
Performing practice

Howard Mayer Brown, David Hiley, Christopher Page, Kenneth Kreitner, Peter Walls, Janet K. Page, D. Kern Holoman, Robert Winter, Robert Philip and Benjamin Brinner

<https://doi.org/10.1093/gmo/9781561592630.article.40272>

Published in print: 20 January 2001

Published online: 2001

A term adapted from the German *Aufführungspraxis* (in America the usage 'performance practice' is generally preferred).

I. Western

As applied to Western music, the subject involves all aspects of the way in which music is and has been performed, and its study is of particular importance to the modern performer concerned with historically informed performance. Topics that may be considered aspects of performing practice include notational ones (i.e. the relationship between written notes and the sounds they symbolize, especially such matters as rhythm, tempo and articulation); improvisation and ornaments; instruments, their history and physical structure and the ways in which they are played; voice production; matters of tuning, pitch and temperament; and ensembles, their size, disposition, and the modes in which they are directed. Performing practice is generally approached through the study of treatises and instruction books, critical writings and iconographical material, as well as actual instruments and music. The present article summarizes the issues involved in different periods; particular topics relevant to instruments and their use are treated in separate entries.

1. General.

Howard Mayer Brown

Musical notation can be understood as a set of instructions indicating to the performer how the composer wished the music to sound. From the accent signs of the ancient Greeks and the staffless neumes of some medieval manuscripts (which reminded singers of the general shape of melodies they already knew, but did not indicate exact pitches or intervals) to the carefully marked scores of most 20th-century composers, methods of notation have changed radically over the centuries, along with the attitudes of composers to the degree of detail and precision they wished to offer the interpreter. Not all the elements of a performance can be fixed in writing. Even in the 20th century, when composers took more care than ever before to state exactly the quality and duration of each sound, different performances of a piece (including sometimes those by the same musician) varied in tempo, phrasing, articulation, timbre and so on. The amount and kind of deviation from a precisely determined ideal tolerated (or even encouraged) by composers have depended partly on convention – habit and training – and partly on the temperaments of the individuals involved and the practical requirements of particular situations – the size of the ensemble, the acoustics of the performing area, the nature of the occasion, and so on. Throughout history musicians in the Western world have cherished those ambiguities of notation that have allowed performers some freedom and given musicians and listeners alike the impression that a piece of music is created anew each time it is heard. The principle that the

performers should be allowed some scope to 'interpret' the notation subjectively was challenged successfully for the first time in the 20th century, with the advent of recordings and electronic means of fixing a composition in its definitive form once and for all.

In considering the kinds of information written music of the past supplies to performers, the student of performing practice must make a distinction between those elements of the original notation that may be misleading or confusing to a modern performer unless translated into symbols with which he is familiar, and those that originally had a fixed meaning which is now lost or ambiguous. The problems created by the first category are generally faced by editors, and are thus dealt with under Editing. Consideration of the second category is complicated by the fact that some signs permitted but did not demand particular styles of performance, while others changed their meanings over the years. Thus it is not entirely clear how the rhythms of plainchant and medieval secular monophony were interpreted, or even whether the notation demanded a particular solution; scholars disagree in their transcriptions of the time values of some early polyphony; the hypothesis that the Renaissance mensural system indicated precise tempos and tempo relationships is being questioned; the application to German and Italian music of the French 17th- and 18th-century rules of rhythmic alteration – the convention that allows or demands quavers to be played unequally even though they are notated in equal values – has been sharply challenged; and performers are beginning to learn that some signs for particular bowings and articulations in use today meant quite different things to late 18th- and 19th-century musicians. In short, the student of performing practice must investigate carefully the precise meanings of musical symbols in each period of music history and attempt to discover how they have changed over the years.

Perhaps even more important, scholars must try to establish the amount of freedom allowed the performer, by determining which aspects of performance were not fixed on paper during a particular period. Unwritten conventions make up the most difficult but also the richest category of problems of performing practice. In fact, all players and singers must ask themselves certain basic questions about the compositions they perform, most of which have not been precisely answered by composers: the exact tempo, whether alterations of the written rhythms are allowed or expected, which sonorities are best suited to the piece being played, how each note should be articulated, whether or not melodic embellishments are permitted or forbidden within the convention in question, whether the players are expected to improvise (or prepare for themselves before the performance) sections of the composition, and so on. The 'correct' tempo of a piece, for example, depends on a number of variable features, among them the size of the ensemble and of the concert hall and the mood of the performers on the day of the concert. Even since the invention and widespread adoption of the metronome, musicians and listeners have tolerated widely divergent tempos for the same piece (and, indeed, arguments continue about the accuracy and appropriateness of many composers' metronome markings). Singers must learn how, when, and whether to embellish their melodic lines, and how to sing florid ornamentation, before they can perform late Renaissance solo songs or late Baroque operatic arias in the way audiences first heard them. Some music calls for the addition of improvised or semi-improvised parts. Many modern performers of medieval music, for example, add drones and heterophony to the unadorned melodies of the troubadours and trouvères; harpsichordists and organists must learn how to invent their own part above a figured bass when they accompany 17th- and 18th-century music; and soloists must prepare cadenzas not supplied by the composers when they perform 18th- and 19th-century concertos and arias. Instrument makers and players have acquired a great deal of collective experience in reproducing the timbres of Baroque music by building replicas of old instruments and relearning the techniques required to play them, and this area of 'practical research' is gradually

widening to encompass the timbres of medieval and Renaissance music on the one hand, and late 18th- and 19th-century music on the other. Concurrently with their attempts to clarify the nature of old instruments by learning to play them again, students of performing practice have sharpened their perceptions of the sonorities of the past by studying matters of pitch level, tuning and temperament, research that often yields surprisingly practical results.

