writing, reading and performing song', in Mary Carruthers (ed), *Rhetoric Beyond Words: Delight and Persuasion in the Arts of the Middle Ages* (Cambridge, 2013), p.86.

[127] Rob C. Wegman, 'Johannes Tinctoris and the "New Art"', *Music & Letters*, lxxxiv/2 (May 2003), pp.171-188 at 174.

[128] See Francis Knights, 'The Choral Foundation of Corpus Christi College, Oxford', *The Organ*, lxx/275 (Winter 1991), pp.10-14.

[129] James Saunders, *English Cathedral Choirs and Choirmen, 1558 to the Civil War: An Occupational Study*, PhD thesis (University of Cambridge, 1997), p.66.

[130] Roger Bowers, 'Chapel and Choir, Liturgy and Music, 1444-1644', in Jean Michel Massing and Nicolette Zeeman (eds), *King's College Chapel 1515-2015: Art, Music and Religio in Cambridge* (London, 2014), pp.259-286 at 266.

[131] Some London churches booked and paid additional singers for major feasts; Harrison (1963), pp.198-199.

[132] Graham Dixon, 'The performance of Palestrina: Some questions, but fewer answers', *Early Music*, xxii/4 (November 1994), pp.666–676 at 669.

[133] See the lists in Andrew Ashbee, *Records of English Court Music*, 9 vols. (Snodland/Aldershot, 1986-96).

[134] Reproduced in Brown and Sadie (1989a), p.194.

[135] A letter notes 'there were two basses. One is a trombone'; Seishiro Niwa, '"Madama" Margaret of Parma's patronage of music', *Early Music*, xxxiii/1 (February 2005), pp.25–38 at 33.

[136] Dixon (1994), p.670; O'Regan (1996), p.150.

[137] Marcelle Benoit, 'Paris, 1661-87: the Age of Lully', in Curtis Price (ed), *The Early Baroque Era* (Basingstoke, 1993), pp.239-269 at 247; the serpent was sometimes used to double plainchant in 17th and 18th century France.

[138] John Stevens, *Music and Poetry in the Early Tudor Court* (Cambridge, 2/1979), pp.312 and 318.

[139] Peter Le Huray, *Music and the Reformation in England, 1549-1660* (London, 1967), pp.14-17 summarizes what is known, from a variety of documentary sources; see also Harrison (1963), section IV.

[140] Harrison (1963), p.173, Peter Giles, *The History and Technique of the Counter-Tenor* (Aldershot, 1994), pp.28-29 and Roger Bowers, 'To chorus from quartet: the performing resource for English Church Polyphony, c. 1390-1559', in Morehen (1995), pp.1-47 at 35-37.

[141] Thomas Mace, *Musick's Monument, or a Remembrancer of the best Practical Musick* ... (London, 1676), p.25.

[142] Saunders (1997), p.161; see pp.130-140 for information on terms and stipends.

[143] Saunders (1997), pp.141-142; Mace (1676), p.25. Williamson (1997), p.363 also notes additional non-musical roles at Eton College.

[144] For a table of the skills taught to pre-Reformation choristers, see Flynn (1995), p.182.

[145] David G. T. Harris, 'Musical Education in Tudor Times (1485-1603)', *Proceedings of the Musical Association*, 65th session (1938-1939), pp.117 and 119. See also Harrison (1963), pp.8-9. For the comparable arrangements in a French institution, see Andrew Kirkman, *Music and Musicians at the Collegiate Church of St-Omer: Crucible of Song, 1350-1550* (Cambridge, 2020).

[146] For a list of known players before the English Civil War, see Francis Knights, 'A Register of British keyboard makers, composers, copyists and players, c.660-1630', *National Early Music Association Newsletter*, vii/2 (Autumn 2023), pp.25-108.

[147] Bowers (1995), p.33.

[148] Flynn (1995). The reference to 'keeping from them nothing of his knowledge' is interesting, as Thomas Mace complains about teachers who were '*Very Sparing* in … *Imparting* much of *Their Skill* to their *Scholars*' (Mace (1676), p.40). Paul O'Dette agrees that performers 'appear to have been … protective of their personal practices' ('Teaching Historical Lute Technique in the 21st Century: Exceptions to the Normal Rules of Renaissance Lute Fingering', in John Griffiths and Sigrid Wirth (eds), *Teaching & Studying the Lute* (2022), pp.23-42 at 23); and see also Pat O'Brien, 'Just how secret were those Muses?', *Lute Society of America Quarterly*, xlii/1 (2007), pp.11-14 and Karel Davids, 'Craft Secrecy in Europe in the Early Modern Period: A Comparative View', *Early Science and Medicine*, x/3 (2005), pp.341-348. It should be remembered that guilds could be more about restricting than promoting activity in, or knowledge of, their subject; Woodfill (1953), pp.8-15.

[149] David Brown, *Thomas Weelkes: a Biographical and Critical Study* (London, 1969), pp.34, 37 and 40; see also Mould (2007), p.58-60. At Durham Cathedral in 1563, prayers for all were at 6 am for 'almost halfe an houre', with Matins at 9 am and Evensong at 3 pm; Saunders (1997), p.22. For the tuition and training of musicians and singers in England, see Saunders (1997), pp.117-120.

[150] Bowers (2014), p.276.

[151] Maul (2018), p.23. A 1592 document shows that this had slightly changed by that date; Maul (2018), pl.5.

[152] Alejandro Enrique Planchart, 'Choirboys at Cambrai in the Fifteenth Century', in Susan Boynton and Eric Rice (eds), *Young Choristers 650-1700* (Woodbridge, 2008), pp.123-145 at 128; see also Sandrine Dumont, 'Choirboys and *Vicaires* in the Maîtrise of Cambrai: a socio-anthropological study (1550-1670)' in Boynton and Rice (2008), pp.146-162 at 152.

[153] Harris (1938), p.112.

[154] Parrott (2022), p.395.

[155] Saunders (1997), pp.195-196.

[156] William Bathe, *A Briefe Introduction to the Skill of Song* (London, 1600). See also see Flynn (1995).

[157] Lewis Emanuel Peterman, 'Michel Blavet's Breathing Marks: A Rare Source for Musical Phrasing in Eighteenth-Century France', *Performance Practice Review*, iv/2 (Fall 1991), article 4.

[158] John Wilson (ed), *Roger North on Music: Being a Selection from his Essays written during the years c.1695-1728* (London, 1959), p.268.

[159] Johann Joachim Quantz, trans Edward R. Reilly, *On Playing the Flute* (London, 1966), p.200.

[160] Cited in Timothy J. McGee, *Medieval and Renaissance Music: A Performer's Guide* (Aldershot, 1990), p.56.

[161] Anderson (1989), p.889.

[162] Andrew Cichy, 'Lost and found: Hugh Facy', *Early Music*, xlii/1 (February 2014), pp.95-104 at 97.

[163] For a 1501 illustration of a music blackboard in class, see Owens (1997), p.83.

[164] The *studiolo* may have been one particular private space for aristocratic rehearsal in Italy, and also for some kinds of domestic performance; see Tim Shephard, 'The Studiolo, Identity, and Music', in *Echoing Helicon: Music, Art and Identity in the Este Studioli, 1440-1530* (2014), pp.4-29.

[165] Burrows et al. (2020), pp.151, 645 and 677.

[166] Cited in John Walter Hill, 'Florence: Musical Spectacle and Drama, 1570-1650', in Price (1993), pp.121-145 at 135.

[167] Boynton and Rice (2008), p.10.

[168] Data on the importation of spectacles and spectacle cases from 1380-1537 can be found in Stuart Jenks (ed), 'The London Customs Accounts', *Hansischer Geschichtsverein Lübeck*, lxxiv (2016-2023), 45 vols.

[169] Judith Milhous, 'Lighting at the King's Theatre, Haymarket, 1780–82', *Theatre Research International*, xvi/3 (1991), pp.215-236. See also Simon Eliot, 'Reading by Artificial Light in the Victorian Age', in Matthew Bradley and Juliet John (eds), *Reading and the Victorians* (London, 2015), pp.15-30 and Lee Prosser, 'Experiments with historic light in Kensington Palace's early eighteenth-century interiors', in Christine Casey and Melanie Hayes

(eds), *Enriching Architecture: Craft and its conservation in Anglo-Irish building production, 1660–1760* (London, 2023), pp.138-159.

[170] David R. M. Irving, *Colonial Counterpoint: Music in Early Modern Manila* (Oxford, 2010), p.180.

[171] Bowers (1995), p.34. Practice in the cathedrals of Scotland, Wales and Ireland has been relatively neglected by modern scholars, but see Harrison (1963), pp.14-17, 26-27 and 37-38..

[172] Bowers (1995), p.31.

[173] Jean Lionnet, 'Performance Practice in the Papal Chapel during the 17th Century', *Early Music*, xv/1 (February 1987), pp.3-15 at 4.

[174] Klaus Pietschmann and James Steichen, 'Musical institutions in the fifteenth century and their political contexts', in Anna Maria Busse Berger and Jesse Rodin (eds), *The Cambridge History of Fifteenth-Century Music* (Cambridge, 2015), pp.403-426 at 421.

[175] Saunders (1997), p.90.

[176] Saunders (1997), p.116.

[177] Ursula Brett, 'The Polemics of Imperfection', *The Consort*, lxxviii (Summer 2022), pp.71-94 at 73-74.

[178] A cornett is also mentioned elsewhere in the regulations.

[179] Jonathan Glixon, '*Far il buon concerto*: Music at the Venetian Scuole Piccole in the Seventeenth Century', *Journal of Seventeenth Century Music*, i/1 (1995), section 3.4.

[180] Cited in Canguilhem (2011), p.99.

[181] Holman (2020), p.218. Low payment for rehearsals continued to be a sore point in the early 19th century; see Christina Bashford, *Public Chamber-Music Concerts in London, 1835-50: Aspects of History, Repertory and Reception*, PhD thesis (King's College, London, 1996), i.

[182] Saunders (1997), p.41.

[183] Cited in Smith (2011), p.5

[184] See Owens (1997), pp.48-50.

[185] See https://www.cacophonyhistoricalsinging.com/post/the-twenty-tests-for-applicants-for-the-post-of-choirmaster-at-toledo-cathedral-in-1604 and Philippe Canguilhem, 'Singing upon the Book according to Vicente Lusitano', *Early Music History*, xxx (2011), pp.55–103.

[186] Walter L. Woodfill, *Musicians in English Society from Elizabeth to Charles I* (Princeton, 1953), p.42

[187] Jerold (2005), pp.91-92.

[188] For early 18th-century Germany, see Beverly Jerold, 'Bach's Lament about Leipzig's Professional Instrumentalists', *Bach*, xxxvi/1 (2005), pp.67-96.

[189] Cited in Jerold (2005), p.75.

[190] A well-organized institution could arrange formal cover for absence, as at València, where another musician was instructed to 'play the cornett to cover all of Vicente Úbeda's absences and illnesses'; Royo (2021), p.40.

[191] Rob Wegman, *Born for the muses: the life and Masses of Jacob Obrecht* (Oxford, 1994), p.81.

[192] Wegman (1994), p.305.

[193] O'Regan (1996), p.153.

[194] Saunders (1997), p.62. Larger choirs could presumably operate a rota system to allow for both daily services and individual holidays; a repertoire of music for men's voices only shows that choristers also got time off, either by design or for illness.

[195] Le Huray (1967), p.42.

[196] Brown (1969), pp.29 and 34.

[197] Kirkman (2020), p.81.

[198] Royo (2021), p.38.

[199] H. C. Robbins Landon (ed), *The Collected Correspondence and London Notebooks of Joseph Haydn* (London, 1959), p.207.

[200] Stras (2018), p.237.

[201] Saunders (1997), Table 4, pp.215-216.

[202] Williamson (1997), pp.347-348; he also suggests that higher payments were given to long-standing members, which may have aided retention of experienced singers.

[203] Thomas Morley, *A Plaine and Easie Introduction to Practicall Musicke* (London, 1597), p.179. Whether the better-paid full-time singers of the early Tudor period had similar attitudes is not recorded.

[204] Jonathan Glixon, 'Music at the Venetian Scuole Grandi, 1440-1540', in Fenlon (1981), pp.193-226 at 196.

[205] Woodfill (1953), p.88.

[206] Owens (1997), p.293.

[207] Niwa (2005), p.33.

[208] Woodfill (1953), p.88.

[209] Saunders (1997), p.126.

[210] Bowers (2014), p.275.

[211] Craig Wright, 'Antoine Brumel and patronage at Paris', in Iain Fenlon (ed), *Music in Medieval and Early Modern Europe: Patronage, Sources and Texts* (Cambridge, 1981), pp.37-60 at 47.

[212] Harrison (1963), p.9.

[213] Williamson (1997), p.377.

[214] Stevens (1979), p.305. Note however that there were several Richard Davys, whose biographies may have become confused; see David Skinner, 'Davy [Davys], Richard', www.oxfordmusiconline (accessed 1 September 2023).

[215] Woodfill (1953), p.244. See also Heinrich W. Schwab, 'The Social Status of the Town Musician', in Walter Salmen (ed), trans Herbert Kaufman and Barbara Reisner, *The Social Status of the Professional Musician* (New York, 1983), pp.33-59 and Kirkman (2020), ch.2.

[216] Stevens (1979), pp.315-316.

[217] Rob C. Wegman, '"Musical Understanding" in the 15th Century', *Early Music*, xxx/1 (February 2002), pp.46-66 at 55.

[218] Cited in Wegman (2002), p.57.

[219] Saunders (1997), p.75.

[220] Daniel Trocme-Latter, 'Thieves, Drunkards, and Womanisers? Perceptions of Church Musicians in Early Reformation Strasbourg', in R. Gerald Hobbs and Annie Noblesse-Rocher (eds), *Bible, Histoire et Société: Mélanges offerts a Bernard Roussel* (Turnhout, 2013), pp.383-399 at 384, 387.

[221] Trocme-Latter (2013), pp.390-391 and 395.

[222] Wright (1978), p.312.

[223] Richard Sherr, 'The papal chapel in the late fifteenth century', in Busse Berger and Rodin (2015), pp.446-462 at 447.

[224] Harris (1938), p.119.

[225] Brown (1969), pp.28-31.

[226] Le Huray (1967), pp.41-44.

[227] Harrison (1963), p.8.

[228] Brown (1969), pp.34-44.

[229] Le Huray (1967), p.44; for a survey of the topic, see Saunders (1997), ch.6.

[230] Jerrold (2006), p.77.

[231] John Brown, *A dissertation on the rise ... and corruption of poetry and music* (London, 1763), p.214; cited in Jerrold (2006), p.77.

[232] Dumont (2008), pp.160-161.

[233] Wright (1978), p.295.

[234] Harrison (1963), p.8.

[235] Le Huray (1967), p.42.

[236] Giles (1994), p.49.

[237] Giles (1994), p.26.

[238] Wright (1978), p.312.

[239] Glixon (1981), p.202.

[240] Glixon (1981), p.203.

[241] Woodfill (1953), p.88.

[242] Sherr (1999), IV, p.87.

[243] Michael F. Robinson, *Opera before Mozart* (London, 3/1978), pp. 24-25.

[244] H. C. Robbins Landon, 'The Operas of Haydn', *New Oxford History of Music*, vii (Oxford, 1973), pp.172–199.

[245] Burrows et al. (2019), pp.305. For the 'Second Academy' season in London in 1730-31, see Cummings (1998), p.356: seven works, with between six and 16 performances.

[246] Anderson (1989), p.249.

[247] Bruno Forment, 'An enigmatic souvenir of Venetian opera: Alessandro Piazza's "Teatro" (1702)', *Early Music*, xxxviii/3 (August 2010), pp.387-401 at 395.

[248] Denis Diderot, trans Kate E. Tunstall and Caroline Warman, *Rameau's Nephew/Le Neveu de Rameau* (Cambridge, 2/2016), p.74.

[249] Anderson (1989), pp.173-176.

[250] Leopold Mozart (1772): 'During the last few days we have had three rehearsals of the recitatives'; Anderson (1989), p.220.

[251] Anderson (1989), p.696.

[252] Anderson (1989), p.223.

[253] Holman (2020), p.274.

[254] Judith Milhous and Robert D. Hume: 'A Prompt Copy of Handel's *Radamisto*', *The Musical Times*, cxxvii/1719 (1986), pp.316–321.

[255] Cited in Beverly Jerold, 'Fasch and the Beginning of Modern Artistic Choral Singing', *Bach*, xxxv/1 (2004), pp.61-86 at 70.

[256] Francis Knights, 'John Richardson's Cathedral Tour of 1869', *The Organ*, lxix/272 (Spring 1990), pp.8-12.

[257] See Shai Burstyn, 'In quest of the period ear', *Early Music*, xxv/4 (November 1997), pp.692–701, Shai Burstyn, 'Pre-1600 music listening: a methodological approach', *The Musical Quarterly*, lxxxii (1998), pp.455–65, Rob C. Wegman, '"Musical Understanding" in the 15th Century', *Early Music*, xxx/1 (February 2002), pp.46-66 and Tim Carter, 'Listening to music in early modern Italy: some problems for the urban musicologist', in Tess Knighton and Ascensión Mazuela-Anguita (eds), *Hearing the city in early modern Europe* (Turnhout, 2018), pp.25–49.

[258] Christopher Page, *Discarding images: reflections on music and culture in medieval France* (Oxford, 1993), p.xxii. For 15th-century music aesthetics, see Rob C. Wegman, 'Sense and Sensibility in Late-Medieval Music: Thoughts on Aesthetics and "Authenticity"', *Early Music*, xxiii/2 (May 1995), pp.298-312. Stevens (1979), p.235 suggests that the 'public music of the late Middle Ages … was functional rather than expressive'.

[259] Wright (1978), p.295.

[260] Harnoncourt (1988).

[261] Quantz (1966), p.298.

[262] Sebastian Giustinian, trans Rawdon Brown, *Four Years at the Court of Henry VIII* (London, 1854), vol.1, p.80; Wegman (2002), p.53.

[263] Wright (1978), p.306.

[264] Harris (1938), p.122; Giles (1994), p.30.

[265] Laurie Stras, *Women and Music in Sixteenth-Century Ferrara* (Cambridge, 2018), p.302.

[266] Anderson (1989), p.873.

[267] For example, in Giles (1994), ch.3 and 4.

[268] Harrison (1963), pp.189-190.

[269] Wegman (2002), p.49.

[270] Thomas Coryat, *Coryat's Crudities* (London, 1611), cited in Ellen Rosand, 'Venice 1580-1680', in Price (1993), p.83.

[271] Burney (1974), p.149. Her name is not given by Burney, but it was either Rufina or Maria Benedetta.

[272] Anne Bagnall Yardley, 'The Music Education of Young Girls in Medieval Nunneries', in Boynton and Rice (2008), pp.49-67 at 59.

[273] Noel O'Regan, 'Choirboys in Early Modern Rome', in Boynton and Rice (2008), pp.216-240 at 233.

[274] Burney gave an account of the Naples Conservatoire in 1770; Burney (1974), pp.162-164.

[275] Burney (1974), p.77.

[276] Poulin (1990), p.216.

[277] Nikolaus Harnoncourt, trans Mary O'Neill, *Baroque Music Today: Music as Speech* (Portland, 1988), p.25.

[278] Harnoncourt (1988), p.17.

[279] Jerold (2004), p.61.

[280] Quantz (1966), p.118.

[281] Boynton and Rice, 'Introduction: Performance and Premodern Childhood', in Boynton and Rice (2008), pp.1-18 at 9.

[282] Flynn (1995), p.198.

[283] Strunk (1981), iii, p.62.

[284] Woodfill (1953), p.146.

[285] 'Dotted Crotchet', 'Winchester College. Seinte Marie College of Wynchestre', *The Musical Times*, xlv/736 (1 June 1904), pp.360-369.

[286] Mould (2007), p.50.

[287] Sherr (1999), XIV, pp.608, 612, 614 and 617.

[288] Denis Arnold and Nigel Fortune (eds), *The New Monteverdi Companion* (London, 1985), pp.26 and 66.

[289] Anderson (1989), p.374.

[290] Anderson (1989), p.492.

