

Structured listening projects for musicians

Francis Knights

Introduction

From early in the history of recorded sound, questions were raised as to what music recordings were really for, and how they might best be used. The remarkable and widespread circulation of commercial shellac, then LP discs, aided by the invention of radio broadcasting, soon overwhelmed these concerns, but some performers retained doubts as to the artistic value of recordings relative to the ‘reality’ of live performance. Others, such as pianist Glenn Gould (1932-82), in his 1966 essay, ‘The Prospects of Recording’, prophesied the demise of the concert, partly due to the high normalized technical standards that multi-take editing provided – and that Gould welcomed.¹ Gould had abandoned the concert stage for the recording studio two years earlier, but almost no other classical musicians have followed his path. The arrival of the CD in 1982 led to an explosion both of new recordings and reissues, the market eventually becoming saturated and sales falling quickly after about 2000.² Despite the vast quantity of material available by the century’s end, access to material at scale still remained surprisingly difficult, and discographer Timothy Day, in a book section called ‘Musicologists and historians don’t listen to recordings’, noted as recently as 2000 that one ‘obvious reason why so little has been done to investigate discs and tapes is that there are very few large collections of sound recordings, and none of them are easy to use’.³

The arrival of online sound repositories such as Spotify, Apple Music and Soundcloud has transformed access to materials out of all recognition over the past decade,⁴ and the access problem is now turned on its head: musicians, students and listeners face what Jemima Kelly calls ‘digital overabundance’⁵ and Jonathan Dunsby describes as an ‘overwhelming abundance’⁶ of what Helmut Rösing categorizes as *Übertragungsmusik*, or ‘transmitted music’.⁷ Whereas Day lamented the lack of the bibliographic tools that made the serious study of recordings possible, the difficulty twenty-five years later is now the vastness of the options: ‘the unlimited amount of choice is paralysing’, with 675 million songs on Spotify, so ‘the over-availability of everything ... lessens our desire for it’.⁸ The automated ‘recommendation engines’ used by Amazon and others seek to locate music in similar styles for individual listeners (‘if you enjoyed this, try that’), but provide only a very crude approximation to musical taste itself.⁹

In addition, the widespread availability of digital devices this century has led to frequent observations about declining cognitive skills such as concentration, the consequences being most serious for the young.¹⁰ Such distractions appear to be impacting students’ ability to read complete books,¹¹ and the length of things such as film and music are now seen to be a barrier to engagement – modern listeners and viewers seem to have become much more impatient. For

music students specifically, while listening remains an important part of their experience, it is now less correlated with the repertoire they are studying, as noted in a 2011 US study: while music majors spent far more time listening to music than practicing their instrument or voice, the ‘majority of that listening time was done for personal interest, rather than for their music studies’, and was principally non-classical.¹² For spoken word recordings such as lectures, the statistics are alarming: 31% of Americans aged 18-29 listen to speeded-up playback to save time, compared to 8% of those over 45.¹³

For many, the constant music that surrounds us is a development to be welcomed, and Simon Frith suggests that this represents a new form of musical ‘ownership’: ‘we can now possess music as obsessively, as madly, as music once possessed us’.¹⁴ Personal repertoire access can be through use of self-devised playlists, through random shuffle or through recommendation engines,¹⁵ but much of this music is ‘heard’, alongside other activities, rather than ‘listened to’. For classical music in particular, this unfocused hearing (compare skimming the pages of a novel) may provide more in the way of pleasure than of knowledge. Focused ‘close listening’ – by analogy with ‘close reading’¹⁶ in literary studies – is a very different way of working, but one with huge potential for the study of music.¹⁷ Despite the vast quantity of sound recordings, there are few projects that systematically link these with the parallel score repositories now found at IMSLP, CPDL and elsewhere,¹⁸ but the number of different learning exercises that can be carried out by combining sound and vision is very large. A selection of these, together with repertoire and other components, are discussed below. The key engagement here is between score and recording, which means primarily notated music composed for foreground listening, thus largely classical music.

Projects

‘Directed listening’ can have many different goals, whether in terms of expanding repertoire knowledge, improving musical notation comprehension or exploring performing styles, but the key feature is meaningful organization. Topics may be sparked in any way – for example, hearing a performance of a ‘new’ composer deserving of further exploration – but defining the scale of each task is important: this can vary between a few additional works to a composer’s complete output.