The further back one goes in music history, the fewer aspects of performance there are that composers established precisely in writing. The 20th century was something of an exception to that general rule, and offers examples of both extremes: on the one hand the meticulous, almost obsessively careful, markings of Schoenberg, Berg and Webern and the well-known aversion of Stravinsky to 'wilful' interpreters of his music, and on the other the controlled, and sometimes uncontrolled, improvisations introduced into their scores by John Cage and other members of the avant garde since 1945.

Composers of the 19th century, beginning with Beethoven, greatly increased the number and precision of their directions for performance by indicating tempos (by means of the metronome as well as by the use of conventional terms), phrasings, bowings, dynamics and so on. In the 17th and 18th centuries tempos were indicated only approximately by means of a fairly well understood convention using descriptive terms; some but not all bowings were marked, and performers were expected to realize keyboard accompaniments above a bass, and in many instances to embellish their own parts. In music before 1600 many aspects of compositions that later became a part of their very conception were left to the performers to determine (and presumably to change from occasion to occasion), such as the choice of voices and instruments, the accidentals required by the rules of *musica ficta*, and the way the syllables of vocal music were made to fit the notes.

Answers to many questions about performing practice – even for music of the not very distant past – can be found only by examining indirect evidence, such as the musical institutions of a period. Thus the subdiscipline of performing practice involves the study of social history, as well as the history of musical instruments (organology), of musical subject matter in works of art (iconography), of theoretical treatises, and of the music itself. Archival documents are often the only way to discover the number of performers engaged for a given occasion, what sorts of events were accompanied by music, and so on. And investigations of the organization and rules of various institutions – the minstrel guilds of the Middle Ages, the courts, cathedrals and academies of the Renaissance and the Baroque era, and the concert societies of the 19th century, for example – are often necessary prerequisites for discovering various details about the way music was performed in past times.

Some, and perhaps many, basic questions about past performing practice can never be answered completely. One can never know, for example, the quality of voice most cultivated by the virtuoso singers of the Italian Renaissance, or the exact specifications of most medieval instruments. Moreover, one might reject on aesthetic grounds some of the qualities most prized by past musicians (early recordings convincingly demonstrate how much taste changed even during the 20th century). Reproducing as closely as one can the techniques and timbres known to be appropriate to a given period can never replace performances that are musically convincing to the audience; and yet the means and style of performance imagined by a composer are so indissolubly bound up with the whole musical fabric that he or she has set down, that the communication and impact of the composition are seriously impaired if the sounds imagined are not at least kept in mind when preparing modern performances.

The study of performing practice as a subdiscipline of musicology has been fostered by an implicit distinction between that which standard notation may indicate precisely – namely an exact pitch (within a given tuning) and duration for each note – and that which requires a knowledge of the style for its proper interpretation. While this approach may be extended to music in non-European notations, it is obvious that for societies without a written tradition distinctions cannot be made between the way the music looks on the page – its style considered in the abstract – and the way it sounds. Thus performing practice is an inseparable part of the central concerns of ethnomusicologists who work with orally transmitted repertoires, and of those scholars who work with the music of ancient civilizations, such as those of Egypt, Greece and Rome.

2. Medieval monophony.

(i) Sacred.

David Hiley

The principal sources of information about the performance of Western medieval sacred monophony are the chant manuscripts themselves and the writings of theorists. Owing to the widespread preservation of such sources a great deal is known about plainchant performance in the Middle Ages (for a fuller account see Hiley, B(i)1989). However, as is frequently the case in the discussion of performing practice, problems such as contradictory accounts or missing details create obstacles that prevent the confident reconstruction of such performances. Any modern performance, therefore, must depend considerably on subjective interpretation. Furthermore, unlike more complex music, monophonic chant can support a very wide range of interpretation and still remain ostensibly true to the notes preserved in the sources.

The case of the Eastern (Orthodox) Churches is different, for in some traditions the melodies have been transmitted orally for more than a millennium. Questions naturally arise, therefore, as to the constancy of the transmission, especially since in the best-documented tradition – Byzantine chant – very grave changes may be seen to have occurred.

For the reconstruction of chant performance, several aspects have to be considered. The first is liturgical context: the function of the chant in the ceremony, the forces needed to sing it, and other practical considerations such as the position of the singers in the building. Such matters were clearly of great importance through the ages, but only gradually were they set out in written documents. The earliest surviving sources in which liturgical ceremonies are described in any detail are the *Ordines romani*, dating from the 7th–9th centuries, regarding Roman liturgical practice; somewhat over two dozen are extant (ed. M. Andrieu, *Les Ordines romani du haut Moyen-Age*, Leuven, 1931–61), many of them copied in the Carolingian period by Frankish churchmen concerned to follow Roman usage. The most widespread monastic Rule, that of St Benedict (c530), also sets out broad guidelines about how the canonical Hours are to be performed. During the following centuries such documents became more detailed and were available for a greater number of churches, particularly monastic ones. The Rules of religious orders such as the Cistercians (in the 12th century) and the Dominicans (in the 13th) are full of specific information about liturgical usage. From the 13th century onwards ordinals survive from a number of important churches (Chartres, Paris, Salisbury etc.), providing enough detail to make possible the reconstruction of these aspects of liturgical performance. Knowledge of performance

conditions can also help in the reconstruction of the content of liturgical services: for example, if the performance conditions obtaining in a 9th-century service also applied in a 7th-century service of the same kind, there is a strong possibility that the same melody was sung in the 7th century as in the 9th, even though no notated sources for the earlier period exist.