[291] Cited in Jerrold (2006), p.79.

[292] Burney (1974), p.164. For the background to these comments, see John Rosselli, 'The Castrati as a Professional Group and a Social Phenomenon, 1550-1850', *Acta Musicologica*, lx/2 (May-August 1988), pp.143-179.

[293] Anderson (1989), p.300.

[294] Beverly Jerold, 'Fontenelle's Famous Question and Performance Standards of the Day', *College Music Symposium*, xliii (2003), pp.150-160 at 157.

[295] Burney (1773), i, p.93.

[296] Quoted in Peter Walls, *History, Imagination and the Performance of Music* (Woodbridge, 2003), pp.72-73. For all the other sorts of goings-on during opera performances in early 18th-century Italy, see Forment (2010) and Parrott (2022), pp.273-274.

[297] Cited in Le Huray (1967), p.52.

[298] John Vicars, *Gods arke overtopping the worlds waves* (London, 1646), p.184.

[299] Mireya Royo, 'Instruments in the liturgy of the Real Colegio Seminario de Corpus Christi, València, in the 17th century', *Early Music*, xlix/1 (February 2021), pp.35–48 at 37-38. For these documents, see also Greta Olson, 'Required early seventeenth-century performance practices at the Colegio-Seminario de Corpus Christi, Valencia', *Studies in Music*, xxi (1987), pp.10–38 and Mireya Royo, *La Capilla del Colegio del Patriarca: vida musical y pervivencia de las Danzas del Corpus de Juan Bautista Comes (1603–1706)*, PhD thesis (University of Oviedo, 2015).

[300] See, for example, the scoring allocations made by Augsburg cantor Adam Gumpelzhaimer (1559-1625) in copies of printed multi-choir works by Giovanni Gabrieli; Richard Charteris, 'Giovanni Gabrieli's *Sacrae Symphonae* (Venice, 1597); Some rediscovered partbooks with new evidence about performance practice', *Early Music*, xxiii/3 (August 1995), pp.487-498.

[301] A list is transcribed in Raymond Russell, rev Howard Schott, *The Harpsichord and Clavichord* (London, 2/1973), pp.155-160.

[302] Accessing consumables like replacement reeds and strings may sometimes have been a problem, particularly when they needed to be imported: a 1607 letter in the Hatfield House records notes that 'My Lord's instruments are unstrung, and … this half year none will come over'; Richard Charteris, 'Jacobean Musicians at Hatfield House, 1605-1613', *Royal Musical Association Research Chronicle*, xii (1974), pp.115-136 at 117.

[303] For the application of Georg Muffat's rules on bowing, see Walls (2003), pp.151-152; Corelli also demanded regular bowing (Parrott (2022), p.396). The study of later performance annotations has been undertaken by the CHASE (Collection of Historical Annotated String Editions) project, https://mhm.hud.ac.uk/chase.

[304] See the various options outlined by Italian theorists in Augusta Campagne and Elam Rotem, *Keyboard Accompaniment in Italy around 1600: Intabulations, Scores and Basso Continuo* (Basel, 2022).

[305] For a Restoration example from Oxford, see Knights (1990a) and Knights (1990b).

[306] Rebecca Herissone, *'To fill, forbear, or adorne': The Organ Accompaniment of Restoration Sacred Music* (Aldershot, 2006). John Morehen, 'Ornaments in organ scores' (unpublished essay, c.1968) even wonders whether the absence of keyboard ornaments in such scores might have meant that they 'were generally used as conductor's copies and that they were not actually used to play from'.

[307] Mace (1676), p.242; he is discussing the consort organ at this point.

[308] Strunk (1981), iii, p.62.

[309] None of the twenty or so surviving English virginals has a known institutional provenance, for example; see Donald H. Boalch, rev Charles Mould, *Makers of the Harpsichord and Clavichord, 1440-1840* (Oxford, 1995), now superseded by https://boalch.org.

[310] See Andrew Johnstone, "'As it was in the Beginning": Organ and Choir Pitch in Early Anglican Church Music', *Early Music*, xxxi/4 (November 2003), pp.506-525.

[311] Harrison (1963), p.167; there were three by 1531-32.

[312] Harrison (1963), p.160.

[313] Magnus Williamson, *The Eton Choirbook: Its Institutional and Historical Background*, DPhil thesis (University of Oxford, 1997), p.132 and David Force, *'A Holding, Uniting-Constant Friend': The Organ in Seventeenth-Century English Domestic Music*, PhD thesis (The Open University, 2019), p.99.

[314] Saunders (1997), pp.142-143.

[315] Beverly Jerold, 'Why Most *a cappella* Music Could Not Have Been Sung Unaccompanied', *The Choral Journal*, xl/7 (February 2000), pp.21-27. See also Parrott (2015), ch.16.

[316] Jerrold (2000), p.27: in 1784 'Christian Carl Rolle mentions that the singers of the papal chapel were accompanied by organ, but not instruments'.

[317] Wilson (1959), p.269.

[318] Johann Georg Albrechtsberger, ed Ignaz von Seyfried, trans Sabilla Novello, *J. G. Albrechtsberger's Collected Writings on Thorough-Bass, Harmony, and Composition, for Self-Instruction* [Vienna, 1826] (London, 1855), pp.254-256.

[319] See Elena Pons Capdevila, *Arranging the Canon: keyboard arrangements, publishing practices and the appropriation of musical classics, 1770-1810*, PhD thesis (Royal Holloway, 2017). The quality of such arrangements was variable, and that for Mozart's *Die Entführung aus dem Serail*, for example, was described in 1791 as having 'ruined' the work; Cliff Eisen, *New Mozart Documents* (London, 1991), p.41. The keyboard intabulation tradition was of course much older, but the extent to which such material served explicitly for rehearsal is not known. See Thomas Neal, 'Between Practice and Print: Performing Palestrina's *Missarum liber quartus* (1582) with Alessandro Nuvoloni's *Basso principale co'l soprano* (1610)', in *Marcello Mazzetti (ed), Basso Continuo is Italy: Sources, Pedagogy and Performance* (Turnhout, 2023), pp.105-139.

[320] Anderson (1989), p.199.

[321] Holman (2020), p.309.

[322] Donington (1989), p.291.

[323] Benjamin Jowett (trans), *The dialogues of Plato* (Oxford, 3/1892), p.484. For a discussion of the changing historical relationship between memory and notated text in the Middle Ages, see Clanchy (1993).

[324] Katherine Rundell, *Super-Infinite: The Transformations of John Donne* (London, 2022), p.223.

[325] For a discussion of the historical importance of memory to musicians, see Smith (2011), pp.15-18 and Boynton and Rice (2008), p.10.

[326] Robert M. Stevenson, *Music in Mexico: A Historical Survey* (New York, 1952), p.55.

[327] Parrott (2015), p.16.

[328] Jennifer Mishra, 'A Century of Memorization Pedagogy', *Journal of Historical Research in Music Education*, xxxii/1 (October 2010), pp.3-18.

[329] Wright (1978), p.304.

[330] Claude V. Palisca, *The Florentine Camerata: Documentary Studies and Translations* (New Haven, 1989), p.121.

[331] Anderson (1989), p.538.

[332] Mary Ellen Cavitt, 'Descriptive analysis of error correction in instrumental rehearsals', *Journal of Research in Music Education*, li/3 (2003), pp.218–230 at 228.

[333] Stevenson (1952), p.18.

[334] Yardley (2008), pp.61-62.

[335] Leach (2013), p.94.

[336] Cited in Smith (2011), p.136; see also p.138.

[337] Donington (1989), p.137.

[338] Sherr (1999), XIII, p.457.

[339] Lionnet (1987), p.7.

[340] Sherr (1999), XIII, pp.454-455.

[341] Our thanks to Kerry MacCarthy for these two references.

[342] Cited in Harnoncourt (1988), p.151.

[343] See Brian Crosby, 'A Service Sheet from June 1680', *The Musical Times*, lxxi/1648 (June 1980), pp.399-401.

[344] Francis Knights, 'Zechariah Buck of Norwich', *The Musical Times*, cxxxi/1764 (February 1990), pp.107-109. A short rehearsal preceded each 10 am Matins, with a much longer one before Evensong at 4 pm,

[345] Adolph Kielblock, *The Stage Fright or How to Face an Audience* (Boston, 1891).

[346] Andrew Steptoe, 'Stress, Coping and Stage Fright in Professional Musicians', *Psychology of Music*, xvii/1 (1989), pp.3-11. See also Christopher Taborsky, 'Musical Performance Anxiety: A Review of Literature', *Update: Applications of Research in Music Education*, xxvi/1 (2007), pp.15-25 and Raluca Matei and Jane Ginsborg, 'Music performance anxiety in classical musicians – what we know about what works', *BJPsych International*, xiv/2 (May 2017), pp.33-35.

[347] Quantz (1966), p.199. Duirng the 19th century, newspaper reviews did sometimes mention performance nerves, as in a review of the singer Enrico Tamberlik, 6 April 1850: 'he was exceedingly frightened and nervous'. Richard Bethell, *Vocal Traditions in Conflict* (Hebden Bridge, 2019), p.190.

[348] Sibylle Brosch and Wolfgang Pirsig, 'Stuttering in history and culture', *International Journal of Pediatric Otorhinolaryngology*, lix/2 (14 June 2001), pp.81-87.

[349] For music at court in earlier periods, see Stevens (1979), ch.11.

[350] Lionnet (1987), p.12.

[351] Lionnet (1987), p.11.

[352] Oliver Strunk, *Source Readings in Music History: I Antiquity and the Middle Ages* (London, 1981), pp.103 and 105.

[353] Strunk (1981), i, p.124.

[354] Harris (1938), p.131.

[355] Mould (2007), p.130.

[356] Poulin (1990), p.218.

[357] Anderson (1989), pp.315 and 339.

[358] Anderson (1989), p.449.

[359] Anderson (1989), pp.81-82 and 101.

[360] Anderson (1989), p.460. Burney even had a term for this, calling Madame Brillon in Paris an 'excellent sightswoman'; Burney (1974), p.19.

[361] Anderson (1989), pp.448-449.

[362] Anderson (1989), p.813.

[363] Johann Friedrich Köhler; in David and Mendel (1998), p.412.

[364] Forkel (1802), in David and Mendel (1998), p.435.

[365] Askold V. Smirnov, 'Johann Gottfried Wilhelm Palschau: reconstructing the composer's biography', *National Early Music Association Newsletter*, vi/1 (Spring 2022), pp.56-66 at 61.

[366] See, for example, Justine Sergent, Eric Zuck, Sean Terriah and Brennan MacDonald, 'Distributed Neural Network Underlying Musical Sight-Reading and Keyboard', *Science*, New Series, xxlvii/5066 (3 July 1992), pp.106-109; Thomas W. Goolsby, 'Eye Movement in Music Reading: Effects of Reading Ability, Notational Complexity, and Encounters', *Music Perception*, xii/1 (Fall, 1994), pp.77-96; Gary E. McPherson, 'Factors and Abilities Influencing Sightreading Skill in Music', *Journal of Research in Music Education*, xlii/3 (Autumn, 1994), pp.217-231; and Dneya Udtaisuk, *A Theoretical Model of Piano Sightplaying components*, dissertation (University of Missouri-Columbia, 2005).

[367] Morley (1597), p.1.

[368] Woodfill (1953), p.217.

[369] Strunk (1981), iii, p.71; Donington (1989), p.369, Strunk (1981), iii, p.61.

[370] William Byrd, *Psalmes, Songs, and Sonnets* (London, 1611).

[371] Burney (1935), ii, p.739.

[372] Oliver Strunk, *Source Readings in Music History: III The Baroque Era* (London, 1981), p.124.

[373] Arnold and Fortune (1985), pp.19 and 33.

[374] Walls (2003), pp.111-112.

[375] Mould (2007), p.51; Harrison (1963), p.171. Interestingly, the narrator of Karen Heenan's historical novel *A Wider World* (2021) is the very chorister called Robin from Wolsey's choir who was handed over to the Chapel Royal as the 'prize' in this contest (p.31). There is even a contemporary description of Robin's skills, as he was praised by composer William Cornysh for his 'sure and clean singing'; Mould (2007), p.51.

[376] Dana Gooley, *Fantasies of Improvisation: Free Playing in Nineteenth-Century Music* (Oxford, 2018), pp.101 and 103.

[377] William Shakespeare, *Troilus and Cressida*, Act v, scene 2.

[378] See Ernest Ferand, 'Improvised Vocal Counterpoint in the Late Renaissance and Early Baroque', *Annales Musicologiques*, iv (1956), pp.129-174, Wright (1978), Wegman (1996), Philippe Canguilhem, 'Improvisation as concept and musical practice in the fifteenth century', in Busse Berger and Rodin (2015), pp.149-163 and Massimiliano Guido (ed), *Studies in historical improvisation: from* Cantare super librum *to* Partimenti (London, 2019). Flynn (1995), p.188 describes how 'square-note' improvised singing could be part of an English singer's training.

[379] Wright (1978), pp.313-314.

[380] Wegman (1996), p.416.

[381] See Smith (2011), ch.3.

[382] Morley (1597), 'The Annotations' [n.p.].

[383] Saunders (1997), p.25.

[384] John Merbecke, *The Booke of Common Praier noted* (London, 1550).

[385] Anderson (1989), p.859.

[386] Eisen (1991), p.81.

[387] Anderson (1989), p.275.

[388] Anderson (1989), p.482.

[389] Anderson (1989), pp.807-808.

[390] Nicholas Kenyon, *The Life of Music* (New Haven and London, 2021), p.17.

[391] See Holman (2020), ch.8. Modern baton conducting techniques were strongly influenced by Wagner's example, and reinforced in modern times by Toscanini; see Chris Walton, *Richard Wagner's Essays on Conducting: A new Translation with Critical Commentary* (Rochester, 2021), and Haynes (2007), p.98.

[392] Reproduced in Ausoni (2009), p.221.

[393] Stras (2018), p.235.

[394] Holman (2020), p.20.

[395] Giorgio Vasari, trans Julia Conaway Bondanella and Peter Bondanella, *The Lives of the Artists* (Oxford, 1991), p.67.

[396] Reproduced in Alberto Ausoni, trans Stephen Sartarelli, *Music in Art* (Los Angeles, 2009), p.209.

[397] Venceslaus Philomathes, *Musicorum libri quattuor* (Vienna, 1512), Book 3, ch.1; translation courtesy of Tim Braithwaite.

[398] Laetitia Hawkins called this a 'paper-truncheon'; Holman (2020), p.90.

[399] Holman (2020), pp.89-90.

[400] Holman (2020), p.138, with the etching on 139.

[401] Holman (2020), p.140.

[402] Romain Rolland, *Adelphi Collected Works of Romain Rolland* (2020), ebook.

[403] Wright (1978), p.297.

[404] Rosand (1993), p.78.

[405] Holman (2020), pp.105-106.

[406] Burney (1974), p.203. See also Holman (2020), p.90 in reference to 'a desk among the performers' mentioned by John Hawkins.

[407] Cited by Jean-Paul C. Montagnier, 'Choirbooks and Musical Practice', in Jean-Paul C. Montagnier (ed), *The Polyphonic Mass in France, 1600–1780: The Evidence of the Printed Choirbooks* (Cambridge, 2017), p.34,

[408] Rosand (1993), p.83.

[409] Harris (1938), p.118.

[410] Henry Ellis (ed), *Original Letters, illustrative of English History* (London, 1824), i, p.189.

[411] Smith (2011), pp.5-6.

[412] Holman (2020), p.35.

[413] Eamonn O'Keeffe, *Musical Warriors: British Military Music and Musicians during the French Revolutionary and Napoleonic Wars*, DPhil thesis (University of Oxford, 2022), p.191. See also Trevor Herbert and Helen Barlow, *Music and the British Military in the Long Nineteenth Century* (New York, 2013).

[414] O'Keeffe (2022), pp.192-193.

[415] Edward R. Reilly, 'Quantz and the Transverse Flute: Some Aspects of His Practice and Thought regarding the Instrument', *Early Music*, xxv/3 (August 1997), pp.428-438 at 433.

[416] David and Mendel (1998), pp.92-93.

[417] See Lewis Lockwood, 'Strategies of music patronage in the fifteenth century: the *capella* of Ercole I d'Este', in Fenlon (1981), pp.227-248.

[418] John Mainwaring, *Memoirs of the Life of George Frederic Handel* (London, 1760), pp.112-113.

[419] William Shakespeare, *Othello*, Act i, scene 1.

[420] Woodfill (1953), p.151.

[421] Arnold and Fortune (1985), p.44.

[422] Brown (1969), p.34.

[423] Saunders (1997), p.64; Woodfill (1953), p.151.

[424] Wright (1981), pp.44-45.

[425] Mould (2007), p.56.

[426] Claudio Annibaldi, "'The singers of the said chapel are chaplains of the pope": some remarks on the papal chapel in early modern times', *Early Music*, xxxix/1 (February 2011), pp.15-24 at 16.

[427] Annibaldi (2011), p.17.

[428] Cited in Wegman (1996), p.429.

[429] Bowers (2014), p.274.

[430] Although, as Roger Bowers notes of early modern England, 'nobody was employed specifically as a composer': 'Obligation, agency, and *laissez-faire*: the promotion of polyphonic composition for the Church in fifteenth-century England', in Fenlon (1981), pp.1-19, at 10.

[431] The use of different 'key signatures' in the lower and higher voices, with Bb in the bass part only being common, was likely also well understood in terms of its harmonic implications for the higher voices; see Harrison (1963), pp.325-326. Later Renaissance composers became very expert in arranging the voice-leading to suggest *ficta* (or sometimes, to deliberately make sure was it impossible).

[432] Karol Berger, 'Musica Ficta', in Brown and Sadie (1989a), pp.107-125 at 107.

[433] Bray (1970), p.31.

[434] Morley (I597), p.88.

[435] It might also be asked whether all the accidentals in a score – some of which were merely notated *musica ficta* – were regarded as inviolate by performers.

[436] For a recorded example, see *The Eton Choirbook*, Huelgas Ensemble/Paul van Nevel, Deutsche Harmonia Mundi 88765408852 (2012).

[437] Howard Mayer Brown, 'Introduction', in Howard Mayer Brown and Stanley Sadie (eds), *Performance Practice: Music before 1600* (Basingstoke, 1989a), pp.147-166 at 148.

[438] Gareth R. K. Curtis, 'Brussels, Bibliothèque Royale MS. 5557, and the Texting of Dufay's "Ecce ancilla Domini" and "Ave regina celorum" Masses', *Acta Musicologica*, li/1 (January-June 1979), pp.73-86 at 75.

[439] Le Huray (1967), p.106. Similarly, in Lucca in 1557 a room was assigned for the municipal wind players to rehearse two hours each Wednesday and Saturday, in the morning or afternoon depending on the time of year; Parrott (2022), p.394.

[440] Woodfill (1953), p.44.

[441] Burney (1974), p.135.

[442] Robbins Landon (1959), p.207.

[443] Parrott (2022), p.394.

[444] Maul (2018), p.25.

[445] Michael Talbot, *Vivaldi* (London, 1979), p.21.

[446] Robbins Landon (1959), pp.9-10.

[447] Holman (2020), p.156.

[448] Holman (2020), p.290.

[449] Anderson (1989), p.517.

[450] Anderson (1989), p.692.

[451] Anderson (1989), p.897.

[452] Poulin (1990), pp.220-222.

[453] Parrott (2022), p.395.

[454] Quantz (1966), p.210.

[455] Donington (1989), p.193.

[456] Anderson (1989), p.281.

[457] Wilhelm Ehmann, 'Performance Practice of Bach's Motets', *American Choral Review*, xxix/3-4 (Summer and Fall 1987), pp.5-24 at 7.

[458] Donington (1989), p.485.

[459] Yardley (2008), p.55.

[460] Sherr (1999), IV, p.92.

[461] Cited in Kirkman (2020), p.52.

[462] Oliver Strunk, *Source Readings in Music History: II The Renaissance* (London, 1981), p.109.

[463] Jerold (2007), p.219.

[464] Cited in Jerold (2003), pp.155-156.