The many different projects outlined here are very flexible, and can be adapted for use in group study, and at levels of experience from school pupil to working professional musician.¹⁹ They might be part of formal study (repertoire work continues to decline in university music degrees), for private study,²⁰ or just for pleasure. However, certain components increase the likelihood of substantial progress over time: regular periods allotted; repertoire variety; privacy; and the ability to concentrate undisturbed. For example, if it were possible to set aside 20’ or 40’ privately late every evening, and using a CD player, studio-type closed-back headphones and a tablet loaded with pdf scores, a daily diet of one Bach cantata, one Haydn symphony or one Beethoven quartet will cover even the largest genre in only a matter of months.²¹ It is vital to keep a notebook and pen handy for observations, keyed to score page numbers and/or recording

timings, which might include comments about anything from compass to orchestration to cadence formulas to technical errors to ornamentation to underlying structures. These observations can become the stimulus to research topics, identifying elements that are either characteristic or unusual.²² The ability to repeat and rehear sections or movements can be crucial.

Repertoire studies

Repertoire knowledge was in the past conditioned by the availability of scores for study or performance, and by the choices made by musicians and promoters for concerts, broadcasts and recordings. Complete Works editions were not available for many composers beyond the main classical figures, and even scholars would often have to make assessments without knowing all the works, and certainly without having heard them all. While there is still a divide between free access to material (for the vast majority of copyright works, printed scores are available rather than pdfs, making the study of contemporary music more challenging), numerous online editions (of varying quality) now exist, and it is likely that the number of assembled complete works online will grow. Thanks to sub-licensing, substantial recorded box sets as large as 330 discs have been issued in the CD era, including the complete (or near-complete) works of Bach, Beethoven, Brahms, Buxtehude, Chopin, Dvořák, Fauré, Frescobaldi, Froberger, Haydn, Mozart, Poulenc, Puccini, Tallis, Tchaikovsky, Rachmaninov, Saint-Saëns, Wagner and others, produced by labels such as Brilliant Classics, EMI and Universal.²³ There are no fewer than four competing complete Bach sets (from Brilliant Classics, Hänssler, Teldec and Universal), while online resources like Spotify provide multiple performances of mainstream works, with hundreds of alternatives. The listener can thus choose to investigate in breadth (a survey of different works by one composer, or a particular genre used by various composers) or in depth (numerous alternative performances of the same piece).

These alternatives have the potential to make previous discussions – and indeed grievances – about the contents of the classical ‘canon’ somewhat redundant: musicians are now free to easily investigate music of many different times, places and styles, and by composers and performers from every possible background.²⁴ The difficulty is dealing with the excessive number of choices, and having reasons to explore particular areas. The following sections outline some specific educational components which may assist in making such choices.

The ability to understand a composer’s output in its entirety should also be valuable, as all were writing for different instruments, venues, performers and circumstances, so a monograph on (say) Monteverdi’s sacred music which ignores the large number of madrigals he also wrote throughout his career will have only a partial understanding of how the composer worked.

Stylistic analysis

One of the most critical elements of musical composition is ‘style’, which includes all the melodic, harmonic, structural, technical and other elements that result in the final ‘sound’ of a work.²⁵ Traditional musical analysis has worked on many of these components separately for

hundreds of years, but the trained ear also has a remarkable ability to distinguish between (for example) the works of different composers, even to pinpointing work dates quite accurately, and identifying some of the influences that are embodied in a work ('sounds like'). This type of training can now be undertaken more systematically through structured listening, by selecting works on the basis of genre, chronology or form, for example. Detailed questions can then be asked, looking at the changes in one composer's style over time (for example, early or late Dufay, or Handel), or within one genre (changes in Haydn's symphonic structures), or between master and pupil (Bach and his sons) or in respect of questionable attributions (Josquin).