A second aspect, concerning the way the chant sounded, is much more problematic. Little is known about the sort of voice production favoured over the centuries, or about dynamic level or tempo: vocal colour, loudness and speed affect the way chant is sung and heard, but the musical sources are silent on such matters. It is not even clear if all genres of chant were performed in the same way. There are, however, indications that tempo varied according to the solemnity of the day: the more important the occasion, the slower the tempo. One of the earliest such recommendations is a passage in a *Regula canonicorum* of Chrodegang of Metz (c755; *PL*, lxxxix, 1069), which states that the number of singers and the rank of the feast day were the determining factors. The Cistercian *Instituta patrum de modo psallendi* (13th century) refers on numerous occasions to faster and slower singing (*GerbertS*, i, 5–8; see also Van Dijk, B(i)1950). Information of a more specific nature is given in a passage in the *Commemoratio brevis de tonis et psalmis modulandis* of about 900, which says that in the antiphons for Office psalms, antiphon and psalm were delivered in the same tempo, but the final repeat of the antiphon was sung at half the speed ('duplo dumtaxat longius'). Cantic antiphons, however, were sung slowly from the start.

The most detailed account of chant singing almost until modern times is Conrad von Zabern's *De modo bene cantandi* of 1474 (discussion and partial translation in Dyer, B(i)1978). It warns against such faults as aspirating notes within a syllable, over-nasal tone, distorted vowel colours, forced high notes (but trumpet-like low notes are recommended), and lazy delivery and inappropriate posture. The vast majority of texts relating to performance matters simply recommend moderation in choice of tempo and pitch, together with sweetness of voice production. (Many texts are discussed in Müller-Heuser, B(i)1963).

Johannes de Grocheio, writing at the end of the 13th century, is something of a special case. He compared chant genres to those of secular music, whose characteristics he described in more detail in an earlier passage. Thus, for example, he stated that the gradual and alleluia were sung 'in the manner of a *stantipes* or of a *cantus coronatus*, so that they may bring devotion and humility to the hearts of their hearers'; the *stantipes* was previously described as difficult, both textually and musically, which 'makes the minds of young men and girls dwell on it', and the *cantus coronatus* is 'composed entirely from longs, perfect longs', also implying some ceremoniousness. The sequence that follows is, on the other hand, 'sung in the manner of a *ductia*, so that it may make [the hearers] joyful', the *ductia* having been described as 'light and rapid in its ascents and descents'. Yet just when a distinction between grave and lively seems to be emerging, Grocheio states that the offertory 'is sung in the manner of a *ductia* or of a *cantus coronatus*'.

Very rarely, there are hints of what may be called an aesthetic appreciation of tempo. In the *Scolica enchiridiadis* (9th century) it is stated: 'Whereas one melody is better sung more quickly, another is sweeter when sung more slowly. For one can know by the very formation of a melody whether it is composed of fast or slow phrases' (Schmid, B(i)1981, p.89; Erickson, in Palisca, B(i)1995, p.53).

Another clear sign that chant was not always sung in a flat and featureless manner is the existence of a small number of 10th-century chant books in which the neumes are supplemented with small letters, most of which have significance for pitch and rhythm, a few for delivery (*see also* Notation, §III, 1). The meaning of these letters is explained in a letter reputedly written by Notker of St Gallen at the end of the 9th century (*see* J. Froger, *EG*, v, 1962, pp.23-72). Among those concerning delivery are ‘f’ (*cum fragore seu frendore feriat*: ‘to be performed with harsh or percussive attack’), ‘k’ (*clangere*: ‘with a ringing tone’), ‘p’ (*pressionem*: ‘driving forward’; *prensionem*: ‘with urgency’) and ‘r’ (*rectitudinem vel rasuram ... crispationis*: ‘with straight or forthright vibratoless [tone]’).