[465] For example, Nicola Vicentino, trans Maria Rika Maniates, *Ancient Music adapted to Modern Practice* (New Haven, 1996), p.301. For a wider discussion, see Smith (2011), pp.102-109.

[466] Harris (1938), p.117; Harrison (1963), pp.174-175; Wegman (1996), p.448. Note that 'foreign fashion' does not necessarily imply from another country, just that it was different.

[467] Wegman (1996), p.421.

[468] Mainwaring (1760), p.57.

[469] François Couperin, trans and ed Anna Linde, *L'art de toucher le clavecin* (Wiesbaden, [1961]), p.23.

[470] Quantz (1966), pp.298 and 115. See also Parrott (2022), pp.282-285.

[471] Wegman (1995), p.306.

[472] David R. M. Irving, 'Lully in Siam: music and diplomacy in French—Siamese cultural exchanges, 1680–1690', *Early Music*, xl/3 (August 2012), pp.393-420 at 420.

[473] Stras (2018), p.236.

[474] Jerold (2007), p.215.

[475] Poulin (1990), p.218.

[476] Holman (2020), p.277.

[477] Holman (2020), p.274. Puccini used the same trick in the waltz from *Il Tabarro* (1918).

[478] Oliver Strunk, *Source Readings in Music History: IV The Classic Era* (London, 1981), p.160.

[479] Harris (1938), p.119.

[480] Jerold (2000), p.24.

[481] Jerold (2000), p.23.

[482] Rolland (2020).

[483] Charles Butler, *The Principles of Musik* (London, 1636), p.103, cited in Parrott (2015), p.374.

[484] Jerold (2007), p.216.

[485] Jerold (2007), p.218.

[486] Jerold (2007), p.220.

[487] Jerold (2000), p.24.

[488] Giovanni Maria Artusi, *L'Artusi, overa delle imperfettioni della moderna musica* (Venice, 1600), cited in Stras (2018), p.316.

[489] Jerold (2007), p.217.

[490] Williamson (1997), p.332.

[491] David Knight, *The organs of Westminster Abbey and their music, 1240-1908*, PhD thesis (King's College, London, 2001), i, pp.25-26.

[492] Charteris (1974), p.125. See also Knights (2023) for known organ tuners in Britain before 1630.

[493] Stras (2018), p.300.

[494] Niwa (2005), p.27. Two other tuners appear in her records, Baldassar Ruytigheerts/Baldassare Tuytrighet in 1567-68 and 1586, and Marc Vincq, who died in mid-1577 (pp.32-33 and 30).

[495] Cited but without any specifics in Vincent J. Panetta, jr (trans and ed), *Treatise on Harpsichord Tuning by Jean Denis* (Cambridge, 1987), p.77n.

[496] Burney (1773), vol.1, p.33.

[497] Nicholas Mitchell, 'Choral and Instrumental Pitch in Church Music 1570-1620', *The Galpin Society Journal*, xlviii (March 1995), pp.13-32. See also Parrott (2022), pp.401-406.

[498] See the summary voice-range charts in Wulstan (1986), p.211-212. These can represent a considerable constraint on plausible modern options, as for example the very wide written choral compasses of nearly four octaves found in Tudor sacred music, or the nearly two-octave individual vocal ranges of Brumel's 12-part *Missa Et Ecca Terrae Motus*. Whether Eton College could ever have mustered 13 men each capable of singing the range of a 13th for Robert Wylkynson's canonic *Jesu autem transiens* in the Eton Choirbook is open to question; Harrison (1963), pp.413-415 suggests it was intended for Compline in Lent.

[499] Grant O'Brien, *Ruckers: A harpsichord and virginal building tradition* (Cambridge, 1990).

[500] Mary Oleskiewicz, 'The Flutes of Quantz: Their Construction and Performing Practice', *The Galpin Society Journal*, liii (April 2000), pp.201-220 at 217.

[501] Philip Brett, ed Joseph Kerman and Davitt Moroney, *William Byrd and his contemporaries: essays and a monograph* (Berkeley, 2007), ch.4. See also Caitlin Nolan, *Music of the Paston Household: Case Studies of Circulation and Adaptation in the Lutebook* GB-Lbl Add. MS 29247, PhD thesis (Newcastle University, 2023).

[502] The history of this ability is not well understood; for a modern medical study of the phenomenon, see Simon Leipold, Carina Klein and Lutz Jäncke, 'Musical Expertise Shapes Functional and Structural Brain Networks Independent of Absolute Pitch Ability', *The Journal of Neuroscience*, xli/11 (17 March 2021), pp.2496-2511.

[503] A few institutions banned organs, such as Syon Abbey: 'organs schal theu never have none'; Harrison (1963), p.193. See also Parrott (2015), p.82 on the instability of organ pitch. At Lincoln Cathedral in 1570, Byrd was instructed by the increasingly Puritan authorities to just give the organ note for the choir; this seems to have been to avoid him playing complex organ preludes for this purpose, so may have a specific context. John Harley, *William Byrd: Gentleman of the Chapel Royal* (Aldershot, 1999), p.39.

[504] During the English Civil War, organ pipes were mouth-blown when instruments were vandalized: at Exeter Cathedral, 'they brake down the organs, and taking two or three hundred pipes with them in a most scorneful and contemptuous manner, went up and downe the streets piping with them'; John Norman, *Box of Whistles: The History and Recent Development of Organ Case Design* (London, 2007), p.22.

[505] Early bells are discussed by Hugh Willmott and Adam Daubney, 'Of saints, sows or smiths? Copper-brazed iron handbells in Early Medieval England', *Archaeological Journal*, clxxvii/1 (2019), pp.336-355. Sets of pitched bells were known at the Tudor court ('Hire of 17 dozen bells', 1511); Stevens (1979), p.274. For bells at one particular institution, see Kirkman (2020), ch.5.

[506] Some brass instruments are also possible, but far less likely. A small recorder seems a suitable choice, as it could sound any note, was portable and sufficiently loud for all the musicians to hear.

[507] Later developed into the glass harmonica and glasschord.

[508] The pitched 'instrument' that actually led Pythagoras to his mathematical theory of harmonic relationships was the blacksmith's anvil, according to the *Manual of Harmonics* by Nicomachus of Gerasa (c.60-c.120); Kenyon (2021), p.18.

[509] Royo (2021), pp.40-41.

[510] Irving (2010), p.165; a *sochantre* (succentor) was to give the pitch for Psalms, introits and responsories, and all these regulations may have been following Spanish practice.

[511] Baron (2019), p.152.

[512] Wegman (1999), p.322.

[513] Donington (1989), p.156.

[514] Translation from James R. Anthony, *French Baroque Music from Beaujoyeulx to Rameau* (New York, 2/1978), p.261.

[515] Cited in Donington (1989), p.155.

[516] Cited in Franklin B. Zimmerman, 'Performance Practices and Rehearsal Techniques', *College Music Symposium*, ix (Fall 1969), pp.101-111 at 101.

[517] For an example of the very large literature on this contentious topic, see John Byrt, 'Inequality in Alessandro Scarlatti and Handel: a sequel', *Early Music*, xl/1 (February 2012), pp.91-110.

[518] Musical exceptions were clockwork instruments and automata, but these were very rare before the 19th century; see Arthur W. J. G. Ord-Hume, *Clockwork music: an illustrated history of mechanical musical instruments from the musical box to the pianola, from automaton lady virginal players to orchestrion* (London, 1973), David Fuller, 'An Introduction to Automatic Instruments', *Early Music*, xi/2 (April 1983), pp.164-166 and Beverly Jerold, 'A Re-Examination of Tempos Assigned to the Earl of Bute's Machine Organ', *Early Music*, xxx/4 (November 2002), pp.584-591.

[519] Strunk (1981), ii, pp.108-109.

[520] Donington (1989), p.410; these remarks were attributed to Purcell by the publisher.

[521] Quantz (1966), p.198.

[522] Poulin (1990), pp.220-221.

[523] Anderson (1989), p.311.

[524] Wilson (1959), p.98.

[525] Giustinian (1854), vol.1, p.80.

[526] Hogwood (1980), p.49.

[527] Quantz (1966), p.198.

[528] Philomathes (1512), Book 3, ch.1; translation courtesy of Tim Braithwaite.

[529] Cited in Jerold (2005), p.81.

[530] Oliver Strunk, *Source Readings in Music History: IV The Classic Era* (London, 1981), p.160.

[531] Mace (1676), p.81.

[532] McGee (1990), pp.58-59. See also Harold Copeman, *Singing in Latin: Or Pronunciation Explor'd* (Oxford, 2/1996), Alison Wray, 'The sound of Latin in England before and after the Reformation' and 'English pronunciation, c. 1500-c. 1625', in Morehen (1995), pp.74-89 and 90-108. For Tudor English pronunciation, see John Hart, *An Ortographie, conteyning the due order and reason, howe to write or paint thimage of mannes voice, most like to the life or nature* (London, 1569).

[533] Thomas Elyot, *The Book Named the Governor* (London, 1531).

[534] Nicholas Orme, *Tudor Children* (New Haven and London, 2023), p.160.

[535] Sherr (1999), XIV, p.607.

[536] Sherr (1999), XI, p.255.

[537] Parrott (2022), p.273.

[538] Anderson (1989), p.552.

[539] Brian Crosby, 'Private Concerts on Land and Water: The Musical Activities of the Sharp family, c.1750-c.1790', *Royal Musical Association Research Chronicle*, xxxiv (2001), pp.1-118 at 12.

[540] See Price (1981).

[541] Reproduced in Price (1981), p.43.

[542] Harris (1938), p.131.

[543] Jessie Childs, *God's Traitors: Terror & Faith in Elizabethan England* (London, 2014), p.136.

[544] Williams (1931), p.23.

[545] Cited in Saunders (1997), p.48.

[546] Benham (1977), p.43.

[547] Benham (1977), p.44-45. Proportional and length relationships are discussed on pp.43-47.

[548] However, note that a letter of Susan Burney describing an initial opera rehearsal in London in May 1780 has one of the soloists apologizing that there would be 'a great many Da Capos which will tire you!', implying rehearsal of the full content; Holman (2020), pp.273-274.

[549] Harrison (1963), p.316.

[550] See Francis Knights, Pablo Padilla and Mateo Rodríguez, '*O Splendor gloriae*: Taverner or Tye?', *Early Music*, xlix/4 (November 2021), pp.565-578 at 568-569 for a discussion of the difference between structured and loose imitation.

[551] See Francis Knights, 'Bach's *Orgelbüchlein* as a keyboard tutor', *National Early Music Association Newsletter*, vii/1 (Spring 2023), pp.21-34.

[552] See Walls (2003), ch.6 and Haynes (2007), pp.96-101.

[553] Jerold (2006), p.79.

[554] For an analytical exploration of some of Monteverdi's harmonic excursions, see Youyoung Kang, 'Monteverdi's Early Seventeenth-Century "Harmonic Progressions"', *Music Analysis*, xxx/2-3 (July-October 2011), pp.186-217.

[555] For example, the opening of the finale of the Symphony No.9.

[556] For some examples, see Crosby (1980) and Tudway (1706).

[557] Whether or not the weekly cycle of seven polyphonic lady-masses by Nicholas Ludford of c.1520-30 was part of a wider repertoire for this particular liturgy, they would likely soon have become familiar to the singers if performed many times each year, or even each week; see Harrison (1963), pp.285-287.

[558] What was done when a work broke down, or too many performers got lost for it to continue, must have varied depending on circumstance and tradition; the issue of a 'completed' liturgical text must have been a concern in sacred music.

[559] Harrison (1963), p.162.

[560] See Francis Knights, 'J. S. Bach's keyboard works: from performance to research', *Muzikologija*, xxxi (2021), pp.161-180.

Restoration of stringed keyboard musical instruments: harpsichords, spinets, clavichords, pianofortes and pianos

Jean-Claude Battault

Introduction

The restoration of stringed and keyboard musical instruments differs from the restoration of other artefacts in that they are subject to very important constraints that fatigue and weaken their structures. This may be further complicated if they carry decoration which may be sumptuous. This realization over the last few years, both in museum and private contexts, has called for their restoration to a state as close as possible to their original while avoiding destroying the historic organological elements that are essential to their study. The techniques and solutions in use have had to be adapted to safeguard their physical and historical integrity.

Stringed keyboard instruments - spinet, harpsichord, clavichord, pianoforte, piano - often with more or less elaborate decoration, are technical objects that come to life under the fingers of musicians to recreate the music of the past and present. In addition to the deterioration and/or fragility caused by the passage of time, structural stresses due to string tension contribute to their weakening, as does playing, which wears the many moving parts. The restoration operations to maintain them in a state of preservation, presentation or playability are therefore numerous, and require highly qualified personnel for both the decoration and the instrumental parts.

Composition of a stringed musical instrument with keyboard(s)

A musical instrument is made up first and foremost of a framed structure, which we will refer to as a case or cabinet (illus.1), composed of natural, painted, lacquered, veneered, carved or varnished wood. For the oldest instruments, this case, usually fitted with a lid, is placed on a stand decorated in the same style as the piece of furniture.

The instrumental part is made up of the resonant wooden soundboard glued to the case, the string-band, the keyboard(s), the action (plucking or striking the strings: jacks for harpsichords and spinet instruments, tangents for clavichords, hammers for pianofortes and pianos), the dampers, the ancillary sound devices (lute, celeste, bassoon*, una corda* etc), as well as the stop levers, knee levers and pedals that operate them.

Illus.1 Walnut veneered case, copy of a Friederici clavichord, Géra (1773) by Matthieu Vion (2009). Photos: all © Jean-Claude Battault unless indicated

Condition and damage most frequently observed

As mentioned above, these instruments are subjected to stresses due to the strings: for harpsichords, just under a ton; for pianofortes from the late 18th and early 19th centuries, from one to two tons or more; and about twenty tons for modern pianos. This leads to fatigue of the structure and resonant elements, resulting in twisted cases, detachment of the joints between the ribs and the hitchpin rails where the strings are attached, and deformation and/or fracture of the soundboards due to the pressure (load) of the strings on the bridge(s). These structural accidents can alter the decoration, causing loss of adhesion of the paint layers or fractures in the case veneers, for example. Moving parts such as keyboards, jacks, hammers and dampers are subject to wear and tear due to intensive use, which eventually leads to inaccuracies when playing.

Very often, instruments have been repaired using the invasive techniques and methods of the past, accelerating their deterioration over time. However, to qualify this statement, there can be respectful repairs and, *a contrario*, unjustified restorations. Finally, we note that some instruments, notably harpsichords, may have had different decoration superimposed over time.

Illus.2 Vincent Tibaut harpsichord, Toulouse (1691), Musée de la Musique, E.977.11.1. The state when discovered. Photo: unknown

Instruments can come to us in different states:

- original condition: no work has been carried out since the instrument was built. The instrument may be in good general condition, with little or no deterioration over time (illus.2);
- modified condition: repairs, *ravalements* and changes in decoration indicate that the instruments have been maintained in playing condition over a long period (illus.3);
- degraded condition: instruments have suffered physical damage, sometimes due to poor initial design, inappropriate alterations and/or repairs etc. (illus.4 and 5).

Conservation, presentation, playing

There are several types of intervention: conservation state, presentation state and playing condition. Restorations can be carried out at the request of institutions (public sphere) or private owners (private sphere). Restorations carried out in the public sector are generally to conservation and/or presentation state. Depending on the specialties and materials involved, there can be a wide range of interventions, both on furniture and on instrumental parts. They require good coordination between the various restorers, to ensure that the work protocols of some do not interfere with those of others. When the object is to be displayed, it may be necessary to create specific supports or protection to compensate for the fragility of certain parts, such as lids or stands.

Illus.3 Ioannes Couchet harpsichord, Antwerp (1652), ravalement in France in 1701, Musée de la Musique, E.2003.6.1

Illus.4 Pascal Taskin harpsichord, Paris, Museum für Kunst und Gewerbe, Hamburg, inv. 2000-532

Illus.5 Taskin harpsichord: details of the jacks, with multiple modifications

In rare cases, an instrument belonging to the public domain may be restored to playing condition. This usually occurs in the context of musicological and organological research programmes requiring the playing of an old instrument, of which no copy or similar old instrument exists. In this case, an instrument restorer intervenes beforehand if the instrument shows structural disorders, and then, after the restoration of the furniture aspect, to put it into playable condition. This work is not without risk, as the stresses on the structures caused by string tension are enormous.

In the vast majority of cases, restorations in the private sector are to playing condition, which more or less repeat the operations carried out in the public sector.

Issues and questions

Restoring an old instrument of any kind raises a host of questions, some of which are difficult to answer. We may find ourselves faced with an incomplete instrument, some parts of which will have to be reconstituted. Searches in public or private collections for a similar instrument that could serve as a model sometimes prove fruitless. Documentary sources (musical iconography, texts, patents etc) can in some cases provide information that partly compensates for the absence of material sources.

One of the pitfalls faced by restorers is the loss of know-how. For example, the manufacture of felt piano hammer fittings as made by their inventor Jean-Henri Pape (1789-1875) is currently impossible, despite knowledge of the patent registered in 1826. Certain specific tools and machines are also lacking. It is therefore necessary to make them from rare models that have been preserved. For example, a 19th-century hammer covering machine has been reconstructed from a demonstration model (illus.6) and an incomplete machine in the Musée de la Musique in Paris. The tuning hammers used on modern pianos bear no resemblance to those of the 18th and 19th centuries, and it is therefore necessary to make them identical to the original ones that have been preserved.

Illus.6 Model of a hammer covering machine, Pinet factory, Paris (end of the 19th century), Musée de la Musique, E.977.1.2

The disappearance of certain types of wood, such as Cuban mahogany and Rio rosewood, over-exploited in past centuries, whose veneers decorated the vast majority of 19th-century pianos, is forcing some restorers to recycle elements found on instruments that are of little interest and/or too damaged. The ban on the use of certain materials, such as ivory, which were used as natural-note key coverings in the keyboards of all pianos of the 19th and first half of the 20th centuries, is a major obstacle to restoration work.

Faced with an instrument whose history and condition are particularly complex, the project of its restoration raises several questions:

- Can it be restored, and to what extent?
- To what condition should it be restored: original or modified?
- Should it be de-restored to start again on a reliable historical and technical basis?
- Should and can the instrument be returned to playing condition?

In the latter case, it is illusory to think that the sound of a restored early musical instrument (and this is true for all instrumental families) is identical to that of the time of its manufacture. After restoration, the sound is that of an instrument that has aged, that has often been repaired several times, and that has sometimes been kept in extreme climatic and material conditions. The original regulation is generally lost, and restoring an instrument to playing condition is always a set of compromises that reflect the vision of the restorer who restored it and the musician who plays it. But this new playing state

makes it possible to apprehend the technical limits of the instrument and how to approach the keyboard, to better render and understand the music for which it was designed, and to rediscover through it the sound ambiance specific to its era.

Preliminary studies and preparation prior to restoration

Restoring an instrument that must withstand several hundred kilogrammes, or even several tons, of tension requires extremely meticulous preparation, starting with the search for similar instruments in museums or private collections to compare them and check whether they are in original or modified condition. This is why it is so important to keep old instruments in near-original condition, so that they can serve as references for reconstituting lost elements on those to be restored. These preliminary examinations enable us to understand the instrument's history, the modifications and repairs it has undergone, determine its reference pitch and decide whether or not it can be restored to playing condition. As mentioned above, archival research including historical testimonials, technical explanations, patents, manufacturing and tuning methods etc, can shed light on certain unanswered questions.

A detailed condition report on the case structure, its decoration and the instrumental part must be drawn up, to establish a set of specifications including the various interventions required by speciality. This document must consider the restitution of forbidden or lost materials.

Particular attention must be paid to the string plan, which determines the stresses on the instrument and its musicality. Several manufacturers offer historically-drawn strings whose qualities are close to those found on original instruments. However, it is often necessary to make compromises between the string gauges sometimes marked on the instruments and those finally chosen, to limit the tensions exerted, so as not to over-stress the case while maintaining sound qualities. Then there is the problem of pitch. We now have several standardized pitches: A392 or 415 for the oldest instruments, A430 or 440 for the most recent. However, from the 16th to the 19th century, pitch varied from city to city and country to country, sometimes quite widely;[1] musical instruments were therefore made according to the local reference pitches. To play in today's ensembles, instruments need to be tuned to modern standard pitch, which means even greater compromises in the choice of strings and their tensions.