Notation reading

Familiarity with traditional music notation is a function of both time and experience: sufficient hours spent so that the notation becomes 'transparent' (in the same way one instantaneously grasps the meaning of a word without needing to spell out its constituent letters); and sufficient experience to have come across enough different aspects of the notation, such as complex tuplets, large numbers of ledger lines or unusual clefs. The learning of new notational features is often undertaken at an instrument (consider a young cellist learning the tenor clef for the first time), but the comprehension of notation and the execution of it are in fact two separable tasks. The first part can often be done more conveniently away from an instrument, and be supported by listening skills. For example, a violinist wanting to learn the viola could spend useful preparatory time following the printed viola parts of string quartets while listening to recordings, until the clef becomes 'transparent', as it already has for the treble clef. The same process can be used to learn transposition, as with the pairs of high and low horns in Eb in Mozart's Symphony No.19 in Eb, K132 from 1772 (ex.1).

The skills in clef reading and transposition are similar, in that the sounding pitch of the note does not match the written pitch relative to previously-known clefs, and must be mentally and aurally relocated. There are useful exercises for this that can be undertaken at the keyboard, such as playing movements from Bach's unaccompanied cello suites in different keys and at different pitches through imagined substitution of both clef and key signature at the start of each line, watching carefully for subsequent accidentals. These can include – from the original bass (F4) clef of the cello version – treble (G2), soprano (C1), alto (C3) and tenor (C4) clefs; those with a specialist interest in 17th and 18th century notation might also learn G1, C5 and F3 clefs. The piece could therefore be played in eight or so additional keys, simply through clef-substitution transposition.²⁶

Sinfonie in Es

KV 132

Entstanden Salzburg, Juli 1772

Allegro

Oboe

Horn in E-flat alto / E-flat alto

Horn in E-flat bass / E-flat basso

Violino I

Violino II

Viola

Violoncello e Basso

Ex.1 Wolfgang Amadeus Mozart, *Symphony No.19 in E-flat major, K132, first movement (opening)*

Original sources

Access to large numbers of original manuscript and printed sources in score repositories has given a new impetus to such reading skills, especially for repertoire not available in edited, modernized form. For example, a great deal of late 18th century German keyboard music uses C1 and F4 clefs, while English keyboard music from before the Civil War uses six- not five-line staves (the 'extra' lines are at the bottom of the right-hand and top of the left-hand stave, so are not that difficult to assimilate). More challengingly, Frescobaldi used six- and eight-line staves, the latter having two clefs (illus.1). Again, learning to read this notation competently in advance of actually trying out it at the keyboard helpfully separates out these two different tasks. The same is true of 17th-century German organ tablature, which almost no-one can now play from fluently.



Illus.1 Girolamo Frescobaldi, Toccata I from Toccate e partite d'intavolatura, Primo Libro (1637 reissue) (opening)

Open score in clefs was also widely used for keyboard counterpoint (from Frescobaldi and Froberger to Bach); although it takes longer to learn a work this way than through a two-stave keyboard format, it gives a much better sense of the layout and movement of the individual parts. Once open-score formats have been mastered, expanding to small then large orchestral scores becomes possible, at which point the clef and transposition skills mentioned above come into play. The more fluent the reading of such complex notation is, the better the actual playing, especially at sight.

As well as reading skills, working with digitized versions of the composer's own scores (for example, in Bach, Zelenka (illus.2), Mozart, Beethoven and so on) give unparalleled insight into the creative process, seeing where corrections and amendments are made, the ways in which orchestration is devised, and so on.

Sightreading

Sightreading (and sight-singing) is a particular case of notational fluency, but is also tied up with embedded repertoire knowledge, stylistic understanding and technique. A performer with a great deal of experience playing 17th-century German keyboard suites will not find too much of a challenge in exploring further repertoire of this kind (standard forms, textures, cadences and hand-shape patterns in a restricted number of keys, in this case), but the ability to read two separate lines of music, distribute the notes on them correctly between the hands, distinguish theme from accompaniment and so on often depends on the skill of accurately extracting the full musical data from the notation – at sight. An analytical understanding of how that skill works for any given player can greatly assist with their progress.