Many more such significative letters refer to rhythmic detail, for example ‘c’ (*cito* or *celeriter*: ‘to be performed rapidly and quickly’) and ‘t’ (*trahere*: ‘drag out’; or *tenete*: ‘hold’). The same manuscripts that are rich in significative letters contain many details of notation that are rare or unknown elsewhere; they include *episemata* and the deliberate modifying or distorting of the normal neume shape to suggest a different significance. These and many other features have occasioned extensive discussion, the chief issue being whether they can be interpreted in mensural rhythmic terms, and, if so, which rhythmic values are appropriate. On the one side, many have argued that the rhythmic indications are no more than nuances, agogic modifications of the basic flow. This is more or less the position adopted in the early years of this century by the monks of Solesmes; it became known as ‘equalist’ because all notes are basically of equal length. On the opposite side, the ‘mensuralists’ have been of varying opinions, some proposing two basic mensural units in the ratio 2:1, while others prefer three or more units (in the ratio 3:2:1 or 4:2:1, etc.). Further scope for varied note values is provided when they are grouped in bars, with the necessary flexibility to accommodate shorter, longer or dotted notes. While such meanings can be read into the notation, there is almost no firm contemporary evidence – in theoretical writings, for example – that these were envisaged. It is true that several authors speak of long notes, but with reference only to the closing notes of phrases. Only the *Commemoratio brevis* (c900, therefore contemporary with the manuscripts richest in notation detail) attaches proportional value to long and short notes: ‘The longer values consist of the shorter, and the shorter subsist in the longer, and in such a fashion that one has always twice the duration of the other, neither more nor less’ (*see* Bailey, B(i)1979, p.103). Yet the necessary link between such statements and the notational signs is lacking.

It is not surprising, therefore, that a wide range of interpretations have been proposed, ever since Lambillotte made mensural transcriptions from the early St Gallen manuscript **CH-SGs** 359. Pothier believed that the notational signs were a limited and chronological phenomenon and ignored them for the purposes of making the Vatican editions of chant, the *Graduale romanum* (1908) and the *Antiphonale romanum* (1912). This was the cause of the famous break with Solesmes, whose own chant editions, produced under the leadership of Mocquereau, add supplementary bars and dots indicating agogic nuances. For a group of scholars, including Houdard and Riemann, the text-syllable had to maintain a constant length, the notes being shorter or longer depending on how many were allotted to the syllable in question. Wagner transcribed with minim, crotchet and quaver, later with dotted crotchet, crotchet and quaver (in *AdlerHM*). Jeannin used only crotchet and quaver. (For other mensuralist transcriptions *see* Jammers, B(i)1937 and Vollaerts, B(i)1958.) Dechevrens had the interesting idea that many notes of Gregorian chant were of ornamental rather than structural significance, and he transcribed accordingly. His transcriptions, though barred, have melodic ornamental flourishes: the music thus resembles, at least on the rhythmic surface, the melodies of Coptic chant taken down from oral tradition. The adoption of one of the other mensuralist

interpretations, on the other hand, may result in a performance closer to that of Greek Orthodox chant today. Furthermore, the guttural, forceful and vibrant delivery of Orthodox singers need not be ruled out as an impossibility for Western chant. There is, however, no evidence that Latin singers ever used the *ison* or drone note of late Byzantine chant, which in any case does not seem to be documented in the East before the 15th century (Jammers, B(i)1962, p.185; refuted by Nowacki, B(i)1985-6, p.260). The term 'paraphonista' used in a few early *Ordines romani*, sometimes adduced in this context, simply means 'cantor' (Van Dijk, B(i)1963, pp.346-7).

No matter how much scholars read into chant notation and into theoretical writings, these sources cannot be expected to provide a full understanding of performing practice. One of the few hints as to how much remains unexplained may be found in the treatise of Hieronymus de Moravia, who not only gave rules about which notes should be longer than others, but also wrote about 'special effects' in singing chant (see Cserba, B(ii)1935, pp.lxii ff, 181ff). He stated that most notes in chant are equal in length, but with five exceptions: the first note of a chant if it is the same as the final, the *plica longa* (a liquescent neume), the penultimate and final notes of a phrase, and the second note of a phrase. The 'special effects' include various types of vibrato on the long notes; some, including various grace notes (*reverberatio, nota mediata*), were peculiar to French singers.

These last remarks are a reminder that chant is a changing, living tradition, and was (and still is) subject to regional variation as well as to changes that happen over time. Later additions to the chant repertory from the 14th century onwards include melodies sometimes found with mensural or semi-mensural notation; these are mostly new melodies, and do not necessarily suggest that the same rhythmic style of performance was applied to the older parts of the repertory. The wholesale revisions of the 17th and 18th centuries (for example Neo-Gallican chant) meant that the restoration movements of the 19th century (most particularly that of Solesmes) had to reconstruct a long-dead tradition. That chant is part of a living liturgical tradition, therefore, means that for practical purposes decisions have to be made for which hard evidence is, strictly speaking, lacking.

(ii) Secular.

Howard Mayer Brown and Christopher Page

It was presumably in the realm of secular monophonic music that the concept of performance was principally fostered in the 12th and 13th centuries. The question of how medieval concepts of performance arose, and of how they were related not only to issues of social status but also to questions of domestic space and court decorum, may yet prove to be one of the most challenging areas of research in medieval performing practice. It is uncertain at present whether performers expected 'audiences' to keep silent, or whether listeners were generally accustomed to sit or stand. If there were discussions after the performance, we know little of the critical language employed. The consideration of such issues requires close attention to the nature of court experience, very remote from the modern scholar's own. A Franco-Italian manuscript of the mid-14th century, shows a knight performing before the court of King Arthur. The 'performer' stands before his 'audience' and is separated from them by a space that the modern eye instantly recognizes from the concert hall. The courtiers stand in deference to their monarch's state, but it remains uncertain whether such attendants in the Middle Ages (or long after) would have drawn a sharp distinction between listening and simply waiting in attendance. The call to stand while a musician sang was simply another call upon

their obligation of service that they could not deny. Nor it is clear where the performance shown in the picture is taking place. The presence of a throne suggests the great hall, a large and impersonal space used for council and ceremonial meals, and in no sense a specialized place for music.