The leathers and felts that once covered hammer heads were much less dense than those used today. Their replacements must therefore be meticulously studied, as they condition the resulting sound. Similarly, the feathers from which the quill plectra used on spinet and harpsichord jacks are cut must possess qualities combining stiffness and suppleness, which are difficult to find in those from unprotected birds.

In some cases, it makes more sense to replace parts that are too damaged or very close to the original state with a facsimile copy. This solution is particularly well-suited to mechanical parts (registers, jacks, hammers, dampers, ancillary stops) that have

deteriorated or are missing, and which are rebuilt identically. It preserves the old parts, which receive a conservation intervention, and guarantees musicians the reliability of the mechanics, allowing them to play without constraint.

Taking this line of reasoning to the extreme, if the old instrument is too degraded or in such an original state that intervention would alter it, it may be decided to make a new instrument, a copy of the old one (illus.7). It is interesting to note that an old instrument was originally new. We can therefore assume that the music played on a copy is more 'historically informed' than that played on an old instrument that has been restored many times.

Illus.7 Copy of Vincent Tibaut harpsichord, Toulouse (1691) by Emile Jobin, Boissy l'Aillerie (1994)

Case studies

1. Anonymous harpsichord, France (17th century), Musée de la Musique, E.996.33.1

This instrument (illus.8) was discovered in a house near Lyon. It features elements characteristic of 17th century French harpsichord-making, such as sculptured key-fronts in the form of a three-lobed arcade, while the soundboard shows Italian influences (moulded bridges, parchment rose) and Flemish influences (painted decoration on the soundboard). The exterior decoration of the case and stand in imitation Chinese lacquer, inlaid with mother-of-pearl, is identical to that found on certain cabinets, suggesting a workshop that specialized in this type of decoration. Organologically speaking, its internal structure is unusual, the soundboard bracing resembling that of a lute rather than a harpsichord.

Illus. 8 Anonymous harpsichord, France (17th century), Musée de la Musique, E.996.33.1

It arrived in exceptional, near-original condition. Most of the jacks were still present, some with feather plectra and cloth dampers, and old string fragments remained around the tuning pins. The exterior decoration was little damaged, although there was a slight opacity in the lacquer. The stand, however, showed numerous worm-holes, and there were missing areas on the lower parts of the legs. Also, two keys on the upper manual, as well as two ivory buttons on the keyboard blocks, were missing.

In view of its exceptional condition and its historical and organological importance, it was decided to return it to display condition unstrung. The old jacks and string remains were removed and preserved, as was a piece of the rose that had fallen into the instrument.

Restoration required a team of restorers specialized in the materials making up the instrument: treatment and consolidation of the stand, cleaning of the lacquer decoration and illusionist reintegration of the missing mother-of-pearl, consolidation of the rose and intervention on the painted vellum soundboard surround, reconstitution of the two missing ivory buttons, preparation for presentation of the instrumental part with the creation of the two missing keys and the jackrail in facsimile of that on a French harpsichord in the Musée de la Musique collection. Finally, the presentation of the instrument with the lid open required the fabrication of a support to show it as it must have looked in the 17th century.

2. Clavichord by Christian Gottfried Friederici, Gera (1773), Musée de la Musique, E.998.8.1

The instrument, whose maker was unknown when it arrived at the museum, is representative of the large unfretted clavichords built in Thuringia in the 18th century. Its untouched condition makes it an important organological document (illus.9).

Illus. 9 Friederici clavichord, Gera (1773), Musée de la Musique, E.998.8.1

When it arrived at the museum, the walnut-veneered cabinet showed numerous scratches and various marks. The soundboard was cracked and displaced, and its roses were very dirty and damaged, ready to fall into the instrument.

Restoring it to playable condition would have required extensive work, which would have destroyed some of the organological data. It was therefore decided to present the instrument in its original state, while preserving the natural ageing of the surface layers, which was not detrimental to the conservation of the instrument, i.e. with as little intervention as possible to its external appearance. The strings found in the instrument were removed and placed in storage. Restoration of the roses required removal of the soundboard so that they could be cleaned and consolidated by a parchment restorer. With the soundboard removed, the signature written in pencil on the bottom board was discovered. The cracks on the soundboard were consolidated using small blocks glued to the underside rather than shims, which would have required the removal of material from the edges of the cracks (illus.10). The keyboard was cleaned and levelled. After re-fixing the roses and gluing the soundboard back into the instrument, new strings, identical to the one found and preserved, were installed without putting the strings under tension to avoid fatiguing the structure.

Illus. 10 Friederici clavichord: detail of the underside of the soundboard after restoration

3. Harpsichord by Andreas II Ruckers-Pascal Taskin, Antwerp-Paris (1646-1780), Musée de la Musique, E.979.2.1

This magnificent Flemish instrument (illus.11), rebuilt in the 18th century, has been known since the 19th century and has been part of several prestigious private collections, including those of writer and art historian Paul Eudel (1837-1911) and Countess Geneviève Thibault de Chambure (1902-1975), musicologist and director of the Musée instrumental du Conservatoire national de musique de Paris between 1961 and 1971. It was put into playing condition in 1881 by harpsichord maker Louis Tomasini and played in 1889 by Louis Diémer (1843-1919), then restored again in 1972 by harpsichordist and restorer Hubert Bédard (1933-1989).

Illus. 11 Andreas Ruckers harpsichord, Antwerp (1646), rebuilt by Pascal Taskin, Paris (1780), Musée de la Musique, E.979.2.1

In 1990, the instrument was still in playable condition, but the action was showing signs of wear. The old jacks were still in the instrument, sliding in registers with degraded leathers and enlarged housings, making the attack of the plectra on the strings imprecise. This observation led to the decision to maintain the instrument in playable condition by maintaining the old jacks and upper registers in a state of preservation and making a facsimile of these mechanical elements. The restoration involved cleaning and consolidating the decor where necessary, overhauling and aligning the keyboards, and making new jacks and registers identical to the originals. Existing strings were removed and stored. A new stringing was calculated for the pitch A415, based on the gauges present on the instrument, which was re-strung with strings drawn in a historically informed way. Quill plectra were fitted to the jacks, followed by tuning and voicing.

A further overhaul of the instrument was carried out in 2019, consisting mainly in the replacement of the 1994 jacks, which were too heavy compared with the originals, with new lighter facsimiles.

4. Joseph Brodmann piano, Vienna (1814), Musée de la Musique, E.982.6.1

This piano was acquired by the museum at a public auction in 1982, as it is representative of the great Viennese piano-making school of the early 19th century. It was in exceptional condition, despite some damage (illus.12).

The cabinetwork was in used condition, with some lifting and missing mahogany veneer. The lyre, the cross-strut between the two front legs and the pedals were missing, but the action parts (keyboard, hammers, dampers) were in original condition and only slightly damaged.

After careful examination, it was finally decided to restore the instrument to playable condition, but to avoid the action suffering from a haphazard restoration that could have lost important organological information, a facsimile of the keyboard, hammers and dampers was made from the originals, which were placed in reserve and preserved without intervention (illus.13).

The casework has been restored. The missing parts were copied from a similar original instrument by the same maker. The most delicate part of the action copy was the meticulous choice of leathers for the new hammer coverings, and the tensions applied to them, in order to respect those of the originals. The instrument was tuned to A430, close to the Viennese pitch used in the 1810s, which was around A435.[2]

Illus. 12 Brodmann grand piano, Vienne (1814), musée de la Musique, E.982.6.1

Illus.13 Brodmann grand piano: detail of the original hammers

5. Pleyel piano, Paris (1842), Musée de la Musique, E.991.16.1

The Musée de la Musique houses the piano lent to Frédéric Chopin (1810-1849) by the Pleyel company between 1839 and 1841. It is no longer in its original condition, having been restored in the 1920s by the Pleyel firm in the spirit of that period (illus.14).

In 1991, the Musée de la Musique decided to acquire a similar piano in a good state of preservation, so as not to touch the Chopin piano, which can now be considered a historical testimony. As soon as it arrived at the museum, it was minimally restored to playable condition. The original hammers, covered with felt and leather, were left in the instrument, which was played for a time as it was (illus.15). In order to avoid further damage to these important parts of the instrument, it was decided to replace them with facsimiles, leaving in place the original keyboard which was in good condition. The old strings present in the instrument have not been removed and have been tuned to the pitch A430, in accordance with that used in Paris in the mid-19th century.

Illus. 14 Pleyel grand piano, Paris (1842), Musée de la Musique, E.991.16.1. Photo: © Claude Germain

Illus. 15 Pleyel grand piano: detail of an original hammer with felt underlay and chamois leather top layer

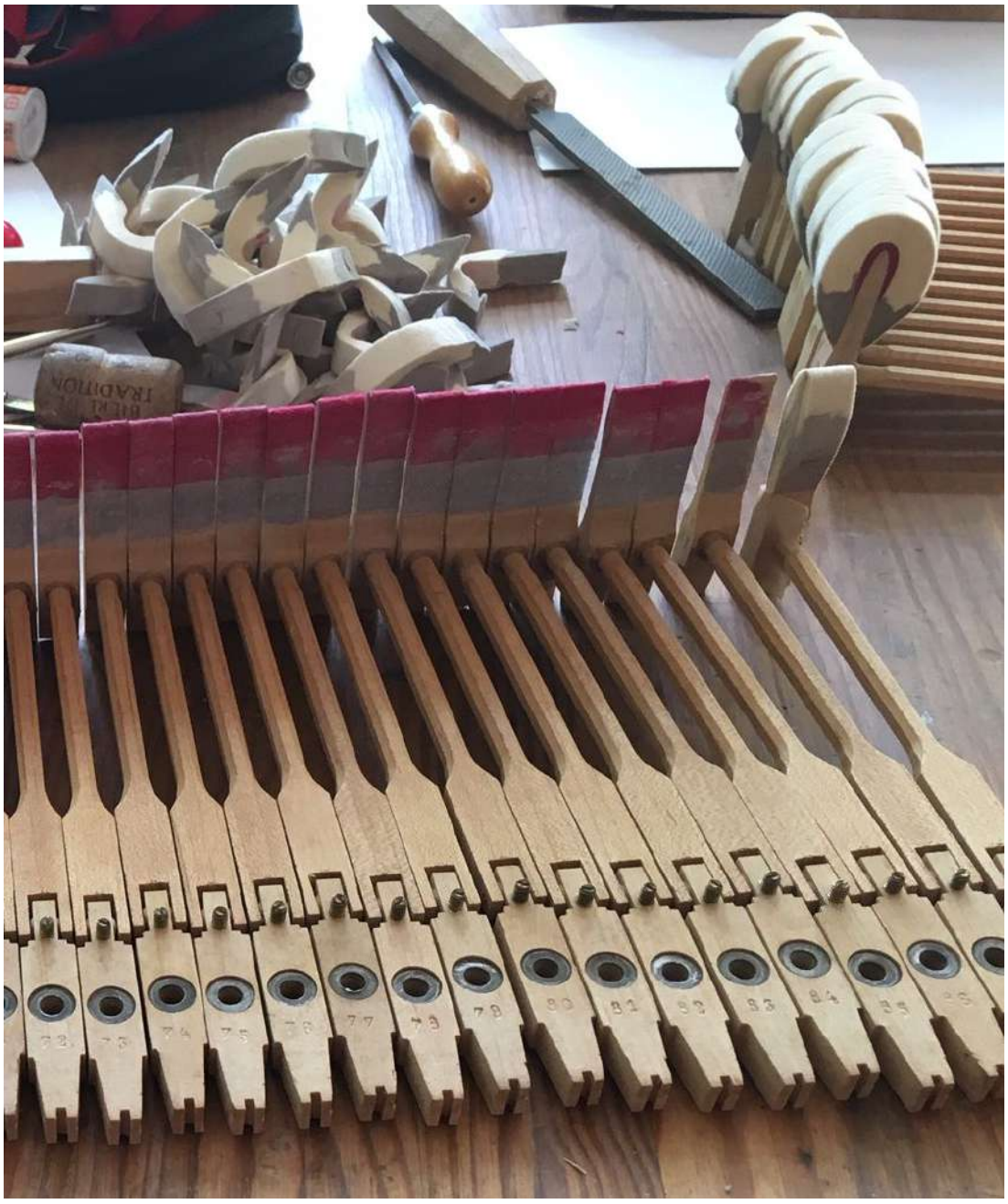
6. Gaveau piano, Paris (1929), Musée de la Musique, E.2015.11.1

This instrument (illus.16) was donated to the Musée de la Musique by the family of Catalan composer, pianist and teacher Gonçal Tintorer (1890-1969). Based in the South-West of France, he founded the Amis de la Musique de Pau, a concert society, in 1947. In 1952, the latter bought the instrument from the Gaveau company to play at the society's concerts. Some of the great pianists who came to play in Pau applied their signatures to the piano's cast-iron frame.

Illus. 16 Gaveau grand piano, Paris (1929), Musée de la Musique, E.2015.11.1. Photo: © Claude Germain

When it arrived at the museum, the instrument bore the marks of intensive concert use, but it was obvious that it had not been played for some time: the case, with its stained wax finish, was fatigued, the ivory-covered keyboard, internal bracing, metal frame and soundboard were extremely dusty. The hammers had been re-covered at some indefinite time and voiced by sanding several times since. All the steel strings had also been replaced.

Despite its apparent state of neglect, the musical interest of this piano called for it to be restored to playing condition, while preserving the traces of its past life. The case was therefore cleaned and consolidated, while retaining its patina, with the application of a black-stained wax finish. The metal frame was cleaned, taking care not to erase the signatures. The keyboard was dusted and levelled. The felt coverings of the hammer heads were removed and the hammers sent to a specialist for re-covering, using a medium-hard felt like that used in the 1930s (illus.17). The dampers were also replaced. All removed felts were placed in storage. The strings were kept in the instrument and tuned to A440. A general adjustment of the action and voicing of the hammers completed the restoration.



Illus. 17 Gaveau grand piano: preparing hammers for new felt coverings

Conclusions

The notion of restoring keyboard musical instruments in a museum setting has evolved considerably over the last thirty years. Priority is now given to safeguarding all the technical and documentary information they contain, rather than to restoring them to a playing condition that may be ethically questionable. Like manuscript scores, early instruments are now regarded as objects that help us to understand and recreate the music of the past.

This attitude is beginning to be reflected in the private sphere. Some owners, advised by restorers who have worked for museums, no longer hesitate to take their recommendations into account when restoring an instrument to better preserve its value, for example by replacing certain old elements with copies and conserving the parts which have been removed.

Instrument restoration has of course benefited from advances in intervention protocols and the use of techniques and tools little used in instrument making. The future is likely to bring even greater advances in our knowledge of musical instruments. Some recent techniques, such as X-ray tomography and 3D scanning, are already being used to study them, but we have not yet seen all the possibilities they have to offer, particularly in terms of restoration assistance.

Jean-Claude Battault Curator-restorer. After studying science and music, he turned to harpsichord making. In 1986, he joined Claude Mercier-Ythier's Paris workshop, where he restored several antique harpsichords and pianofortes. In 1990, he joined the team at the instrumental museum of the Conservatoire National Supérieur de Musique et de Danse in Paris, as part of a research project on three-dimensional digital surveys of early musical instruments. At the same time, he helped prepare the collections for presentation in the future Musée de la Musique, which was inaugurated in 1997. Since then, as part of the museum's mission, he has been studying and documenting keyboard instruments held in French and foreign collections. He is regularly invited to give lectures at international symposia and is the author or co-author of articles devoted to these instruments.

This article first appeared in the journal *Conservation-restauration de biens culturels*.[3] NEMA kindly thanks the Association des restaurateurs d'art et d'archéologie de formation universitaire for permission to publish this translation by the author.

Further reading

Historic books

Giorgo Armellino, *Manuel simplifié de l'accordeur ou l'art d'accorder les pianos mis à la portée de tout le monde* (Paris, 1855)

M. G. Huberson, *L'Accordeur et du réparateur de pianos: traitant de la facture des pianos anciens et modernes et de la réparation de leur mécanisme* (Paris, 1891)

Claude Montal, *L'Art d'accorder soi-même son piano* (Paris, 1836)

E. Nugues, H. C. Pouget and C. Martin, *L'Accordeur de pianos et harmoniums. Traitant de l'accord et de la réparation de ces instruments, contenant en outre des principes élémentaires: manuel pratique* (Paris, 1902)

Writings on restoration

Florence Abondance, *Restauration des instruments de musique* (Fribourg, 1981)

Robert L. Barclay (ed), *The Care of historic musical instruments* (Edinburgh, 1997)

_____, *The Preservation and use of historic musical instruments* (London, 2004)

Jean-Claude Battault, 'Conservation et jeu des instruments de musique anciens: problématique et solutions', in *Instruments pour demain: conservation & restauration des instruments de musique: 9es journées d'études de la section française de l'Institut international de conservation* (Limoges, 2000), pp.161-169

_____, 'Quelques réflexions sur la notion d'authenticité des pianos anciens: une autre quête du Graal', in Jean-Jacques Eigeldinger (ed), *Interpréter Chopin, actes du colloque des 25 et 26 mai 2005* (Paris, 2006), pp.49-57

_____, 'Restauration des instruments de musique à cordes et à claviers: clavecins, épinettes, clavicordes, pianofortes, pianos', *Conservation-restauration de biens culturels*, xl (2023), pp.49-68.

Stephen Birkett and Paul Poletti, 'Reproduction of authentic historical soft iron wire for musical instruments', in Thomas Steiner (ed), *Instruments à claviers: expressivité et flexibilité sonore* (Bern, 2004), pp.259-272

David Blanchfield and John Watson, 'Theory and practice in the conservation of musical instruments', *Journal of the Violin Society of America*, xvi/2 (1999), pp.11-24

Christopher Clarke, 'Le cuir dans les garnitures de marteaux: présentation de la problématique', in *La facture du piano en France entre 1780 et 1820, actes de la journée d'étude du 27 février 2006* (Paris, 2006), pp.4-10

Bruce Haynes, *A History of performing pitch: the story of 'A'* (Oxford, 2002)

Anne Houssay, 'Limites des méthodes de conservation et restauration des bois applicables aux instruments de musique', in *Le bois: instrument du patrimoine musical: actes de la journée d'étude du 29 mai 2009* (Paris, 2009), pp.124-135

Maurice de Keghel, *Traité général de la fabrication des colles, des glutinants et matières d'apprêts* (Paris, 1926)

Michael Latcham, *The Stringing, scaling and pitch of Hammerflügel built in the southern German and Viennese tradition*, 2 vols. (Unterwössen, 2000)

Andre Larson, 'Musical instruments museum, preserving the past, confronting the future', *Journal of the Violin Society of America*, xvi/2 (1999), pp.25-65

Alain Moysan, 'La restauration des fortepianos, sauvetage, illusions?: inventaire et analyse des moyens dont disposent les restaurateurs ainsi que de leurs besoins', in *Instruments pour demain: conservation & restauration des instruments de musique: 9es journées d'études de la section française de l'Institut international de conservation* (Limoges, 2000), pp.211-218

_____, *La restauration des pianos anciens des origines à 1850* (Paris, 2009)

Stephen Paulello, 'La réalisation de cordes pour instruments anciens', in *La facture du piano en France entre 1780 et 1820, actes de la journée d'étude du 27 février 2006* (Paris, 2006), pp.43-48

Stewart Pollens, *The Manual of musical instrument conservation* (Cambridge, 2015)

Malcolm Rose and David Law, *A Handbook of historical stringing practice for keyboard instruments: 1671-1856* (Lewes and Long Compton, 1991)

Stéphane Vaiedelich, Christine Laloue, Joël Frelat and Jean-Claude Battault, 'Maintenir en état de jeu: le cas du clavecin de I. Couchet Anvers 1652', *Technè*, xxv (2007), pp.74-78

Notes

[1] Bruce Haynes, *A History of performing pitch: the story of 'A'* (Oxford, 2002).

[2] Haynes (2002), pp.338-341.