Illus.2 Jan Dismas Zelenka, *Magnificat in D major* (opening), autograph

Temperament and tuning

Most classical musicians are now trained to hear equal temperament as normal, usually a result of working with keyboard instruments. Similarly, pitch at A440 is near-universal. However, those working in music from before about 1800 can use recordings to help re-train their pitch sense into modes more appropriate for earlier repertoire. This can include what have become modern standards for historical instrument repertoire (for example, a semitone above A440, and a quarter-tone, semitone and tone below) covering Renaissance, Classical, Baroque, French Baroque and other early repertoire. Adjusting to hearing quarter-comma meantone as normal for much of 16th and 17th century keyboard and organ repertoire is a longer process, but can be done. An understanding of the importance of variously tempered thirds is also very valuable for choral singers.

Musical quality

Close comparative listening – for example, to a chronological sequence of string quartets by composers such as Mozart or Dvořák – can invite conclusions about the relationship of stylistic development to quality, and to the consistency of that quality. Evaluation of a composer's work in this way can be very instructive, showing how techniques are refined, how formal structures become more fluent, and how external influences are assimilated. While 'quality' is currently an unfashionable topic – many commentators now take refuge in safe subjective notions ('everyone's opinion is equally valid') rather than engaging with this difficult problem – but understanding why individual compositional components and overall results can be more, or less, successful or effective, is a vital part of understanding musical style. For example, Haydn's remarkable progression between his Op.9 (c.1769) and Op.20 (1772) string quartets is very evident when they are heard in close sequence, as is the development of Mozart's quartet-writing skill during his twenties.

Performance styles

The ear has the ability to 'focus in' on particular features, and one training exercise can (for example) use a single movement, such as the opening of Bach's Brandenburg Concerto No.6 (ex.2), heard repeatedly in the same or different recordings, but listening each time to specific instruments (here, viola, viola da gamba, cello, bass and harpsichord), or to particular features such as balance, blend, tuning, agogics, dynamics, bowing, accents, ornamentation, acoustics and so on. This type of task, undertaken a dozen or more times, can help begin to train the ear in the important skill of really listening to (rather than just hearing) recordings, and thereafter lead to comparative observations about musical performance styles that are important for any musician.²⁷ There is a great deal of comparative material of this kind available: Vivaldi's *Four Seasons* concerto set is thought to have been commercially recorded a thousand times.

Sonic qualities

Another form of close listening is to the sound quality itself, and even the venue or recorded medium. The choices made by sound engineers affect the balance, perspective and tonal quality of the musicians, and it is important to learn to hear these. For example, and as noted above, sequentially listening to ten or more different recordings of the opening of Brandenburg Concerto No.6 from the point of view of just sound is very instructive in terms of close-listening to (for example) the relative brightness of the viola tone, the balance with the gambas, or the resonances of the bass line. Teaching the ear to focus on detailed dynamics, frequency range and blend is a very worthwhile refinement of listening skills: experts can even identify particular recording studios, or church or cathedral acoustics. Further discernment is possible by those who spend most of their time listening to recordings professionally: Daniel Levitin has described his early work as a recording engineer, learning to distinguish between different makes of recording tape: 'Ampex 456 tape had a characteristic "bump" in the low-frequency range, Scotch 250 had a characteristic crispness in the high frequencies, and Agfa 467 a luster in the

midrange'.²⁸ Mark Tanner's aural experiment comparing midi and human recordings of Liszt's Piano Sonata in B minor²⁹ required 65 listeners to assess details such as pedalling technique, 'which for anyone is an extraordinarily challenging task', as Dunsby notes.³⁰

The image displays a musical score for the opening of Johann Sebastian Bach's Brandenburg Concerto No. 6 in B-flat major, BWV 1051. The score is arranged for a chamber ensemble consisting of six parts: Viola da braccio 1, Viola da braccio 2, Viola da gamba 1, Viola da gamba 2, Violoncello, and Violone e Cembalo. The music is in B-flat major and 3/8 time. The first system shows the initial melodic lines for the violas and the rhythmic accompaniment for the cello and double bass. The second system continues the melodic development for the violas and the accompaniment.