The secular music of the Middle Ages survives in a more imperfect state than plainchant. A large corpus of secular monophony exists – Latin songs by clerics, other non-liturgical melodies setting Latin words (e.g. conductus), Spanish *Cantigas de Santa María*, English songs, Italian *laude*, German Minnelieder, and chansons in old French by trouvères and in Old Occitan (Provençal) by troubadours – but there is little information about music intended chiefly for instruments and about the songs of the lower classes. Moreover, most of the courtly songs that survive were written down in staff notation (as opposed to staffless neumes, which served merely as reminders of melodies already known) only from the 13th century onwards. And the manuscript sources often record widely divergent or even completely different versions of the music intended for particular poems – a probable indication that the repertory was transmitted chiefly by oral tradition. For several reasons, then, it should be assumed that only a fragment, and perhaps a small fragment, of the music that must once have been performed outside the patronage of the church has survived.

Most of the important details about the performance of this repertory can never be known. Most past debate on the performance of medieval secular monophony has centred on two questions of fundamental importance: the nature of rhythm in medieval song, and the extent to which instruments took part in its performance.

Secular monophonic melodies are notated mostly in neumes which unambiguously indicate the pitches but not precise time values. However, some trouvère melodies – for example, a number of those in the 13th-century Chansonier Cangé (**F-Pn** fr.846) – appear in a semi-mensural notation in which the scribe seems to have distinguished between some but not all longs and breves in a rather inconsistent way (or in a manner designed to make the notation look like that of a polyphonic source). Moreover, some trouvère melodies (but very few) were interpolated into 13th-century motets where their rhythms as well as their pitches are unambiguous. These questionable indications that secular songs were sometimes sung in strictly measured time have led some 20th-century scholars, beginning with Beck (B(ii)1910) and Aubry (B(ii)1909), to conclude that all trouvère melodies were regulated by Rhythmic modes – repeating patterns in triple metre. Indeed, virtually the entire corpus of secular song has been subjected by scholars to interpretation in modal rhythms, even though the particular pattern to be applied in individual cases is by no means always clear, and scholars have not agreed in their transcriptions.

Other scholars have used both duple and triple metres in their transcriptions, deciding between them apparently on aesthetic grounds. Still others, notably Van der Werf (B(ii)1972), have favoured more or less unmeasured rhythms, suggesting that most medieval song was declaimed freely, while not ruling out metrical and even modal transcriptions of dance-songs and some other chansons. This hypothesis has the virtue of claiming (at least by implication) that the notation indicates in the most efficient way possible the solutions to the musical problems at hand.

Similar controversy surrounds the question of instrumental participation. Some scholars find no justification for the addition of instruments; others add them freely, and still others take some middle position. Their arguments centre on a consideration of three points: the instruments commonly played during the Middle Ages and the musicians who played them; the information derived from musical

sources, miniatures, literary works and archival documents; and the way musicians in other cultures with monophonic song repertoires perform their music. Professional singers and instrumentalists of the Middle Ages were called *jongleurs*, minstrels, or, in German, *Spielmänner*. The terms describe musicians of widely differing sorts. There were poor vagabonds and wayfarers who sang songs, played popular tunes, juggled, did acrobatic tricks, or entertained townspeople and villagers with trained bears and monkeys; and there were *jongleurs*, associated with noblemen or aristocratic society, who were chiefly responsible for the performance of courtly songs. *Jongleurs* attended schools from time to time to renew their repertoires and they were expected to play a number of instruments.

Few instruments from the Middle Ages have survived, so knowledge of the medieval instrumentarium is based almost entirely on secondary evidence. This includes lists of instruments in literary works of the 12th, 13th and 14th centuries (such as Machaut's enumerations in his poems *Remède de Fortune* and *La prise d'Alexandrie*, and the lists in the anonymous 14th-century *Echecs amoureux*), which were apparently intended to be encyclopedic. Paintings and other art works depict large numbers of instruments; the well-known illuminations in the late 13th-century *Cantigas de Santa María* (E-E b.I.2) show Christian, Jewish and Moorish musicians playing instruments at the court of Alfonso X ('el Sabio'), King of Castile and León (1252–84). Among the instruments in the various lists are fiddles in several different shapes, rebecs, hurdy-gurdies, lutes, diverse sorts of guitars and psalteries, citoles, harps, rottes, transverse flutes, a variety of flageolets and recorders (some of them with two or more tubes), shawms, cornetts, *douçaines* (probably soft straight-capped shawms), bagpipes of one sort or another, and trumpets and percussion instruments.

It is by no means clear what music each of these instruments played. If they did take part in performances of medieval secular song, they may have accompanied singers by doubling them literally or heterophonically or by adding drones, preludes, interludes and postludes to the written melodic lines; or they may on occasion have performed the songs completely instrumentally, replacing the singers. (The selfconscious, middle-class Meistersinger of the 15th and 16th centuries, who modelled themselves to an extent on the earlier Minnesinger, forbade instrumental participation, but this should scarcely affect interpretation of medieval practices).