[3] Jean-Claude Battault, 'Restauration des instruments de musique à cordes et à claviers: clavecins, épinettes, clavicordes, pianofortes, pianos', *Conservation-restauration de biens culturels*, xl (2023), pp.49-68.

The Significance of Liszt's 1867 Chickering Concert Grand

Aurel Betz

The *Magnificent Chickering* was one of Franz Liszt's lifetime favourites. Here, I describe the novel model identification, history and background of Liszt's grand piano, #30540, displayed as an exhibit in the Budapest Liszt Museum, and the conservative restoration of the only other surviving technically identical specimen from the same year, #31605. The model 'Scale 33B' (illus.1) was one of the world's earliest modern pianos, arguably beating its arch-rival Steinway in recognition at the 1867 Paris World Fair. A later 1875 version of the 33B was chosen by Liszt's student, the eminent conductor and pianist Hans von Bülow, over Steinway's *Centennial Grand* for the world premiere of Tchaikovsky's 1st and Grieg's piano concertos. #31605 (an unspoiled original) has benefited from an unprecedented three-year restoration effort, documented in an extensive YouTube video series of more than 60 episodes.[1] Several newly developed vanguard conservation techniques were combined, including external re-crowning of the original soundboard and custom rebuilding of the embedded pinblock. The all-original action, hammers, felts and strings were restored or, wherever necessary, reproduced following the originals with uncompromising fidelity. Now, the lost romantic sound, touch and look of one of America's legendary 'stage battleships' can be rediscovered.

Illus.1 The original Chickering 33B fallboard decal

Chickering at the 1867 Paris World Exposition

The 1867 Paris World Fair (illus.2) was an event visited by 15 million people. Western nations proudly competed with their latest inventions, many based on novel steel- and cast iron technology. The arch-rivals Chickering and Steinway both caused a sensation with their concert grands.[2] Their stronger one-piece cast iron plates could hold higher string tensions, which synergized with a novel large-crown soundboard configuration. This 'American System' of piano engineering outshone all European competitors, with longer sustain and higher volumes. Crucially, these instruments could be better heard in the

increasingly large concert halls and through romantic orchestras, which were themselves getting louder due to a growing number of players, more brass instruments and a switch from gut to steel strings.

Illus.2 Overview of the exposition site along the Seine River, with grandiose steel architecture

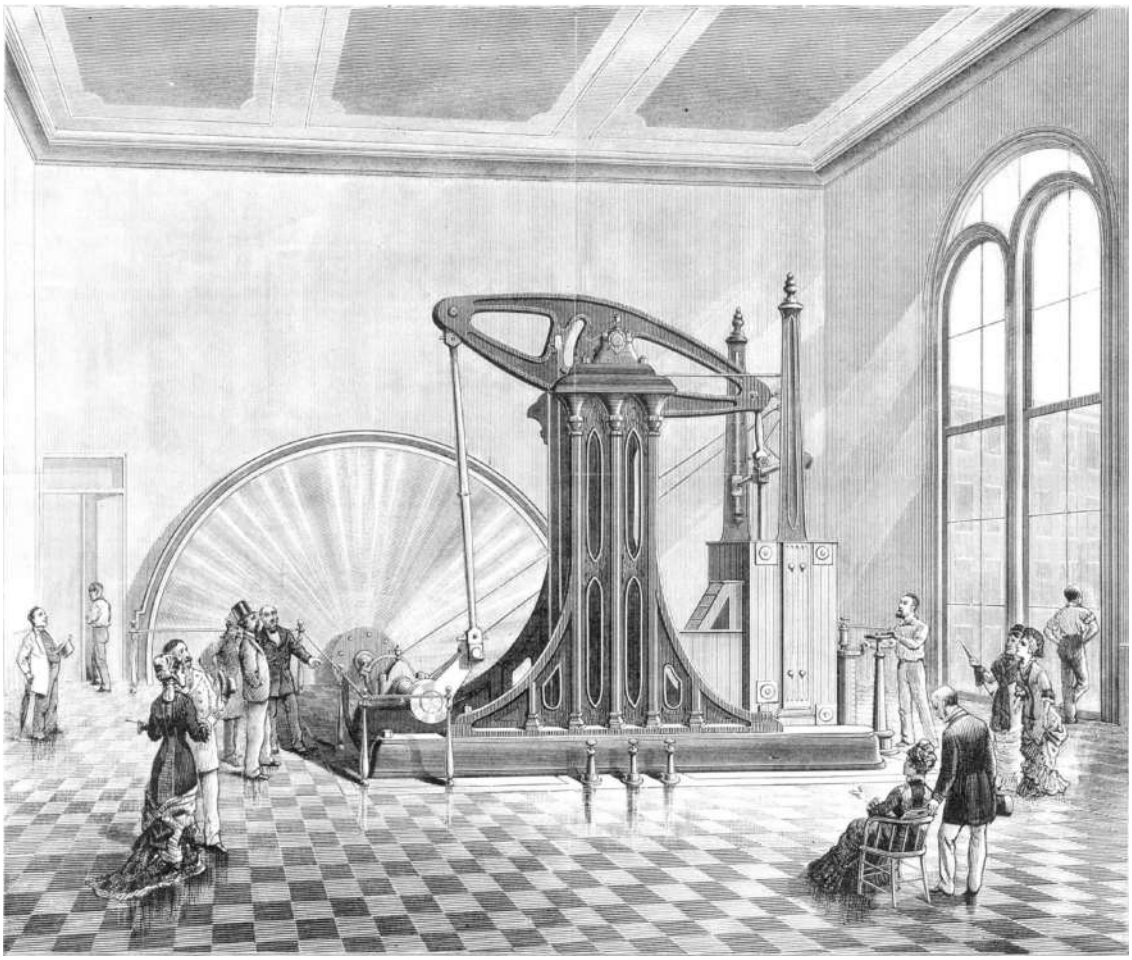
The public, the press, and the official jury soon became engrossed in a passionate debate over which of the two American firms was the better one. In the end, unlike in the years to come, when Steinway would eventually win the 'Piano Wars' (illus.3), it was Chickering who - after a tie with gold medals - scored a narrow victory in this great publicity battle. It was the only piano maker, and one of only a handful of competitors across all disciplines, to receive the 'Legion of Honor'. This award, introduced by Napoleon I and then bestowed by Napoleon III, was the honorary knighthood and the crown jewel of awards, with worldwide recognition. Steinway angrily launched a populist press campaign (e, f), even accusing its rival of bribing the jury. Yet Chickering elegantly landed the knock-out blow by delivering its instrument to Franz Liszt, the world's most celebrated pianist, immediately receiving his enthusiastic and lasting approval.[3]

Advances in steel technology benefiting the music industry were, in fact, an offshoot of the arms industry. Chickering had patented the full cast iron plate already in 1843, taking advantage of the local Bostonian foundry Alder specializing in cannon production.[4] Similarly, modern steel used in German pianos was developed in the production of the most powerful cannons of the time, presented by Prussia. In the ensuing Franco-Prussian war of 1870-71, they became a deciding factor, outweighing the advantage of the faster, most accurate rifle invented by Chassepot (also cited by Liszt).[5] France had to pay large reparations for starting and then losing the war. This money fuelled an economic boom in the newly minted German nation (the 'Founder Years'), which again helped the German piano industry. Firms like Bechstein and Blüthner quickly adopted the 'American System'. Until WWI, with a concert grand costing as much as an average house, the wealthy upper and middle classes of Europe, and especially of the British Empire, were the biggest customers for these instruments.

Illus.3 'Piano mania'; Harper's Weekly *(10 August 1867)*

High-Tech in the Gilded Age: the Chickering piano factory

In 1854, Chickering opened a new steam-powered factory, which, after the Capitol, was the second biggest edifice in the nation. Its operations incorporated cutting-edge technology described in *Scientific American* in 1852, displayed at the 1867 Paris World Fair, and again in this 1878 issue. Still before the advent of electric tools, a giant coal-fired boiler produced steam pressure, driving a huge steam engine and pump (illus.4) displayed in an exhibition room. It powered specialized machinery connected via a complex network of building-wide steam pipes, conveyor belts and differential gears to allow variable speeds. Such machines were used by many of the more than 800 workers in different departments: for example, veneer saws; wood carving machines; string winding; action part production and assembly. Despite the technology, working conditions were harsh and wages low.[6]



Illus.4 Steam engine and pump at Chickerings

While Boston's high society had a jolly time admiring the technical marvels in the engine room, the workers 'below deck' slaved away in their departments. In the 1863 'draft riots', the Steinway factory in NYC narrowly escaped from getting burned down by the mob, many of whom were workers.[7]

The significance of the 1867 Chickering for Liszt and beyond

From 1867 to 1871, Liszt resided in his gorgeous Roman dwelling overlooking the Forum Romanum together with his new Chickering (illus.5). Naturally, 'a flood of visitors' flocked there to see him and - as he quipped - especially it. Their records give an account of the pieces played on these occasions. Liszt's *Soirées de Vienne*, his transcription of Wagner's *Tannhäuser* Overture, Schumann's trailblazing Sonata No.1, and even Creole-inspired pieces by Gottschalk are among them. A notable visitor was the young Edvard Grieg, whose manuscripts (the new piano concerto with the difficult cadenza and the Violin Sonata No.2) Liszt sightread, including the violin part. Grieg wrote:

> *And how, then, did he play? With majesty, beauty, genius beyond compare in interpretation. I believe I laughed, laughed like an idiot. And when I stammered some words of admiration, he mumbled: 'You can surely expect an old hand like me to manage a bit of sight-reading.*

Grieg (and others) had life-transforming experiences, with Liszt's overwhelming musical personality finding an unprecedented medium of expression in this 'most sonorous' instrument.[8]

Illus.5 The 1867 Liszt-Chickering shown in an early photograph in the Royal Music Academy in Budapest (currently displayed in the adjoining Liszt Museum).

Significantly, in his Liszt biography, Alan Walker concludes that Liszt must have composed the famous paraphrase of Richard Wagner's *Liebestod* from *Tristan* on this instrument.[9] Short of time-travelling back to this magic moment, we can listen to Horowitz's recording, made four days before his death, on his custom-modified Steinway. It gives us an idea of the pianistic challenges but also the unprecedented demands on the instrument regarding sound colours, dynamic range and sustain. (Re)creating the rich contrapuntal textures, string-sustained iridescent sound streams, and unbearably grand dramatic arcs on the piano was revolutionary and could only have been attempted with a then-novel 'American System' instrument.

Liebestod and most later Wagner transcriptions (e.g. Walhall, *Parsifal*) more prominently rely on these sound effects reproduced best on an 'American system' piano. Because of its modern soundboard configuration and higher string tensions, the 1867 Chickering (together with the competing Steinway) was the first piano to convincingly render these technically simpler sound effects. Liszt's earlier busy virtuoso effects employed in his *Tannhäuser* Overture paraphrase require the thin translucency of a Boisselot or Erard.

Typical for Liszt, he jumped on an opportunity in piano innovation to push the boundaries of composition techniques. The result was one of only a few highly imaginative and surprisingly original creations of this 'copy' genre still admired in our era, so saturated with well-trained orchestras, singers and recordings.

Many years later, in a letter to the director of the Royal Music Academy in Budapest, Liszt wrote regarding his 1867 Chickering concert grand:[10]

> *Honorable Director and Dear Old Friend,*
>
> *As mentioned before, the American Chickering grand - certainly a gorgeous instrument - should be set up in the music hall of the Royal Hungarian Music Academy. It should be there to serve in extraordinary events with its exceptional service.*
>
> *Respectfully Yours,*
> *F. Liszt*
> *June 21st, 1881*

This was not an advertisement letter for a piano maker, which Liszt volunteered routinely. It was a legacy-minded donation offer to the nation's first music conservatory he had founded and, by extension, to his beloved Hungarians. This conclusion is supported by Liszt's numerous quotations reflecting a deep emotional connection with his Chickering, above most other instruments. According to his primary location, he shuffled it between his private residences in Rome, Budapest and even Weimar, where he had a new 'Bechstein every year'. By contrast, he lent out the two Steinways gifted to him (an ornamentally-cased concert grand Style 4 from 1873 and a Model B from 1883, the latter now at La Scala) soon after receiving them.

The letter is significant because it contains the last of a series of enthusiastic remarks over a 14-year period by Liszt and his visitors about the instrument since he had received it for evaluation directly from the contentious competition at the Paris World Fair in 1867. By then, Liszt was familiar with Wagner's 1876 Steinway *Centennial* (the famous predecessor of the model D, his own 1873 Steinway Style 4*,* traditional and the late 'Americanized' (quasi-modern) versions of European Bösendorfers, Blüthners etc. However, over his lifetime, he showed similar appreciation only for three other brands: the Erards of his early years, his 1846 Boisselot, and later the Bechsteins. And among those, the Erards and the Bechsteins enjoyed the 'unfair' advantage of yearly updated replacement models. (According to Liszt's American student Amy Fay, by 1873 Liszt's Chickering was already hard to play on. Its Brown action - a design unfamiliar to European technicians - was out of regulation, and some keys were stuck. Yet, to her dismay, this did not affect Liszt's playing.[11] In 1928, the legendary instrument was presented in Carnegie Hall by Josef Lhevinne (1874-1944). It would seem likely that for this occasion, it was not only regulated but also - since this was after Chickering's demise - refitted with incorrect modern, i.e., denser hammers.)

The letter's context also matters. Liszt, the authoritative pianist of the 19th century, wrote these lines after a long life inundated with various flagship pianos. He was one of the few

with a complete overview of the formative years of their dramatic evolution. Since by 19th century standards, at 70, he was an old man (and died five years later), the letter amounts to a conscientious bequeathal of one of the top favorite instruments of his lifetime.

The Mystery of the 1867 Liszt-Chickering

> *It is imperial. I never thought that a piano could possess such qualities.*
> Liszt, after trying out the 1867 Chickering for the first time.

Chickering was one of the most innovative piano firms of the 19th century. In 1843, it patented the full concert grand cast-iron plate, increasing tuning stability and supporting higher string tensions. In the mid-1860s, it began introducing a diagonal soundboard configuration, supporting a large, even crown. These two synergistically acting inventions dramatically increased sonority and sustain across all registers. This 'American System', as the European piano builders called it, established the foundation of the modern sound envelope still present in all contemporary pianos.[12]

For these inventions, an enormous amount of research and development was conducted over the years, led first by the firm's co-founder Jonas Chickering and later by his youngest son George, but also with the ingenuity of employees such as Babcock for the cast-iron frame or Brown for Chickering's 'Brown action'. Unlike most firms, Chickering had no qualms about selling prototypes or small series to the public, resulting in many unique variants with significant technical differences inside a small number of cases. In addition, some variants were sold in parallel, and the factory frequently updated older models. Therefore, even for specialists, it is impossible to deduce the exact model and configuration from the exterior (illus.6), which, however, was the only information publicly available from the 1867 Liszt-Chickering.[13] Fortuitously, the Budapest Liszt Academy has recently provided interior pictures to the author (not shown), finally allowing a more conclusive evaluation.

Conclusions

The 1867 Liszt-Chickering #30540 was the first official specimen of the Scale 33B model series. It has a clear model designation cast into the plate not found on any earlier Chickering. Importantly, Liszt's Chickering also belongs to the sub-group of variants with a modern diagonal soundboard configuration.[14] Even though it is no longer playable, many other important original details updated in later versions were religiously kept original by the museum. Such details, e.g., the iron-wrapped bass strings and possibly the early small hammer variants, significantly contribute to the specific sound character. It was moreover discovered that the 1867 Liszt-Chickering has only one other extant technically identical companion piano from the same year. Fortunately, this other specimen, #31605, was also a rare unspoiled instrument with the potential for conservative restoration to the original performance level.[15]

Illus.6 1867 Chickering 33B, three-quarter view

The 'American System'

Throughout piano evolution, but especially during the romantic period, louder-playing instruments with longer sustain mimicking the human voice were in demand. One way to achieve this was by increasing string tensions. But the resulting increased 'downbearing' through the bridge onto the soundboard needed to be balanced with increased mechanical impedance from the soundboard without increasing its mass too much. To hold higher string tensions, Erard and Broadwood pioneered iron tension bars and hitch pin plates in the early 1800s, and later in 1843, the cast iron grand piano plate was created by Chickering. Above a certain level of string tension, sufficient mechanical soundboard impedance could only be accomplished by crowning (arching) the board. While both sturdier plates and crowed boards were developed over time by several piano makers, in the mid-1860s, Chickering and Steinway came out with the optimal soundboard configuration to achieve a large and even crown. These two synergistic inventions constitute the 'American System', which combined the advantages of innovative technology with those of tradition.[16]

By 1867, Erard was a well-respected elder among piano makers, still following 1830s European technology. It consisted of a wrought-iron composite plate (tension bars and a hitch-pin plate joined by screws, painted black) supporting 32 kib[17] in total string tension (measured in the later 1872 London Erard shown here as a representative instrument). As traditionalists, Erards also used the most common traditional soundboard configurations from the 18th century, supporting only a small crown in the center and virtually none in the treble region. Their flat-strung scale contributed to a translucent and clear sound. But

because of the lower tension scale and small crown, even as they grew somewhat bigger and sturdier during the 19th century, such instruments were limited in their maximum volume and especially by their short and weak treble. See illus.7a-d for plan views of instruments by Erard, Chickering, Steinway and Maene.[18]

Illus.7a-d Grand pianos by Erard, Chickering, Steinway and Maene, soundboard view. In the schematic inserts, black indicates ribs, green is the wood grain orientation of the board, blue is the bass cutoff bar, and brown is the bridges

Regarding the crown, the most important elements in comparing soundboards are the grain vs rib angles, which are generally considerably less than 90 degrees in the Erard (illus.7a) as a common representative of traditional soundboards before 1864. These soundboards can only support a small, if any, crown. Furthermore, because of the grain orientation parallel to the spine, the small crown does not reach into the treble corner. In contrast, in illus.7b and c (note insets), this angle approaches 90 degrees, allowing the wood to bend and bulge along the grain line (green) when compressed or pulled by the perpendicular ribs on the underside of the board. The crest of the crown, indicated by the dashed grey line in (b) diagonally, rides approximately along the bridges and the grain right into the treble corner.[19]

The 1867 Chickering 33B (of identical design to that of Liszt's and similar in plate technology to predecessors starting in 1843) was a developmental leap with a sturdier one-piece cast-iron plate. Starting from the mid-1860s, the firm possibly invented and then gradually migrated to modern diagonally grained large-crowned soundboard variants. The combination of new plate and soundboard technology dramatically improved the treble and overall volume. Rapidly, in the early 1870s, Bechstein and Blüthner adopted this system,[20] and gradually, all piano makers (even Erard) followed suit by around 1900. Today, virtually all pianos employ this system.

The Steinway model 'Centennial' was introduced in late 1875 and was replaced in 1884 by the similar current flagship Model D. With its cupula-shaped and A-frame-like overstrung design (the latter already introduced in earlier versions in 1859) and more energy-efficient bridge placement away from the rigid case edge, including the curled back 'ring' treble

bridge, it supported another increase in string tension to about 46 kib. (In his 1880 sales catalogue, Theodore Steinway even claims a safety margin for this plate of up to 75 kib of tension, but no strings available at that time could have possibly carried this much tension). In 1875, Theodore Steinway gifted one of his first Centennials to a very pleased Richard Wagner; it is still present in Haus Wahnfried, Bayreuth. Liszt, who rented the neighbouring house (now turned Liszt Museum), played on it occasionally.