Ex.2 Johann Sebastian Bach, *Brandenburg Concerto No.6 in Bb major, BWV1051, first movement (opening)*

Orchestration

Opportunities for young composers to hear their work performed by an orchestra are becoming less common, and many writers now have to make do with digital presentations of audio scores, of variable levels of sonic realism. While there are numerous textbooks from the 19th and 20th centuries that explain the principles of classical orchestration (for example, those by Berlioz, Rimsky-Korsakov and Piston),³¹ the topic can also be studied historically in both directions through sound recordings. For example, piano score originals can be compared with recorded orchestrations and vice versa: reading a piano reduction of Mozart's Symphony No.34 while

listening to the orchestral version (ex.3); or reading Beethoven's symphonies from score while listening to Liszt's solo piano reductions (ex.4). This enables study of orchestration techniques, exploration of orchestral tone colours and doublings, the practicalities of keyboard arrangement of orchestral textures, and so on.

W. A. Mozart.

Adagio.

The image displays a piano reduction of the opening of Mozart's Symphony No. 34 in C major, K. 338, first movement. The score is written in 3/4 time and consists of three systems of music. The first system begins with a forte (f) dynamic and includes the tempo marking 'Adagio.' The second system features a piano (p) dynamic and includes a fortissimo (f) dynamic. The third system includes a crescendo (cresc.) marking and fortissimo (f) dynamics. The score concludes with a fermata and a C-clef. The composer's name, 'W. A. Mozart.', is printed in the upper right corner.

Ex.3 Mozart, *Symphony No.34 in C K338, first movement (opening)*

Allegro con brio ($\text{♩} = 60$)

The image displays three systems of musical notation for the opening of Beethoven's Symphony No. 3 in E-flat major, first movement, as arranged by Liszt. The tempo is marked 'Allegro con brio' with a quarter note equal to 60 beats per minute. The first system shows the piano introduction with a 'Ped.' (pedal) marking and 'p' dynamics. The second system shows the piano introduction continuing with 'Instr. à v.' and 'cresc.' markings. The third system shows the piano introduction continuing with 'Fl.', 'Clar.', and 'Cor.' markings.

Ex.3 Beethoven arr Liszt, Symphony No.3 in Eb, first movement (opening)

Musical taste

Close listening and repertoire studies also present an opportunity for the exploration and expansion of an individual's musical taste.³² There are a number of positive and negative factors involved in the concept of 'taste', which vary from person to person, although identifying components leading to musical dislike seems easier than finding specifiable (rather than generalized) elements which cause music to seem pleasant or satisfying to listen to. Repertoire exploration might usefully take the form of engaging with music that is actively disliked, both to understand the causes of this (which could be anything, from excessive dissonance to melodic blandness to dullness to formal shapelessness), and to discover whether the ear can learn to enjoy such music over time, due to increased familiarity and understanding: research has shown that the 'exposure effect indicates that in the absence of extreme negative qualities, liking increases with the more exposure one has to a stimulus'.³³ This may be related to experimental observations that correlate musical taste with listeners' ability to comprehend sonic complexity. Some authors also correlate 'understanding' with 'feeling': Bennett Reimer suggested that 'The more one can hear in music, the more one can feel from music'.³⁴ 'Feel' is being used here as a very general term, as musical listeners can have a great variety of intellectual, aesthetic, emotional or other 'feeling' responses to musical sound.

A questionnaire survey by Stidwestfunk radio in Baden-Baden some decades ago³⁵ ranked listeners' classical preferences as follows:

- 1 Popular classical music
- 2 Opera extracts and arias
- 3 Symphonies and orchestral concerts
- 4 Classical and Romantic Lieder
- 5 Chamber and instrumental music
- 6 Sacred music, organ music
- 7 Recent classical music
- 8 Complete operas
- 9 Avant-garde music

This list appears to concatenate issues around familiarity, length and listening difficulty: 'the known, familiar and expected are preferred to the new and unexpected'.³⁶ A musician wanting to expand their horizons would therefore be advised to explore further down this list, where there is plenty of new material awaiting investigation.

Conclusions

The combining of extensive libraries of both music scores and recordings provides new possibilities for the study of music across wider boundaries than ever before. The ability to assimilate aural, theoretical, historical and performance information in an easily repeatable way means that new subjects can be opened up for both private and formal study, and at a pace that is individually adjustable for maximum comprehension. The number of specific tasks relating to repertoire knowledge, training the ear, enhancing notational understanding, studying performance questions comparatively, analyzing orchestration or improving knowledge of musical style, quality and chronology, is almost unlimited.