The case for instrumental participation in the performance of medieval secular song rests partly on literary and pictorial evidence. The pictorial evidence is often of questionable value. The scene shown in fig.2 is separated in time from the text it illustrates by more than a century, and the text calls for a harp, not the gittern that is shown. The Arthurian setting of the text, placing the narrative in a time remote from the original readers, and surely securing certain freedoms for the painter, does little to strengthen the authority of the picture. The case for instrumentation also rests partly on the nature of the instruments involved, and partly on the non-historical claim that monophonic repertoires are apt to be treated in similar ways in different cultures.

A passage from Huon de Mery's *Le tournoiement de l'Antechrist* suggests that instrumentalists at least on occasion accompanied singing: 'The *jongleurs* stood up, took fiddles and harps, and sang us songs, *lais*, tunes, verses, and refrains, and *chansons de geste*' (translation from *NOHM*, ii, 228–9). The principal reason for supposing that these songs might sometimes have been accompanied by drones derives from the nature of the instruments themselves, some of which – notably the hurdy-gurdy, the bagpipe, and various double pipes and recorders – could not be played without drones. (It is perhaps suggestive that the hurdy-gurdy lost its social standing as a courtly instrument in the 14th and 15th centuries just at the time when monophonic music was going out of fashion.) And the fiddle, perhaps

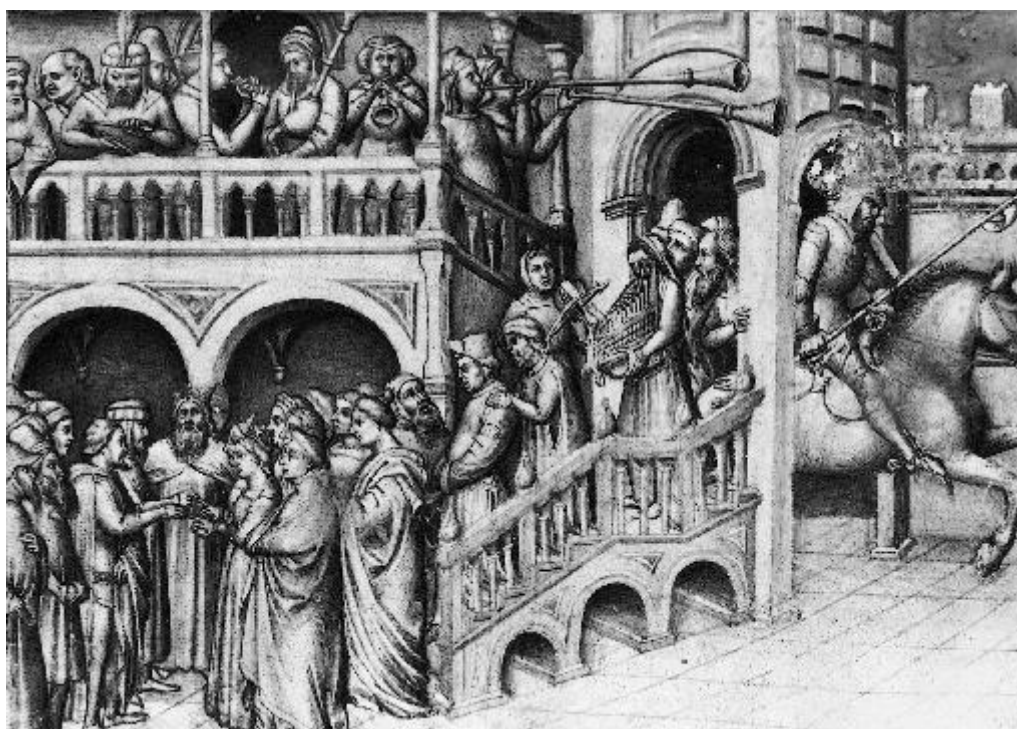
the most versatile and hence most important of the medieval courtly *bas* (that is, soft, as opposed to *haut*, or loud) instruments, was often supplied with drone strings or else tuned in a way to facilitate playing with drones, as Hieronymus de Moravia pointed out in the 13th century.

The highly ornamented character of the 13th- and 14th-century monophonic dances and some medieval songs has given rise to the speculation that instrumentalists played heterophonically – that is, by sounding simultaneously slightly varying versions of the same melody. While the evidence is far from conclusive, the theory is attractive, and it receives some support from the non-historical but nevertheless persuasive fact that heterophony, along with drones and improvised preludes, interludes and postludes, regularly occurs in west European local traditions and in many non-Western cultures (for example, in those Islamic countries that are thought to have influenced so deeply the character of the medieval instrumentarium).

3. Polyphony to 1400.

Christopher Page

Craig Wright (B(i)1989) has neatly summarized the essential circumstances of medieval performance: 'Medieval music manuscripts carried no presumption of absolute pitch, nor any indication of tempo, dynamics, instrumentation [or] vocal ornamentation ... All these the performer was expected to supply himself, drawing on a fund of musical experience and using his skill to extend and refine the accepted practices of his day'. The 'accepted practices' of medieval polyphony extended from the performance of elaborate counterpoint to impromptu treatments of plainchant. Many kinds of evidence illuminate them, but the writings of the theorists are the most consistently valuable because the musical manuscripts have not been systematically examined for the information they may provide. Pictorial sources, literary texts and archives also make a contribution, but when all the available information is assembled the result is only a collage drawn from different repertoires, procedures and levels of musical literacy.