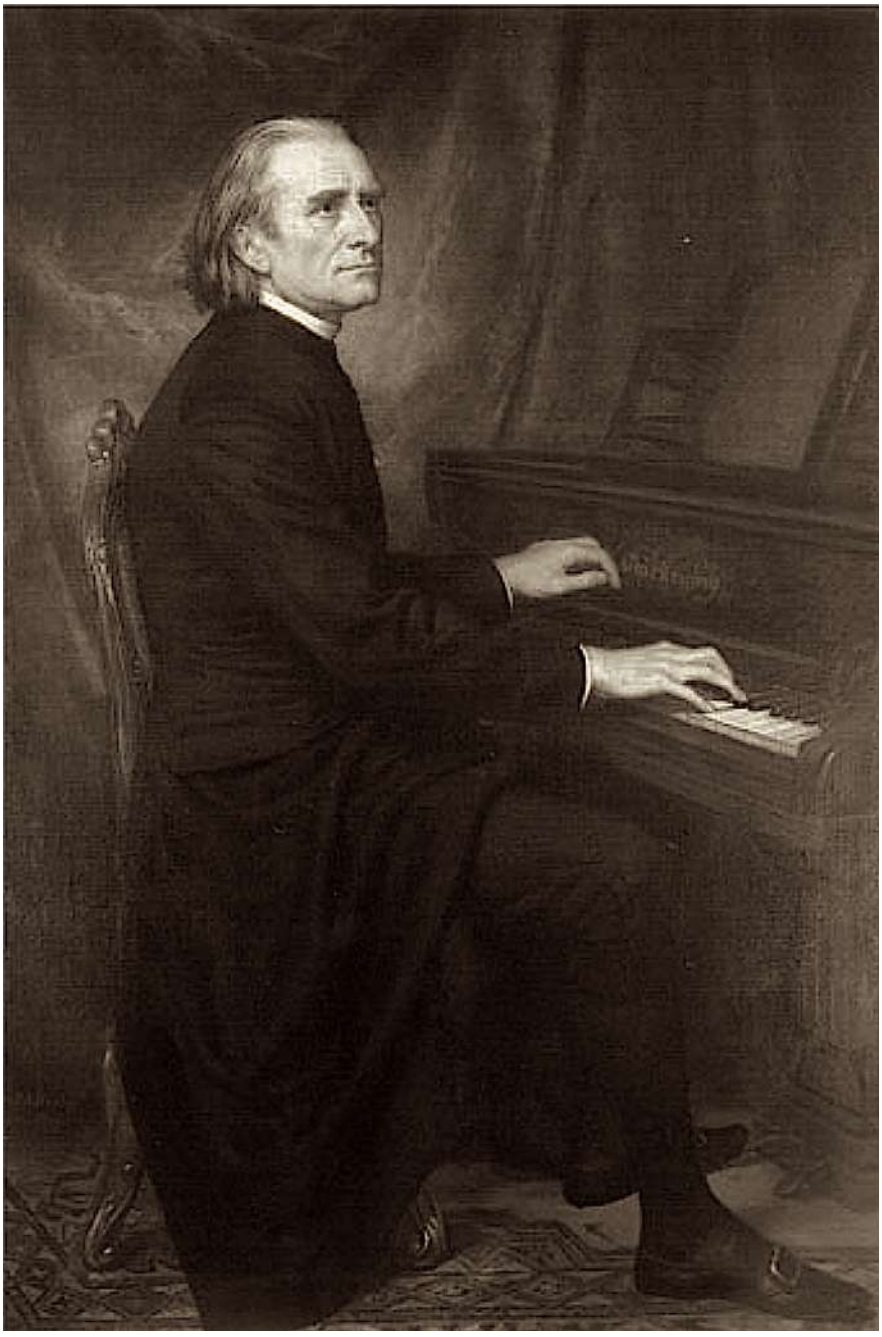
The Chickering 33 series in 19th-century performances

After the resounding success at the 1867 Paris World Fair and Liszt's ringing endorsement of the new 33B, Chickering sold many quickly-changing variants of this general design for over ten more years, making it by far the largest (~1500) and second-longest running series of concert grands in the firm's history. Towards the end of this run, which can also be considered the firm's peak, one of the most outstanding musical performers of the 19th century visited America, supporting Chickering one last time with his international reputation. Again, Charles Chickering made the most of it. He commissioned a new spectacular concert hall, 'Chickering Hall', to be built in downtown Manhattan in record time to be inaugurated by a European superstar. Even his fiercest competitor, William Steinway, was impressed.

In 1868, Liszt let himself be portrayed by P. A. Healy in front of his new Chickering. (close inspection reveals its logo on the fallboard) (illus.8). Including his many surviving photographs, this is the only non-commercial depiction of the composer in front of a clearly signed piano;[21] an enthusiastic Liszt wrote to his socialite friend Jessie Laussot, 'the Chickering Piano … is doing wonders at Rome. Everybody talks to me of it and wants to see and hear it'.[22]

Hans von Bülow, who was almost prevented by his mother from studying music had, by sheer willpower and talent, become Liszt's most influential student. While not an exceptional composer by his own admission, only Liszt himself rivalled his skill on the piano, in sightreading and in conducting. He became the most important promoter of the music of Liszt, Wagner and, later, Brahms. His keen instinct for new quality compositions and his belief in the absolute value of genius transcended widespread rivalries between the progressive and traditional composer camps, nascent nationalism, and even his well-founded personal dislike for Wagner, who had stolen his wife. Bülow's open ears eventually also led him to another then-still little-known composer who, to no small part, thanks to him, became an international star, Pyotr Ilyich Tchaikovsky.

> *I notice the most extraordinary transformation in myself. Whereas before, I frequently played like a pig, I now occasionally play like a god. Chickering's gorgeous pianofortes -undeniably the best in both worlds- have made me into a first-rate pianist.*
> Hans v. Bülow, in a letter from NYC to Karl Klindworth in Moscow (24 November 1875)



Illus.8 The composer at his Chickering

Karl Klindworth was one of the few fellow Liszt students Bülow respected and with whom he kept a life-long friendship. At the time a Professor in Moscow, Klindworth became well-acquainted with the Rubinstein brothers as well as Tchaikovsky. It is clear that Bülow's quote was a private, honest, and heartfelt opinion from one piano professional to another and not an advertisement for Chickering.[23]

In October 1875, Bülow (on a later variant of the 33B*)* world-premiered Tchaikovsky's Piano Concerto No.1 at Chickering Hall in Boston. A few months later, in December 1875, he also inaugurated the new Chickering Hall in New York City (illus.9).

Illus.9 Chickering Hall, New York City (December 1875)

The World Premiere of Tchaikovsky's 1st Piano Concerto

Surprisingly, this piece had a difficult birth. Tchaikovsky was strongly discouraged by comments from his famous teacher, Anton Rubinstein, who found it 'corny, awkward, banal and clumsy beyond redemption'. Rubinstein concluded that it likely would have to be completely reworked or discarded.[24]

Enter Tchaikovsky's new acquaintance, Hans von Bülow, who immediately recognized the work's potential and offered to premiere it on his first America concert tour in 1875-76. Even though challenging for the small Bostonian orchestra, it became an instant success with the public, and the finale had to be encored. During the ensuing season, in a total of 172 concerts, Bülow played the concerto a staggering 139 times! It became arguably the most famous piano concerto of all time.

This paved the way for Tchaikovsky's own visit to the US in 1891, at which he inaugurated Carnegie Hall. But in both cases, money was also a clear motivation. Even though very stressful, these tours resulted in tidy incomes for famous European musicians, in Bülow's case, over half a million in today's dollars.

In March 1876, Bülow secretly visited William Steinway to try out the firm's new flagship, the 'Centennial' Concert Grand (see preceding pages), but he still stayed with Chickering. For the rest of his life, Bülow refused to be won over by Steinway.[25]

> *I shall not make as much noise on a Chickering as on a Steinway, but the tone is far more noble and distinguished.*
> Bülow, after trying out a Chickering for his first America tour in 1875.[26]

Chickering's demise

The period from the mid-1860s to the mid-70s can be seen as the last formative years of the contemporary mainstream piano to which Chickering and Steinway contributed key ideas but also 'collected' many from earlier European makers such as Erard. Around this American piano engineering peak, both firms developed their signature models that they never significantly surpassed. First, it was Chickering's flat-strung Scale 33B that competed at the 1867 Paris World Fair with Steinway's overstrung Style 3, still mostly developed by the then-deceased Henry Steinway. This was followed, in 1875, by Theodore Steinway's Centennial Concert Grand that George Chickering answered around the same time with his last great model, the radically overstrung Scale 77 Concert Grand. In 1881, one of its variants was again given to Liszt at his Budapest residence.[27] By that time, however, Steinway was already overtaking Chickering.

Chickering's end was precipitated by several factors, including a lack of family interest in continuing the business and bad blood between the brothers over the financial excesses of Frank, who turned into a bon-vivant living mostly in NYC rather than near the Boston factory. Steinway's advertising was also more attuned to modern times by stressing the novel scientific aspects of the 'superior machine' over Chickering's old-fashioned reputational and 'traditional value' appeal. Another of Steinway's clairvoyant business strategies was to build a worldwide network of dealers and piano technicians on which any (travelling) Steinway artist can rely to this day. To add insult to injury, after George Chickering's death in 1899, the rudderless firm, under financial duress, was gradually transformed into an incorporated stencil brand (losing all of its original character and sound philosophy). It belonged to a succession of other firms like Baldwin, abusing the once-glorious brand name for their third-tier model line (much like Boston and Essex, which are the cheaper Steinways). During the 20th century, this strategy contributed to most piano professionals' impression that Chickering was best avoided and forgotten.[28] The remaining great 19th-century Chickerings decayed or were badly 'modernized' by piano technicians lacking specialty knowledge.[29] Only very few lucky specimens survived as original furniture pieces in homes with 'traditional decorum' preserving their potential for a conservative restoration.

In the end, very little was left of the great old firm co-founded by Jonas Chickering in 1823 that once dominated the US for decades and had strongly influenced Europe with an innovative spirit in engineering for the piano as well as its first large-scale industrial production. The younger German piano makers Blüthner, Bechstein and Steinway (all

founded in 1853) learned quickly from Chickering's example and adopted many of its concepts. Older firms took much longer to adjust to the new realities of a changing music culture and its required sound.[30] Yet eventually, the Asian brands, following Steinway's lead, brought piano mass production with a louder and harsher sound to a whole new level, now dominating the music scene and the general public's perception of what a good piano should sound like.

However, judging from the very few well-restored or well-maintained specimens, a great Chickering projects its very own distinct sound philosophy aided by a highly sensitive, shallower, and lighter touch of its Brown action. In that, it was a counterproposal to the Steinways of the 19th-century that intended to leverage heavier hammers.[31] In William Steinway's words, his brother's Centennial Concert Grand had 'a wonderfully large tone'.[32] Chickering's sound philosophy was different and stressed sound quality as they saw it over volume. This quality consisted of the clarity of a singing voice without any harshness and cleaner transients, making polyphony much easier to follow. Yet above all, blooming colours and sustain are the signature features of the 33B, which is likely why Liszt and his circle of musicians were so impressed by it.

Conservation versus Restoration

The 1867 Liszt-Chickering has lived in the Liszt Museum in Budapest for many decades. Apart from a restoration almost 100 years ago, it has been kept original, a laudable and correct goal for a museum. However, the instrument has also decayed and is now in an unplayable condition.

Unfortunately, except for a handful of firms worldwide, the technical know-how to correctly restore this most complex of all instruments - the historical piano - has never been developed. Modern, more convenient, and cost-effective techniques, sometimes also meant to 'improve' the instrument, are very popular with commercial restorers. They may make the instrument playable again, but usually on a pitiful level. Inevitably, they also (irreversibly) compromise its originality, and thus the reason for the restoration in the first place. Hampshire Piano in Massachusetts was tasked with resurrecting the all-original #31605 to its former concert stage potential. The small team is unique in the field in their ingenuity and passion for research and development in conserving the original but making it perform again. This sets them apart from virtually all other teams in museums or commercial restoration firms. Developing new techniques or resurrecting old forgotten ones to find more intelligent solutions to fulfill both requirements simultaneously has always been the 'raison d'être' of Hampshire Piano.

True conservation means understanding the individual instrument: below are some of the unusual techniques pioneered on #31605.

External Re-crowning of the Original Soundboard

The 33B had one of the first large-crowned soundboards. Soundboards generally shrink during the aging process, and the crown is lost, rendering the board unresponsive,

especially to higher frequencies. To re-crown the soundboard to its original shape, it must be put through the same procedure as originally in the factory: 'Compression-crowning' involves drying and shrinking the flat board at an elevated temperature, then gluing the ribs onto the underside. Finally, by re-exposing the assembled soundboard plus bridges to normal humidity, it expands preferentially on the top side where the ribs do not restrain it. The soundboard thus regains its original bulge or crown. Since it has been aged and 'pre-shrunk' for over 150 years, it is now more stable and responsive than a new board and, much like historical violins, can display superior sound.

Embedded Pinblock and Stabilisation

When, during the 19th century, string tensions were raised to make pianos louder, pinblock instability became a frequent problem afflicting many pianos. To prevent shifting and cracking, which had compromised the #31605 pinblock, it needed to be custom re-engineered. A new laminated block was reinforced with a steel plate. To re-anchor the new pinblock under the struts and into the recessed case sides required 'deep case surgery', which very few dare to perform. Finally, the pinblock cap was added back. A crossbanded veneer was sanded to accept the original Brazilian rosewood veneer leaf (illus.10).

Illus.10 The pinblock being refinished

Other Conservation and Restoration issues

The original damper-heads and ultra-soft damper felts, consisting of two interwoven layers, were reinstalled, preserving the original sound. The soundboard decal was restored with macro-photography, colour analysis of original paint particles, and high-resolution printing. Progress has been made in the reproduction of Pape-style hand-crafted, multi-layered French hammers, but original ones assembled with early hammer presses are still impossible to reproduce. Their much thicker machine-made, ultrasoft and ultrafine Merino sheep felts are no longer made, and period hammer-making tools and know-how have been lost. Luckily, in #31605, the original extremely rare 1867 hammers survive. These

served as a guide to radically custom-tailor and voice new historically inspired hammers to sound like the originals. Yet authentic reproduction of hammers, crucial for the sound of many predominantly English, American, and German pianos of the 1850s-1900s, should be explored.[33] The softness of the original steel-wrapped bass and plain-wire strings was measured using a Rockwell Hardness Tester, such that replicas very close to the originals could be re-installed. The original blued Chickering-specific conical tuning pins that, unlike modern ones, allow multiple string replacements, required experimentation with a customized drill.

Objets d'art demand a sophisticated finish

For refinishing the case, a special formula of shellac suspension was used with French Polishing. Its ultra-thin application renders the crispest contours and minimizes reflections. The broad veneer leaves, spanning the height of the case, came from old-growth Brazilian Rosewood trees that are entirely extinct today. The wood's legendary acoustic properties have recently been (re)discovered for repurposed guitar case making.

The restoration of the legs, lyre, and the unique 14K gold-filled Acanthus Leaf-shaped pedals followed, and the question is raised as to whether a Piano Leg can be a sculpture in its own right? An original 'faux-painted' leg from #31605 shows that creating Chickering legs was an elaborate process: artisans first individually carved the legs, then stained and faux-painted them using logwood extract (*hematoxylin*) with ferrous sulfate for ebony shades and potassium dichromate for reds. Finally, protective layers of varnish were applied. Depending on the treatment, dull, glossy, or wood grain-like surfaces created lively contrasts on top of the intricate carvings. Conceptually, this approach is reminiscent of Renaissance sculptures.

Finally the work was done and the instrument could be heard again (illus.11).

Acknowledgments

My special thanks belong to Zsuzsanna Domokos and Mark Schretner of the Liszt Museum in Budapest for the excellent pictures of the Liszt-Chickering, as well as my friend in memoriam, the Hungarian pianist Martha Claire for inspiration. Furthermore, Craig Hair, Emmett, and Richard Blais of Hampshire Piano, who performed the unique restoration work described herein, were extremely helpful with advice regarding the technical knowledge of these instruments. Lastly, I thank Gregory G. Bennett, President of the Foundation for the Preservation of Chickering and American Keyboard Instruments, for technical details that helped in the identification of models and the accuracy of the restoration.

Unless otherwise noted, pictures originate from 'fair-use' sites, the Hampshire Piano YouTube channel, or were taken by the author.

Illus.11 Oliver Betz reawakening Liszt's transcription of Liebestod *from* Tristan *on the same 1867 Chickering 33B model on which it was composed. Alan Walker eloquently describes the unprecedented demands on both pianist and piano: 'The formidable task which faced Liszt when he attempted to transfer such a rich texture to the piano was twofold. First, he had to find a way in which ten fingers might do justice to the contrapuntal fabric which comprises so much of this music. Second, he had to find a means of matching some of the biggest climaxes in Romantic orchestral music on a keyboard of a mere eighty-eight notes. After all, the orchestra is a sustaining instrument of tremendous power, while the sounds of the piano start to decay from the moment they are born. Through the judicious use of three devices--arpeggios, tremolandos, and repeated chords--Liszt feeds a continuous stream of sound into the instrument, and then scatters diamond dust across the length and breadth of the keyboard by releasing all the upper partials through the sustaining pedal. The result is a texture which glows with peculiar incandescence'.*[34]

Aurel Betz studied piano under Friedemann Berger (Musikhochschule Munich) but then went to Berlin to study Philosophy and Biology. He received a Master's degree from the Free University of Berlin and Stanford University in Genetics. Subsequently, he earned a PhD in molecular biology from Rockefeller University in NYC and continued as a senior research associate in cancer research and the regulation of gene networks. During the last decade, he has done private research on historical pianos and is currently finalizing a book on the most advanced methods of their conservative restoration.

Notes

[1] https://www.youtube.com/@hampshirepiano6383.

[2] Interestingly, at the same 1867 Paris World Exposition, the Vuillaume brothers presented their violins, now increasingly recognized as playing in the same league as many Stradivaris, Guarneris, and Amatis.

[3] Alan Walker, *Liszt*, 3 vols. (New York, 1996/1997), vol.3: *The Final Years, 1861-1886*, pp.158ff.

[4] Daniel Spillane, *History of the American Pianoforte* (New York, 1890), p.92.

[5] Letter to Jessie Laussot (13 January 1868, Rome) No.62 in *Franz Liszt's Briefe*, hrsg, von La Mara (Marie Lipsius), (Leipzig, 1893), vol.2.

[6] Arthur Loesser, *Men, Women and Pianos: A Social History* (London, 1955), p.890f.

[7] *William Steinway Diary* (New York, 11-14 July 1863).

[8] Walker (1996), pp.162ff.

[9] Walker (1996), p.128.

[10] Translation from the German by the author. Note that a second Chickering concert grand scale 77 was given to Liszt around 1881; he bequeathed both to the Academy, whose archive contains this letter.

[11] Walker (1996), p.163.

[12] Julius Blüthner, *Lehrbuch des Pianofortebaus* (Leipzig, 1872), pp.127-140; Bill Shull, Period Piano Center, personal communication (2023), notes Steinway offered a similar soundboard around the same time. It is still unclear which firm invented it, but it may well have been Chickering.

[13] Gregory G. Bennett, Foundation for the Preservation of Chickering and American Keyboard Instruments, personal communication (2023).

[14] 33Bs were built for years in many variants. Some even have a different inverted soundboard configuration with the wood grain oriented perpendicularly to that in #30540.

[15] Note that #30540 came directly from the 1867 Paris World Fair in an ornamental case; #31605 came in a standard case.

[16] Blüthner (1872).

[17] Kilopounds, equivalent to 1000 pounds-force.

[18] This project's idea came from Daniel Barenboim, who, like other world-renowned musicians (e.g. Andras Schiff), has (re-)discovered the virtues of straight-strung pianos. The upper bass register tends to be more translucent, and the entire scale is more even and less distorted.

[19] Hampshire Piano, personal communication (2023).

[20] Blüthner (1872), pp.127-140.

[21] In early 1868, Liszt went through many hours of sittings to let himself be portrayed in oil with his new Chickering by P. A. Healy. Including his many surviving photographs, this is the only non-commercial portrait of the composer in front of a clearly signed piano. All other pictures of the composer with pianos were commissioned by piano makers, such as those by Graf, Bösendorfer and Steinway, or were produced after Liszt's death. See Geraldine Keeling, 'Liszt at the Piano: Two American Pianos and Two American Artists', *Studia Musicologica*, lv/1-2 (June 2014), pp.145-155.

[22] Letter to Jessie Laussot (13 January 1868, Rome), No.62 in Ida Marie Lipsius (ed), *Franz Liszt's Briefe* (Leipzig, 1893), vol.2, pp.141-142.