Notes

- ¹ Tim Page (ed), *The Glenn Gould Reader* (London, 1987), pp.331-353.
- ² Felix Richter, 'The Rise and Fall of the Compact Disc' (17 August 2022), <https://www.statista.com/chart/12950/cd-sales-in-the-us>.
- ³ Timothy Day, *A Century of Recorded Music: Listening to Musical History* (New Haven and London, 2000), pp.228-231 at 231.
- ⁴ Websites <https://open.spotify.com>, <https://music.apple.com>, <https://soundcloud.com>.
- ⁵ Jemima Kelly, 'We need a cure for curse of digital overabundance', *Financial Times* (24 March 2025).
- ⁶ Jonathan Dunsby, 'Countless Western Art Music Recordings: Towards a Theory of What to Do With Them', in Per F. Broman and Nora A. Engebretsen (eds), *What Kind of Theory Is Music Theory? Epistemological Exercises in Music Theory and Analysis* (Stockholm, 2007), pp.187-202 at 187.
- ⁷ Helmut Rösing, 'Listening Behaviour and Musical Preference in the Age of "Transmitted Music"', *Popular Music*, iv (1984), pp.119-149. For an early case of listening observations in classical music, see Rob C. Wegman, 'Johannes Tinctoris and the art of listening', in Mark Delaere and Pieter Bergé (eds), *Recevez ce mien petit labeur: studies in Renaissance music in honour of Ignace Bossuyt* (Leuven, 2008), pp.279-296.
- ⁸ Kelly (2025).
- ⁹ Liz Pelly, *Mood Machine: The Rise of Spotify and the Cost of the Perfect Playlist* (London, 2025).
- ¹⁰ Jonathan Haidt, *The Anxious Generation: How the Great Reviring of Childhood Is Causing an Epidemic of Mental Illness* (London, 2024).
- ¹¹ See the observations by Rose Horowitch, 'The Elite College Students Who Can't Read Books', *The Atlantic* (November 2024) and Michael J. Petrilli, 'Seven Thoughts about Elite College Students who can't Read Books', *Education Next*, xxv/1 (Winter 2025), p.5.
- ¹² Robert H. Woody, 'Music Listening in the Personal and Professional Lives of University Music Majors', *Contributions to Music Education*, xxxviii/2 (2011), pp.11-28 at 11.
- ¹³ 'The need for 2x speed', *The Economist* (16 August 2025), pp.71-72. See also Anna Goldsworthy, 'The Lost Art of Listening', *The Monthly* (October 2015).
- ¹⁴ Simon Frith, *Performing Rites: Evaluating Popular Music* (Oxford, 1998), p.237.
- ¹⁵ Pelly (2025), p.105 calls this 'personalization'.
- ¹⁶ John Guillory, *On Close Reading* (Chicago, 2025).
- ¹⁷ Michael Beckerman calls this 'deep listening': see 'Can "Old-Fashioned" Approaches to Listening Contribute to Human Flourishing?', in Anna Harwell Celenza (ed), *Music and Human Flourishing* (Oxford, 2023), pp.69-77 at 74. For one experimental study of 'attentive listening', see Patricia J. Flowers, 'Patterns of Attention in Music Listening', *Bulletin of the Council for Research in Music Education*, cxlviii (Spring, 2001), pp.48-59; such studies tend to focus on group classroom listening. For anthropological observations on the topic, see Bruno Deschênes, 'Toward an Anthropology of Music Listening', *International Review of the Aesthetics and Sociology of Music*, xxix/2 (December 1998), pp.135-153.
- ¹⁸ <https://www.cpdl.org>, <https://imslp.org>. Note that there a number of 'scrolling scores' can be found on YouTube www.youtube.com and similar repositories.

¹⁹ For a study of group listening, see Thomas Smialek and Renee Reiter Boburka, 'The Effect of Cooperative Listening Exercises on the Critical Listening Skills of College Music-Appreciation Students', *Journal of Research in Music Education*, liv/1 (Spring 2006), pp.57-72.

²⁰ As in the method outlined in Francis Knights, *Studying music without going to university: an alternative education* (Hebden Bridge, 2022).