Nakers, two shawms, bagpipe, two trumpets, fiddle and portative organ accompanying a wedding procession: miniature showing the marriage of Polynices and Tydeus to Argia and Deipyle from the 'Thebiad of Statius', Padua, c1380-90 (IRL-Dcb W.76A, f.13v)

Reproduced by kind permission of the Trustees of the Chester Beatty Library, Dublin.

The composed polyphony of the Middle Ages is generally regarded as music for soloists, but the evidence suggests a more flexible practice which was much the same whether the polyphony was composed or extemporized. Elias Salomo, a French priest from Périgord, but writing *in curia romana*, stipulated one singer to a part in extemporized parallel organum, conceding that the lowest voice might be reinforced if necessary. In 13th-century Paris the tally of singers deputed to sing organum at Notre Dame was usually the same as the number assigned to the unadorned plainchant, so as many as six might be involved in the performance of two-part polyphony. Wright proposed that a soloist sang all parts save the tenor, but this cannot be confirmed. Among the pictorial sources, the 'Notre Dame' manuscript W₂ shows three (or possibly four) singers in the initial to Perotinus's *Salvatoris hodie* in three parts (f.31r), while a two-part version of *Presul nostri* has four singers (f.92r). These images draw deeply on the iconography of Psalm xcvi, *Cantate Domino* (ii), and their value in this context is open to question.

Two illustrations from the same tradition, but perhaps with a greater claim to authority, have been discovered in English psalters of 1310-20. The work of the same artist, they show three tonsured singers performing the three-voice motet *Zelo tui lingueo/Reor nescia/ [Omnes de Saba]*. The tenor of the motet is derived from the Gradual for Epiphany and the pictures show a singer wearing the starred vestment prescribed for Epiphany by a Sarum ordinal of the 14th century. This is an unusual concatenation of evidence and might serve for a clear ruling about the performance of this motet. However, the artist's contemporary Jacobus of Liège declared that nothing prevented a two-part piece having more than one singer on either tenor or discantus. In view of this evidence it would be difficult to maintain that the aesthetic of medieval polyphony positively demanded a single voice to a part, even if such performances were common.

Some refinements of performing practice are recoverable. The theorists reveal that standards of intonation among the best singers were very high, as might be expected in repertories so consistently based on the octave and 5th rather than the 3rd and 6th (where the ear accepts a greater latitude). Jacobus of Liège disdained any singer who deviated from perfection by as little as a Pythagorean comma, less than a quarter of a semitone, and he associated loss of accuracy in this regard with 'tremulous voices'. This may be a reference to a 'straight' tone allowing the ear to savour the intervals. Many other refinements, however, are beyond recall. Elias Salomo's instruction that a singer 'should lift his voice from note to note in the manner of the French' will probably always remain a mystery, and it is far from clear what Pseudo-Garlandia meant by *nobilitatio*, 'an augmentation or diminution of the same sound'. This is conceivably a reference to dynamics. Hieronymus de Moravia gave some richly metaphorical descriptions of vocal ornamentation and Roesner has used them to reconstruct the nuances of Parisian *organum duplum*. They include the 'harmonic flower', the 'stormy note' ('nota procellaris'), the 'open flower', the 'sudden flower' and 'reverberation', defined by Hieronymus in gratifyingly precise terms. To lay his account beside *organum duplum* as it appears in the sources, blocked out in the ligatures of square notation, is to appreciate the distance that could separate symbol from sound in medieval polyphony.

Hieronymus de Moravia's principal subject when he described these ornaments was the embellishment of chant. Performing practice was strongly influenced by plainchant and therefore by 'the organs which generate the human voice' (Engelbert of Admont). By modern standards, the performer of polyphony before 1400 was often a musician with an exceptional experience of consort singing acquired in the choral performance of plainchant. Elias Salomo, though concerned with extemporized organum, may reveal the broader priorities that were instilled into such singers by their rulers or precentors in rehearsal, marking the pauses on the book to ensure good ensemble and seeking a good blend of *voces concordēs*. The outstanding concern seems to be unanimity of every kind. The terminology of 'head' voices and 'chest' voices was well established by 1300, and Hieronymus de Moravia emphasized that the different types should not be mixed. Jacobus of Liège confirmed that singing chant in unison required the singers to be 'equal in everything' ('*omnino equales*'). It is possible to imagine how organum and conductus counted as an especially exacting form of being 'equal in everything' during performance, for in these two genres the participating voices sang the same text and respired together, demanding careful adjustment of phrasing and, in pursuit of precise tuning, the colour of vowels.