[23] Richard Count du Moulin Eckart (ed), trans. Hannah Waller, *Letters of Hans von Bülow* (New York, 1931, r/1979), p.13.

[24] Tchaikovsky to Nadezhda von Meck (2[-3] February 1878), in Galina von Meck, trans and ed Edward Garden and Nigel Gotteri, *'To my best friend': Correspondence between Tchaikovsky and Nadezhda von Meck, 1876-1878* (Oxford, 1993), pp.151–152.

[25] Alan Walker, *Hans von Bülow: A Life and Times* (Oxford, 2009), pp.400 and 417.

[26] Walker (2009), p.205.

[27] See https://lisztmuseum.hu/permanent_exhibition/drawing-room-120757.

[28] See 'When the Music Stopped: Chickering and the Piano Wars of 1850'; https://newenglandhistoricalsociety.com/music-stopped-chickering-piano-wars-1800s.

[29] For example, on the otherwise original 1867 33B, #31605, a technician in the distant past had hammered in the tuning pins when only slight tapping of these special conical Chickering pins would have done the trick. As a result, he split the pinblock, rendering the piano untunable and unplayable. Ironically, for the long-term maintenance of the rare original hammers, this was a blessing in disguise as the instrument was kept otherwise unmolested in a corner of a large mansion as decorative furniture.

[30] After a long tenure in the Austro-Germanic tradition, in the 1880s, Bösendorfer also joined the 'American club' and, mostly because of this radical transformation, has become the sole survivor of hundreds of traditional firms in Austria. The leading French firms Pleyel and Erard were even later adopters of the new technology around 1900, trying to preserve and perfect the translucent sound of the glorious years of the French School of pianism. Broadwood, the leading English maker, while in the 1880s developing the overstrung cast-iron plate in its own very individualistic barless style, maintained its flat cross-grained soundboard configuration from the 1830s.

[31] The Brown action has a higher action ratio (~9:1 vs ~5:1) and lower mass hammers than the Centennial's, with its Herz-Erard action. That results in a lower inertia of the keys, 'making it easy for the pianist to get around' on the keyboard.

[32] William Steinway's diary; https://americanhistory.si.edu/steinwaydiary/diary/?date=October+6%2C+1875&x=41&y=7.

[33] Personal communications with Paul McNulty, Edwin Beunk, Norbert Abel, Jared and Jendrik Rothe, and Fred Sturm (2021-2023).

[34] Walker (1996), p.128.

Composer Anniversaries in 2024

John Collins

In 2024 there are a number of keyboard composers whose anniversaries are being commemorated; some of the names listed below will need no introduction but there are also quite a few lesser-known names whose compositions are well worth exploring. No claim is made for completion, and there is no guarantee that every edition mentioned is in currently print – there may also be complete or partial editions by other publishers some of which may be difficult to obtain.

An increasing number of pieces, ranging from facsimiles of original publications or manuscripts (which present the usual problems of multiple clefs as well as printers' errors) to typeset versions of complete or individual works, are to be found on various free download sites, most noticeably IMSLP and Free-scores; however, the accuracy of some modern typesetting is questionable, and all should be treated with caution before use.

Girolamo Parabosco (c.1524-1557). Studied with Adrian Willaert in Venice, where he became organist of St Marks. In addition to motets and madrigals he also left literary works. For keyboard instruments he left two Ricercars printed in *Musica Nova* (1540): No.18 (although ascribed to Parabosco in the index and commentary, in the music text it is ascribed to Giulio Segni) and No.21 on *Da nobis pacem*. The collection has been edited by Liuwe Tamminga for Andromeda Editrice, TA3, now available from Il Levante Editrice.

Robert White (1538-1574). Son of an organ-builder and composer, he was Master of Choristers at Ely, Chester and finally Westminster Abbey from 1569. Two keyboard pieces have survived, an *In Nomine* as No.87 in the Mulliner Book (a manuscript containing some 121 pieces, compiled between 1545-1570 by Thomas Mulliner, organist of Corpus Christi College, Oxford). There is a new modern edition is by John Caldwell, Musica Britannica, I, Stainer and Bell. and an *Ut re mi fa sol la* in Add MS29996, included in *Tudor Organ Music 1520-80*, edited by John Caldwell in Musica Britannica, lvi, Stainer and Bell. Caldwell surmises that this piece may be by White senior. Paul Doe has edited a set of six Fantasias as volume K41 in the series 'Early Keyboard Music' for Stainer and Bell. These are preserved in Add MS29246 in the British Library, which contains lute pieces in Italian tablature. They were published previously Musica Britannica, xliv, Stainer and Bell, but Doe suggests that they were likely composed for organ.

Costanzo Antegnati (1549-1624). He studied with his father and with Girolamo Cavazzoni and became organist at Brescia Cathedral. Antegnati composed masses, motets and madrigals, and in 1608 published *Arte Organica*, an important treatise on organ building which included registrations by genre, and a set of Ricercars entitled *L'Antegnata*, one on

each of the 12 Tones. There is a modern edition by Stella Marega for Zanibon 4728 which includes an extensive preface in English and variants from the Torino manuscript for the Ricercars. A new edition of *L'Antegnata* is being prepared by Roberto Anonello as vol.ECHOM6, to be published by Ut Orpheus. A set of 15 Canzonas intabulated for keyboard were included in a 1617 publication by Johann Woltz; there is a new edition by Maurizio Machella for Armelin AMM 339.

Andrzej Hakenberger (c.1574-1627). He published a quantity of vocal music, and intabulations of motets were copied into the Oliva and Peplin tablatures. 55 of his intabulations from the Pelplin tablatures have been edited by Jan Wecowski in vol.9 of *Antiquitates Musicae in Polonia*. Vols.1-10 in this series cover these tablatures, with facsimiles and transcriptions.

Giacomo Carissimi (1605-1674). Organist of Tivoli Cathedral, he published a large number of collections of sacred music and is believed to be the compiler of the organ method known as *Wegweiser*, which was published in Augsburg in 1689. The first part of this gives instructive notes on the rudiments of music, fingering, figured bass, information on clefs and the church Tones; the second part contains 71 pieces, comprising eight pieces on each of the eight Tones, including a longer Praembulm followed by seven fugal verses. Modern editions by Rudolf Walter originally as vol.8 in the series *Suddeutsche Orgelmeister des Barocks*, published by Musikverlag Alfred Coppenrath, and now available through Carus Verlag 91.076/00; and by Gwilym Beechey for Hinrichsen, Edition Peters 7164, which has a good introduction describing the print.

Matthias Weckmann (c.1616-1674). Organist in Hamburg, and on a visit to Dresden he met Johann Froberger, with whom he maintained a friendship. He left instrumental chamber works and some vocal music, and a number of works for organ including a setting of the Magnificat on the second Tone and eight sets of chorale variations, all with pedal parts, edited by Werner Breig for Bärenreiter as BA6211, and also a Fantasia, Fuga and a Praeambulum, all on the first Tone, multi-sectional and requiring pedals. Other pieces which can be played on manuals only include five Canzonas and six Toccatas. These, along with six Partitas and 28 dance movements (16 anonymous, 12 ascribed) from the autograph Hintze MS have been edited by Siegbert Rampe as Bärenreiter BA8189. The Praeludia, Canzonas and Toccatas were edited by Max Seiffert for Kistner & Siegel in *Organum Reihe IV Orgelmusik* and reprinted without any introduction as Kalmus in their Organ Series 9103

François Roberday (1624-1680). Organist in Paris and a goldsmith; in 1660 he published *Fugues et Caprices*, a collection of 12 Fugues, six of which are followed by Caprices in up to three movements, in open score. The preface states that three are based on pieces by Froberger, Frescobaldi and Ebner, but these are not identified specifically by the composer, and that the themes of the other pieces are by de la Barre, Couperin (probably Louis), Bertalli, Cambert, d'Anglebert and Froberger. Siegbert Rampner has surmised that the piece by Ebner is the Caprice No.2 (see his edition of Muffat and Ebner, vol.2, p.xix) No.5 is the Ricercar No.2 from the second part of Froberger's *Libro Quarto* (1656), to

which a triple-time section has been added, and Fugue No.7 is Ricercar No.3 from a set of 12 by Alessandro Poglietti, intriguingly not mentioned by Roberday. There is a modern edition by Jean Ferrard for Le Pupitre, published by Heugel as LP44. Kalmus have reprinted the edition by Alexandre Guilmant published as vol.3 of the *Archive des maîtres d'orgue*, retaining the added registration suggestions and halving the triple time bars but without any introduction or the original preface.

Andrés Lorente (1624-1703). Organist of the Cathedral of Alacalá de Henares (1672), he published the treatise *El Porqué de la Música, en que se contiene los quatro artes de ella, canto llano, canto del organo, contrapunto y composición*; a facsimile was published by Consejo Superior de Investigaciones Científicas. It has been suggested by Louis Jambou that the compositions included in the first 80 folios of Ms 1358 (the full title is *Pensil deleitoso de suaves Flores de Música recogidas de varios orgsanistas por F. Antonio Martín, organista de S.. Diego de la Ciudad de Alcala añ o 1707*), one of four anthologies of pieces of all genres compiled by Martín y Coll are by Lorente; they are the only pieces written in Spanish number-cypher and include a large quantity of versos, settings of *Pange Lingua* and *Ave Maris Stella*, variations on popular tunes, *passacalles*, 15 *Medio Registros* and nine *Tientos Llenos*. Modern editions of many of the large scale pieces are found scattered amongst the several anthologies of selected pieces from the four manuscripts compiled by Martin y Coll. Five pieces, including three *Medio Registros*, a *Tiento Lleno* and *Diferencias sobre las vacas*, are included in *Composizione Inedite dai Flores de Musica*, edited by Carlo Stella and Vittorio Vinay for Edidizione Suvini Zerboni S.8335.Z. Some 21 *Tientros/Obras* together with 17 other pieces are included in *Flores de Musica Volumen 2* edited by Genoveva Gálvez for Fidelio Editorial. A few pieces are included in the three volumes of *Tonos de Palácio y Canciones Comunes* (which contain pieces from the four manuscripts), edited by Julian Sagasta for Union Musical Española.

Andreas Kneller (1649-1724). Possibly a pupil of Franz Tunder in Lubeck or his uncle Matthias Weckmann (see above), Kneller held organist's posts in Hanover (succeeding Melchior Schildt) and Hamburg. He left three Praeludia and a set of eight chorale variations on *Nun komm der Heiden Heil* and these, together with fragments of three further *Praeludia*, have been edited by Klaus Beckmann for Breitkopf & Härtel EB8430

Pablo Nassarre (1664-1724). Spanish theorist and composer. His theoretical treatises contain much useful information, including the attribution of each Tone to a specific planet or heavenly body. Three *Tocatas* (sic) by him, one entitled *Tocata Italiana*, and all with a solo for the right hand, although not designated as such, were included in MS1011 now at the Biblioteca Nacional, Barcelona, and have been edited by Jose Llorens in vol.4 of the *Colección Higini Angles* for. Diputación Provincial de Barcelona, Biblioteca de Catalunya. A *Tiento a cuatro partido de mano derecha* (on the eighth Tone) and two *Versos* for the Sanctus were included in amanuscript at the Cathedral of Astorga, the entire collection has been edited by Jose Alvarez for Unuon Musical Española, in *Coilección de obras de órgano de oirganistas espanoles del siglo XVII (manuscrito encontrado en las Catedral de Astorga)*. His important treatises *Escuela música según la practica moderna dividida en primera y segunda parte* and *Segunda parte de la Escuela musica que contiene quatro libros, and Fragmentos músicos* are available in facsimile by Excma Diputacion Provincial de Zaragoza, Institucion Fernando el Catolico.

Friedrich Niedt (1674-1717). Born in Jena, he moved to Copenhagen, where he died He left sonatas for the oboe and some theoretical works, including *Musicalische Handleitung*, an important treatise on figured bass, including a Partita in C in 14 movements, opening with a Praeludium, Ciacona and Final, followed by 11 dances, with two each of Allemande, Courante and Dsouble, Sarabande, and Gigue, and three Minuets - all using the same bass. A modern edition has been edited by Jorg Jacobi for Edition Baroque, Bremen as EB4018. It contains excerpts from the original, but in German only.

Philip Hart (c.1674-1749). He was organist of St Andrew Undershaft in London from 1696, and of St Dionis, Backchurch from 1724, both until his death. He also held the post of organist at St Michael's Cornhill in 1704-1723. In 1704 he published a volume entitled *Fugues for otgan or harpsichord, and Lessons for harpsichord.* An edition by Frank Dawes contains the three Fugues from this print plus one from Add MS34695 and one from Add MS32161, both in the British Library, was published as vol.37 in the series *Tallis to Wesley* by Hinrichsen. Pieces are also included in *Tallis to Wesley* vol.35, dedicated to three Organists of St Dionis, Backchurch, also including music by Charles Burney and John Bennet.

Pierre Dumage (1674-1751). Organist of L'Eglise royale de St. Quenin, he published a *Premier Livre d'Orgue contenant une suite de premier ton* in 1708. It consists of the typical movements of a *Livre d'Orgue*, opening with a Plein Jeu, followed by a Fugue, Trio, Tierce en Taille, Basse de Trompete, Recit, Duo and concluding with a Grand Jeu. Kalmus have reprinted the edition by Alexandre Guilmant published as vol.3 in *Archive des maîtres d'orgue*, retaining the added registration suggestions, but without any introduction or the original preface.

Johann Nikolaus Tischer (1707-1774). Oboist and organist in Schmalkalden, he left a large number of compositions for instrumental groups, violin sonatas, symphonies and church music. Tischer published many sets of *Haus/Gebrauchsmusik*, consisting of sets of Suites and *Parthien*, as well as 13 three-movement concerti for Cembalo solo. His works for stringed keyboard instruments have been edited by Laura Cerutti in 15 volumes by Armelin, CM021-24 and 040. The Concerti are in volumes 11–13, a further two concertos appearing in vol.14; these are entitled *Weh klangendes Kyrie*, and *Frolockendes Halleluja*, with biblical quotes throughout. They have also been edited by Jörg Jacobi fro Edition Baroque, Eba4063. Jacobi has also edited the manuscript pieces entitled *Vier Jahrzeiten*, eba4053.

José Moreno y Polo (1708-1774). Held organist's positions in Zaragoza, Albarracin and Madrid. He left Villancicos, and numerous keyboard works have been preserved in several manuscripts. Some have been edited in various Spanish anthologies of organ music, but as with many 18th century Spanish composers a complete, critical modern edition is needed. Three Sonatas are included in *Doce compositores aragoneses de tecla*, a splendid anthology with extensive biographical notes for each of the twelve composers, edited by Dionsio Preciado for Editora Nacional. Other pieces are included in vol.VII (two sonatas, two *Obras* and a

Paso) edited by Vicente Ros in the series *Tecla Aragonesa* for Institución Fernando el Católico.

Starling Goodwin (c.1713-1774) was described as 'Late organist of St. Saviour, Sothwark, St. Mary Magdalen, Bermondsey and St. Newington Butts' according to the title page of his two sets of Voluntaries published by C. and S. Thompson (c.1780). Most are in two movements, opening with a slow movement followed by either a movement for solo stops such as Trumpet, Cornet, Swell and Vox, or a Fugue. They continue the style of John Stanley, being described on the title page as 'Wrote for the improvement of juvenile performers'. A modern edition of each book has been edited by David Patrick for Fitzjohn Music. *Goodwin's The Complete Organists Pocket Companion containing a choice collection of Psalm Tunes with their Givings-Out and nterludes as used in Parish Churhes* was also published poshumously by Thompson; as far as I know, no complete modern edition exists. Other pieces attributed to him are included in the Southgate Ms at the RCO, two of which, both movements of No.61 (although the second, a Trumpet and Echo movement, is also attributed to John James in the John Reading Ms now in Manchester) and No.62, a single movement Siciliano for Swell and Vox, are included in *An RCO Miscellany* edited by H. Diack Johnstone for Basil Ramsey as Voluntaries 6 and 7, and in Add Ms 71210 at the British Library.

John Worgan (1724-1790). Best known for playing the organ at Vauxhall Gardens, he also held positions at several London churches, studying with his brother and with Thomas Roseingrave. He composed oratorios, psalm tunes, glees and pieces, including a published set of six Sonatas for the harpsichord, and some organ music, published c.1795, including *Organ Pieces by the late Dr, Worgan never before published*, issued by Fentum (containing five single movement pieces) and three issues of *Select Organ Pieces by the late Dr. Worgan published for the compiler* in the same year (containing 10 multi-movement pieces and a Hymn for Christmas Day). These been edited by Timothy Roberts for Orchard Street Music, but this is no longer available as a hard copy. The editor is planning to make the pieces available in pdf format in the near future. One of his pupils was Charles Wesley.

Theodor Melchior Dreyer (1747-1824). He was organist of the Stiftskirche, Ellwangen, and composed numerous masses, vespers, hymns and offertories as well as symphinies, piano trios, and several collections of organ pieces, His collection of 24 two-movement Sonatas, usually slow or medium – fast, and occasionally in different keys, which appeared in four books between 1800 and 1803, have been edited by Manfred Hossl for Bnote Musikverlag in four volumes, BN16606/16612/16632 and 16640. These present only the scores, lacking an introduction or critical commentary. A selection of eight Sonatas has been edited by Raimund Schacher for Strube edition 3144, which contains a brief introduction in German and the specification of the organ in Ellwanger Stiftskirche, which the composer played.

Christoph Ernst Friedrich Weyse (1774-1842). Organist in Copenhagen, he composed vocal works including cantatas, and symphonies His collected keyboard works have been edited by Gorm Busk for Engstrøm & Sødring in three volumes, the first containing 21

pieces, including five fugues, three sonatas and eight *Allegri di Bravura*, all preserved in manuscripts. Vol.2contains printed works including four sonatas and ten *Allegri di Bravura* as well as dances, and Vol.3 contains more printed works mainly dances better suited to stringed keyboard instruments.

There were also three important publications in 1624 of pieces for keyboard. These include *Il primo libro di Capricci* by Girolamo Frescobaldi; for which there are modern edition by Christopher Stembridge with the collaboration of Kenneth Gilbert for Bärenreiter BA8413, and a volume edited by Pierre Pidoux, also published by Bärenreiter as BA2202, which includes the Capricci, Ricercars and Canzonas as per the 1626 reprint; the latter contains some errors and lacks a preface and critical commentary. There are also edition by Etienne Darbellay for Edizioni Suvini Zerboni as vo.4 of *Opere complete* and also a critical appraisal by him entitled *Toccate e I Capricci di Girolamo Frescobaldi: Genese delle edizioni e apparato critico*, also for Suvini Zerboni. A further edition by Armando Carideo for Il Levante Editirice TA 30 combines the Fantasie, Recercari e Canzoni Francese and the Capricci. Also published in 1624 was the three-volume collection *Tabulatura Nova* by Samuel Scheidt, containing sets of variations on sacred and secular melodies, settings of the Kjyrie and Magnificat Fantasias and a few dances; there is a modern edition in three volumes by Peter Dirksen and Harald Vogel for Breitkopf & Härtel EB8565-7; and the *Ricercar Tabulatura* by Johann Steigleder, this being the first published collection in which the pieces were designated by key rather than by Tone. There are modern editions of this by Willi Apel and collaborators as vol.13, part 1, in the series *Corpus of Early Keyboard Music* for the American Institue of Musicology, and in two volumes edited by Ulrich Siegele for Bärenreiter BA8479/80.

Editions are available from the named publishers; and www.bodensee-musikversand.de is a good general source for rare material.

New Handel research

Mark Windisch

Readers will be familiar with the enormous influence that Donald Burrows has had on Handel scholarship through the years. He has not only conducted valuable scholarship himself, but ensured that the future of Handel research is safe by inspiring younger researchers to carry on this important work. I have a vivid memory of Professor Burrows standing in when a speaker failed to turn up and delivering an excellent talk on Handel's linguistic abilities by displaying the marginal notes, where the language Handel used varied according to the language of the text that the work he was editing, used. In a recently published book from The Boydell Press called *New Perspectives on Handel's Music – Essays in Honour of Donald Burrows* and edited by David Vickers, a number of contributors have given us an interesting range of articles in 'three acts' to cover many aspects of Handel's compositions. Handel is one of a select number of composers who have inspired a continuous tradition of research. I have given below the articles in this important book which I hope will give an idea the range of articles available to anyone who would like to learn more about this favourite composer.