²¹ Where the recording or score order varies significantly, for example, using the Purcell Society edition of Purcell's songs (printed in alphabetical order) with the King's Consort set of recordings (Hyperion CDS44161/3, 2003), the CDs will need changing frequently.

²² For one example, see Francis Knights, 'Cadence patterns in Bach recitative: a guide for continuo players', *Sounding Board*, 14 (2020), pp.24-33.

²³ Composers whose output is too large for everything to have yet been recorded, let alone gathered into a single collection, include C. P. E. Bach, Palestrina, Lassus, Telemann and Vivaldi.

²⁴ For discussions of the 'canon', especially as applied to gender issues, see James Briscoe, 'Integrating Music by Women into the Music History Sequence', *College Music Symposium*, xxv (1985), pp.21-27, Marcia J. Citron, 'Gender, Professionalism and the Musical Canon', *The Journal of Musicology*, viii/1 (Winter, 1990), pp.102-117, Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music* (Oxford, 1992), William Weber, *The rise of musical classics in eighteenth-century England: a study in canon, ritual, and ideology* (New York, 1992), Marcia J. Citron, *Gender and the Musical Canon* (Urbana and Chicago, 1993), Cormac Newark and William Weber, *The Oxford handbook of the operatic canon* (New York, 2020) and William Weber and Beverly Wilcox, *Canonic repertoires and the French musical press: Lully to Wagner* (Rochester, NY, 2021).

²⁵ See the discussion of the components of musical style in Francis Knights and Pablo Padilla, *Formal Methods in Musicology: Models and Computation* (Newcastle, 2025), ch.2.

²⁶ For this method, see Francis Knights and Nigel Yandell, *Introduction to Keyboard Skills: A Practical Course for Classical Musicians* (Cambridge, 2026), ch.6.

²⁷ For one academic study of this kind using recordings, see Dorottya Fabian, *Bach Performance Practice, 1945–1975: A Comprehensive Review of Sound Recordings and Literature* (Aldershot, 2003).

²⁸ Daniel Levitin, *This is your Brain on Music: Understanding a Human Obsession* (London, 2019), p.3. See also Gary Gottlieb, *How Does It Sound Now? Legendary Engineers and Vintage Gear* (London, 2/2025).

²⁹ Mark Tanner, 'The Power of Performance as an Alternative Analytical Discourse: The Liszt Sonata in B minor', *19th-Century Music*, xxiv/2 (Fall 2000), pp.173-192.

³⁰ Dunsby (2007), p.191.

³¹ Hector Berlioz, *Grand traité d'instrumentation et d'orchestration modernes* (Paris, 1843), Nikolay Rimsky-Korsakov, *Principles of Orchestration* (Berlin, 1912) and Walter Piston, *Orchestration* (New York, 1955).

³² For the concepts of perceptions around musical taste, see Tomas Chamorro-Premuzic, Patrick Fagan and Adam Furnham, 'Personality and uses of music as predictors of preference for music consensually classified as happy, sad, complex, and social', *Psychology of Aesthetics, Creativity, and the Arts*, 4 (2010), pp.205-213, David M. Greenberg, Simon Baron-Cohen, David J. Stillwell, Michal Kosinski and Peter J. Rentfrow, 'Musical Preferences are Linked to Cognitive Styles', *PLoS ONE*, 10(7): e0131151 (2015), Levitin (2019), ch.8, Nolan Gasser, *Why you like it. The Science & Culture of Musical Taste* (New York, 2019) and Imre Lahdelma and Tuomas Eerola, 'Cultural familiarity and musical expertise impact the pleasantness of consonance/dissonance but not its perceived tension', *Nature Scientific Reports*, 10:8693 (2020).

³³ Shannon L. Layman and W. Jay Dowling, 'Did You Hear the Vocalist? Differences in Processing Between Short Segments of Familiar and Unfamiliar Music', *Music Perception*, xxxv/5 (June 2018), pp.607-621 at 617.

³⁴ Bennett Reimer, *Developing the experience of music* (Englewood Cliffs, NJ, 2/1985), p.2.

³⁵ Cited in Rösing (1984), pp.141-142.

³⁶ Rösing (1984), p.142.