Act I. Handel's Music and creative practices

"'Almire regiere": Some Reflections on the First Aria in Handel's First Opera', David Kimbell

'*Il pastor fido* by Guarini (1585) and Handel (1712): From *tragicommedia pastorale* to *dramma per musica*', Suzana Ograjenšek

'Late or Soon? Cadential Timing in the Continuo Recitatives of Handel and his Contemporaries', John H. Roberts

'Handel's Bilingual Versions of *Esther* and *Deborah*, 1734-1737', David Vickers

'Handel's Compositional Process in the Creation of the Grand Concertos, Op.6', Silas Wollston

'The London Revisions of Handel's First Roman Oratorio: *Il trionfo del Tempo e della Verità* (1737) and *The Triumph of Time and Truth* (1757)', Matthew Gardner

Act II. Sources, Documents and Attributions

'Handel's Continuo Cantatas: Problems of Authenticity, Classification and Chronology', Andrew V. Jones

'When and Why Did Handel Replace his Conducting Scores?', Hans Dieter Clausen

'Handel, the Duke of Chandos and Investing in the Royal African Company', David Hunter

'Handel and *Comus* at Exton', Colin Timms

'Wordbooks for Handel's Oratorios, Especially *Joseph and his Brethren* and *Hercules*: Copyright and Production', Leslie M.M. Robarts

'New Music by Handel for Horns?', Anthony Hicks, rev Colin Timms

Act III. Context and Reception

'Bach and Handel: Differences within a Common Culture of Musical Invention', John Butt

'*Le rivale regine*: Faustina and Cuzzoni in Satirical Engravings, Literature and Opera in the 1720s and 1730s', Richard G. King

'Charles Jennens Revisited', Ruth Smith

'"O Come, Let us Sing unto the Lord": Performances of the Cannons Anthems during Handel's Lifetime', Graydon Beeks

'Charity Performances of Handel's Works in Eighteenth-Century Dublin (1736-1760) ', Tríona O'Hanlon

'Early Keepers of the Flame: Vanneschi (and Handel) at the Opera', Michael Burden

'Revamped Handel: The Content and Context of his So-Called "Miserere"', H. Diack Johnstone

'Handel's "celebrated Largo": Remarks on the Reception History of 'Ombra mai fu", Annette Landgraf

I think that some of the articles would be of interest to the general reader rather than the musicologist alone, so have made a precis here of a few of them. For deeper insights I would advise purchasing the book or ordering it from a library.

Professor Butt's article on the relation of the compositional influences on Bach and Handel is of interest. Comparison between these two giants of the 18th century have long been a subject of interest to musicologists and the general public. In the 19th and early 20th centuries, comparisons were made between them, usually illustrating Bach as an original genius and demoting Handel to someone who merely copied works by other musicians. The article explores the influences on both men in considerable detail. Although born in the same year and less than 100 miles apart, the difference between the political and religious systems in Thuringia and Saxony were considerable. Thuringia was a very traditional state, unambitious to move forward, whereas Halle along with Magdeburg had been ruled by Prussia, which was very forward looking, ambitious and increasingly cosmopolitan. There was also a difference in the social status of the two men: Handel's father was a high-status barber-surgeon, valet to the Duke, whereas the Bach family enjoyed the lower status of expendable artisans. Another large difference was the musical education systems which the composers had and their social status. Bach was born into what was in effect the family business and with this came the carrying forward of long-established tradition. Composition was not normally an expectation from a church musician. Handel had the benefit of being taught by Zackow and influenced by Alberti, Froberger, Krieger, Kerrl, Ehner and Strunck, who exemplified more modern compositional practices. The tradition he followed made it essential that any aspiring

musician would be expected to compose new works. Having said this there is evidence that Bach had some compositional help from Georg Böhm. Zachow, who taught Handel, had worked his way up from town piper to town organist at the Marktkirche. In Halle music education was being studied as an academic subject. Butt mentions *Rudimenta Musica* by Wolfgang Mylius as an example of the sort of educational resource which could have been in use, and covered ornamentation thoroughly. There is no certainty that the young Bach studied compositional theory (Wolfgang Caspar Printz) which was available in Thuringia, although it is possible that he had access to the writings of Niedt, which deals with thorough bass and counterpoint. Whereas Handel was exposed to opera in Leipzig and would have come under the influence of Kuhnau. Moving to Hamburg and association with Mattheson developed Handel's ability towards dramatic expression. Butt deals with the issue of plagiarism by pointing out that both men used and developed pre-existing compositions as part of their normal compositional procedure. He points out that both men came at an interesting historic juncture where borrowing and impersonation of their models were used to cultivate their own individual voices.

The article by Richard G. King explores the invented 'rival queens' scenario used to compare Bordoni with Cuzzoni, stemming from the story of Alexander the Great and his first and second wives Roxana and Statira. Rivalry was a significant aspect of theatre culture in the 17th and 18th centuries. King has researched the literature of the period, quoting the many instances where rivalry was an essential part of the plot. In fact, Handel scholars have shown that the two singers seemed not to have indulged in real rivalry but in fact worked well together on several occasions The author explores how this invented rivalry continued to be used in an attempt to excite the interest of the public for many years.

The article on Handel's early biblical oratorios *Esther* and *Deborah* by David Vickers illustrates the mixed reception of this format and the difficulty of the Italian singers in mastering English pronunciation. This led to Handel providing dual language versions, with the wordbook supplying English audiences with the text in their own language. Vickers describes the forensic analysis needed to see precisely what was done for these performances.

Ruth Smith returns to her classical study of Charles Jennens, one of Handel's most important collaborators. There had been an attempt to traduce Jennens' character, mostly by rivals in his championing and publication of unexpurgated works of William Shakespeare. Jennens' work in this field of literature was not equalled in its thoroughness until modern times. Later in the article Smith explores the musical characterisation of Saul in the eponymous oratorio and how Saul to some extent mirrors Jennens' own character. There is furthermore an interesting comparison of Saul's kingly style with that of Charles I. This article is unsurpassed in its exploration of the links between the Bbible text and the words used by Jennens. Both Handel and Jennens were indeed fortunate in their relationship and we in the 21st century are the beneficiaries of this partnership.

Annette Landgraf, one of the team of scholars working in Halle, gives us an interesting description of how what is widely known as 'Handel's Largo' became detached from its position in the opera *Serse* and had a life of its own for many years. An arrangement for violin, harp and organ by Joseph Hellmesberger senior (1828-1893) was first performed on Easter Sunday 1876 by Joseph Alexander Zellner (1823-1894) in the Hofoper Theatre Vienna as part of a concert for the benefit of the Opera's 'Pensions-fond'. It received mixed reviews, with some deploring its separation from the opera and others remarking on the beauty of the tune. Landgraf has unearthed no fewer than 42 different sets of words attached to the tune, from 'Calm friendly shade by Maria X. Hayes' in 1882 to 'Crux Fidelis' by Edward Higginbottam in 2002.

I can do no more here than give readers the flavour of this prodigious book, but hope that the range of articles will stimulate interest amongst thinking Handelians, and would advise readers to get hold of the book itself to be informed about up-to-date scholarship.

News and Events

News

Conductor and harpsichordist **Laurence Cummings** (Academy of Ancient Music) has been awarded an OBE for services to Music in the New Year Honours List for 2024.

Harpsichordist and fortepianist **Andreas Staier** will be presented with the Bach Medal of the City of Leipzig on 14 June 2024.

Francis Knights has completed a cycle of all Bach's clavier and organ works, in 42 recitals in Cambridge (2017-2023).

The Packard Humanities Institute has finished its edition (1999-2024), ***Carl Philipp Emanuel Bach: The Complete Works***, cpebach.org.

The complete **50-year Index** to the *English Harpsichord Magazine* and *Harpsichord & fortepiano*, vols. i-xxviii (1973-2023), is now available as a free pdf from https://hfmagazine.info/archive or to purchase in printed form.

A new bibliography of ***Anthologies of Musical Works in Print and Manuscript from the 15th-17th Centuries in the Library of Congress Music Division*** is available at https://www.loc.gov/static/research-centers/performing-arts/documents/Anthologies-Final-Bibliography.pdf

The **Vleeshuis Museum** in Antwerp will close in Autumn 2024 for restoration https://museumvleeshuis.be/en/klaar-voor-de-toekomst.

Obituaries

Harpsichord maker **Andrew Garrett** (1938–October 2021) has died at the age of 83.

Baroque violinist **Florence Malgoire** (9 March 1960–11 August 2023) has died at the age of 63.

Swedish conductor **Arnold Östman** (24 December 1939–15 August 2023) has died at the age of 83.

Scholar and performer **Bernard Brauchli** (5 May 1944–11 November 2023) has died at the age of 79.

Listings

EARLY MUSIC SOCIETIES AND EVENTS

Early Music Fora and events

Border Marches Early Music Forum, www.bmemf.org.uk

13 April 2024, Workshop for Orchestral String Players, tutor Julia Bishop. Stoke Bliss & Kyre Village Hall

29 June 2024, Straus, *Missa Concertata in Echo* - for singers & instrumentalists, tutor David Hatcher. Bishopswood Village Hall, Kerne Bridge

5 October 2024, Workshop for instrumentalists, tutor Alison Kinder. Yarpole Village Hall, Leominster

30 November 2024, Gibbons, Hooper and contemporaries, workshop for singers, tutor Katy Silverman. The Bridges Centre, Drybridge Park

Early Music Forum Scotland, www.emfscotland.org.uk

13 April 2024, Viol Consort Café, tutor Susanna Pell. St Catherine's Argyle Church, Edinburgh

13 April 2024, EMFS Choir Meeting, *Missa l'homme armé*, director Michael Cameron-Longden. St. Cecilia's Music Museum & Concert Hall, Edinburgh

20 April 2024, Recorder Workshop with Palisander Recorder Quartet. Dollar Academy

8 June 2024, Viol Consort Café, St Catherine's Argyle Church, Edinburgh

Eastern Early Music Forum, www.eemf.org.uk

9 March 2024, Sebastianist Music from Renaissance Portugal, tutor Rory McCleery. Horningsea Village Hall, Cambridge

North East Early Music Forum, http://www.neemf.org.uk

7 April 2024, NEEMF performing day. Bowes Museum, Barnard Castle

28 April 2024, NEEMF Day Out at Temple Newsam House, Leeds

18 May 2024, *Christ lag in Todes Banden*, tutor Stephen Muir. The Church of All Souls, Leeds

1 June 2024, *Get a Handel on Handel!*, tutor Amanda Babington. Clements Hall, York

North West Early Music Forum, https://nwemf.org

23 March 2024, Voices and instruments, tutor Lisa Colton, Liverpool Parish Church

20 April 2024, *O What Evil is War*, voices and instruments, tutor Gawain Glenton. Preston

18 May 2024, Handl, *Opus Musicum*, tutor Stephanie Dyer. Manchester

9 November 2024, Padilla, tutor Clive Walkley. Friends Meeting House, Lancaster

16 November 2024, Vocal and Instrumental music, tutor Grace Barton

Midlands Early Music Forum, http://memf.org.uk

20 April 2024, *The Triumphs of Oriana*, tutor Giles Underwood. Tamworth Church

11 May 2024, Music and Ritual in a c16th Florentine Convent, tutor Laurie Stras. Angel Centre, Worcester

22 June 2024, Marc'Antonio Ingegneri, tutor Gareth Wilson. St Philip's Church Centre, Dorridge

Southern Early Music Forum, https://semf.org.uk

20 April 2024, *Gaudeamus*, tutor Peter Syrus. Scaynes Hill Village Centre

8 June 2024, Workshop for voices and instruments, tutor Alison Kinder. Clapham and Patching Village Hall, Worthing

20 July 2024, Conference: *Singing the Baroque, and beyond*, St Paul's Church, Canterbury

29 September 2024, Vivaldi and contemporaries, tutor John Hancorn. Headcorn Village Hall

19 October 2024, *The life and music of Thomas Morley*, tutors Will Dawes and Katie Bank. Findon, West Sussex

9 November 2024, Lassus for voices and instruments, tutor Patrick Craig. Bosham

South West Early Music Forum, http://www.swemf.org.uk

13 April 2024, Medieval plainchant and polyphony for Eastertide, tutor Emma Hornby. St Monica's Chapel, Bristol

25 May 2024, Workshop with David Hatcher. Thorverton, Devon

22 June 2024, Workshop with Mark Wilson

20 July 2024, Annual General Meeting

28 September 2024, *Song of Songs*, tutor Bruce Saunders. All Saints Church, Clifton.

12 October 2024, Workshop with Philip Thorby. Thorverton, Devon

23 November 2024, Workshop with David Allinson. Bristol

Thames Valley Early Music Forum, http://www.tvemf.org

13 April 2024, *Ego flos campi*, Spanish and Portuguese Polyphony, tutor Owen Rees, Queen's College, Oxford

7 September 2024, *An Auld Alliance*, music from Renaissance Scotland, tutor Rory McCleery. Northwood

Conferences

The conference **Women, Opera and the Public Stage in Eighteenth-Century Venice** will take place at the Norwegian University of Science and Technology on 11-13 April 2024. Contact: woven@musikk.ntnu.no

The conference **Rome, Crossroad of Arts between the 17th and 20th centuries**, will take place at the Conservatory of Music 'Santa Cecilia' in Rome on 14-16 May 2024. Contact: 2024rca@conservatoriosantacecilia.it

The symposium **Musica Mercata: Finance, Commodity and the Music Industry from Antiquity to the Present**, will take place at the Sibelius Academy, Helsinki, on 5–7 June 2024. Contact musicamercata2024@uniarts.fi

The workshop **Early Modern Sensory Subjectivities** will take place at the University of Oxford on 6-7 June 2024, contact: leah.clark@conted.ox.ac.uk

The 12th annual Historial Keyboard Society of North America conference on **Cultural & Material Histories of Historical Keyboard Instruments** will take place at Colonial Williamsburg, Virginia, on 26-29 June 2024. Website: www.hksna.org

The conference **Economy, Management, and Staging of performances in the 17th and 18th centuries** will take place in Lisbon on 27-30 June 2024. Contact: dscemspconference2024@gmail.com

The Bate Collection/Galpin Society/Musical Instruments Museum (Brussels) conference on **Mahillon and his time: Musical instruments between industrialization and geopolitics** will take place on 27-30 June 2024 in Oxford and 5-7 July 2024 in Brussels. Contacts: alice.little@music.ox.ac.uk, MahillonBrussels2024@mim.be

The symposium **Issues in Scholarship in Music of the 17th and 18th Centuries: Sources, Editing, Performance** will take place at Royal Birmingham Conservatoire on 1-2 July 2024. Contact: carrie.churnside@bcu.ac.uk

The conference **Music and Majesty: Chapels Royal, Cathedrals, and Colleges, c.1485-1688** will take place at the Society of Antiquaries, London, on 1-2 July 2024. Contact: chapelroyalconference@gmail.com

The American Bach Society conference **Global Bach** will take place at Emory University, Atlanta, on 26–29 September 2024. Contact: vicepresident@americanbachsociety

The symposium **Global Musical Instrument Market: Making, Trading and Collecting in the 19th Century and the Early 20th Century** will be held at the Musée de la Musique in Paris on 18 November 2024. Contact: anais.flechet@uvsq.fr

The 21st Biennial International **Conference on Baroque Music** will take place at the Royal Birmingham Conservatoire on 16-20 July 2025, contact: shirley.thompson@bcu.ac.uk

Festivals

14 March-20 April 2024, **London Handel Festival**, http://www.london-handel-festival.com

3-7 April 2024, **Overstrand Early Music Festival**, Norfolk, https://www.tofem.uk

12–14 April 2024, **Baldwin Wallace Bach Festival**, https://www.bw.edu/schools/conservatory-music/bach-festival

9-20 May 2024, **Handel Festspiele Göttingen**, www.haendel-festspiele.de

10-12 May 2024, **Bristol Early Music Festival**, http://bristolearlymusicfestival.uk

17-20 May 2024, **Tage Alter Musik Regensburg**, www.tagealtermusik-regensburg.de

24-26 May 2024, **Beverley and East Riding Early Music Festival**, https://www.ncem.co.uk/whats-on/bemf

24-26 May 2024, **Handel Festival Halle**, https://haendelhaus.de/en/hfs/veranstaltungsliste

1-16 June 2024, **Connecticut Early Music Festival**, www.ctearlymusic.org

4-9 June 2024, **Stockholm Early Music Festival**, https://www.semf.se

7-16 June 2024, **Das Bachfest Leipzig 2024**, https://www.bachfestleipzig.de/de/bachfest

7-23 June 2024, **Aldeburgh Festival**, https://brittenpearsarts.org/landing pages/aldeburgh-festival-2024

12-15 June 2024, **English Haydn Festival**, https://englishhaydn.com/index.html

6-13 July 2024, **York Early Music Festival**, https://www.ncem.co.uk/yemf

11-27 October 2024, **Brighton Early Music Festival**, http://www.bremf.org.uk

13-16 November 2024, **London International Exhibition of Early Music**, https://lifem.org

8-15 June 2025, **Boston Early Music Festival**, http://www.bemf.org

EARLY MUSIC ORGANIZATIONS

American Bach Society, https://www.americanbachsociety.org

American Guild of Organists, https://www.agohq.org

Bach Network, https://www.bachnetwork.org

Benslow Trust, http://www.benslowmusic.org

Boston Clavichord Society, www.bostonclavichord.org

British Harpsichord Society, http://www.harpsichord.org.uk

British Institute of Organ Studies, http://www.bios.org.uk

Cambridge Academy of Organ Studies, http://www.cambridgeorganacademy.org

L'association Clavecin en France, http://www.clavecin-en-france.org

Cobbe Collection, http://www.cobbecollection.co.uk

Dolmetsch Foundation, https://www.dolmetsch.com/dolmetschfoundation.htm

East Anglian Academy of Early Music, http://www.eastanglianacademy.org.uk

Early Music America, https://www.earlymusicamerica.org

Fellowship of Makers and Researchers of Historic Instruments, http://fomrhi.org

FIMTE, International Festival of Spanish Keyboard Music, http://www.fimte.org

Finnish Clavichord Society, suomenklavikordiseura.blogspot.com

The Friends of Square Pianos, http://www.friendsofsquarepianos.co.uk

Galpin Society, http://www.galpinsociety.org

Handel Institute, https://handelinstitute.org

Handel Friends, www.handelfriendsuk.com

Historical Keyboard Society of America, https://www.hksna.org

London Bach Society, http://www.bachlive.co.uk

London Handel Festival, http://www.london-handel-festival.com

National Centre for Early Music, http://www.ncem.co.uk

National Early Music Association UK, http://www.earlymusic.info/nema.php

Het Nederlands Clavichord Genootschap, www.clavichordgenootschap.nl

Netherlands Bach Society, https://www.bachvereniging.nl/en

REMA, European Early Music Network, https://www.rema-eemn.net

Royal College of Organists, https://www.rco.org.uk/

Schweizerische Clavichordgesellschaft, www.clavichordgesellschaft.ch

Stichting Clavecimbel Genootschap, http://www.scgn.org/¬index.php

Swedish Clavichord Society, http://goart.gu.se/gcs

Japan Clavier Society, www.claviersociety.jp

Vlaamse Klavecimbel Vereniging, http://www.vlaamseklavecimbelvereniging.be

Westfield Center for Historical Keyboard Studies, http://westfield.org

MUSICAL INSTRUMENT AUCTIONS

Brompton's (UK), https://www.bromptons.co

Christie's (USA), https://www.christies.com/departments/Musical-Instruments

Gardiner Houlgate (UK), https://www.gardinerhoulgate.co.uk

Gorringe's (UK), https://www.gorringes.co.uk

Ingles Hayday (UK), https://ingleshayday.com

Peter Wilson (UK), https://www.peterwilson.co.uk

Piano Auctions (UK), http://www.pianoauctions.co.uk