The gradual dissolution of this vocal predominance, with all its technical and aesthetic values, owed much to a sweeping social and musical change between 1300 and 1500; by the end of this period composed polyphony touched many more human lives than at the beginning. At present, the balance of the evidence favours belief in a vocal predominance until at least 1400, but the material is not definitive nor is it too abundant for rapid review. Johannes de Grocheio discussed instruments with monophonic secular music, not composed polyphony. English polyphony of the 14th century was composed for vocal ensembles of stable constitution making little or no use of the organ; a survey of the French and Italian sacred repertoires might reveal something similar. The two-part madrigals and ballatas of the Italian Trecento appear in most of the sources as vocal duets, while the sources of Landini's music show considerably more full and partial texting in the lower parts than the published edition suggests. A picture in the Squarcialupi Codex (**I-FI** Med.Pal.87) famously shows Landini playing the portative organ surrounded by other instruments, but the only known description of his music in performance reveals the three-part ballata *Orsù gentili spiriti* sung by two girls and a man (a perfectly plausible scoring). In French chansons of the Machaut tradition the prevailing texture comprises a texted cantus accompanied by up to three textless parts. Eustache Deschamps (probably Machaut's nephew) mentioned a 'triplicité des voix' for the best performance of chansons with tenor and contratenor; if musicians ever regarded the more angular contratenors of this repertory as artistic vocal music it was perhaps precisely because they were not '*faciles ad pronuntiandum*', in the words of Jacobus of Liège. The possibility that these underparts were generally texted seems remote; perhaps they were vocalized wordlessly. Machaut himself invited '*orgues, cornemuses ou autres instruments*' for his three-part ballade 33 *Nes que on porroit*, a piece he regarded as 'very novel' and 'very foreign'; whatever he intended by this call for instruments (Leech-Wilkinson, B(ii)1993, is the first to have offered a convincing explanation), theorists throughout the period portrayed instrumentalists as musicians working more by *usus* than by *ars*. Only Arnulf of St Ghislain, whose dates are unknown, evoked a situation with the potential for far-reaching change. The instrumentalists that he described were clerics capable of composing and performing pieces that no singer would attempt to rival, and who remedied their own want of musical knowledge by consorting (perhaps in more senses than one) with trained musicians.

Medieval concepts of musical beauty, as they are understood today, have often been contrasted with those attributed to the Renaissance. J.I. Wimsatt, for example (*Chaucer and his French Contemporaries*, Toronto and London, 1993), argued that 'Machaut and his contemporaries ... make no

attempt to imitate or stir the passions', and it is impossible to imagine such a remark being made about a Renaissance madrigalist. However, there is no single line of development to be discerned. Some of the language used by 16th-century musicians to describe the ideals of the Italian madrigal, surely the most intensely 'Renaissance' musical form, is foreshadowed by chant theorists half a millennium earlier. About 1100 John 'of Afflighem' (Johannes Cotto) ruled that a musical setting should express the meaning of the words ('quod verba sonant cantus exprimere videantur'), and it remains unproved that a Latin song known to him would have been performed with fewer nuances of phrasing, tone-colour or pace than a polyphonic madrigal four centuries later, whatever other contrasts the difference of musical texture might impose. The rise of measured polyphony, however, probably shifted the aesthetic ground of medieval music, at least in the polyphonic sphere. Before 1300, the dialectic between precisely measured and not so precisely measured performance was an important intellectual and aesthetic issue for musicians; that is why some of the most suggestive information about performing practice relates to music without precise measure (*organum duplum* is the clearest example) or music which had newly acquired it (Hieronimus de Moravia's ornamented plainchant). By the 1320s this situation had changed. The Ars Nova treatises suggest an aesthetic based upon the scrupulous calibration of duration and pitch, neither broaching the question of how different polyphonic textures might express 'quod verba sonant' nor hinting at the wealth of nuance in performance noted by their Ars Antiqua forebears. A language about the affective union of music and poetry, known to the plainchant theorists, lost pertinence when composed polyphony, exulting in scrupulous measurement and perhaps a certain objectivity, became the medium of high art. The gradual recuperation of that language for polyphony is a significant chapter in the history of performing practice and deserves a study to itself.

4. 15th- and 16th-century music.

Howard Mayer Brown and Kenneth Kreitner

Occasions for informal music-making are seldom recorded systematically. Passing remarks in literary and historical writings and the evidence of works of art depicting commonplace reality or traditional themes in contemporary guises are our chief source of information about such areas of Renaissance activity as aristocratic music-making (with or without professional assistance), the character of informal music in middle-class homes, and the extent to which peasants and the poorer urban dwellers played and sang in taverns, at fairs, at home and at work. But formal musical activity is easier to document, for records of payments to musicians often survive, as well as traces of the institutional framework within which the music was performed. Accordingly, much research into the performing practices of the 15th and 16th centuries has focussed on these formal occasions and the churches, courts and civic institutions that supported them.

By the 16th century the most important churches and cathedrals in western Europe had polyphonic choirs, and in many cases separate singing groups for performing plainchant. These ensembles were responsible for providing music for the daily liturgical ceremonies, the celebration of Mass as well as Office hours, and for more elaborate performances on feast days and other extraordinary celebrations. Church and cathedral choirs counted among their members the best-trained musicians and almost all the greatest composers except those who performed similar duties at princely courts. They regularly performed the finest and most complex masterpieces of the age. On average, leading 16th-century choirs seem to have consisted of between 20 and 30 singers, although the number varied a great deal;

by mid-century the cathedral in Antwerp employed as many as 69 singers, while small provincial centres must have been content with but a handful. Many churches seem to have reorganized and consolidated their musical establishments during the 15th century, and the size of vocal ensembles tended to increase as the century progressed. Nonetheless, even some of the largest and most distinguished ensembles (e.g. the papal chapel) frequently performed polyphony with one singer to a part, especially in polychoral music and mass sections with reduced scoring.

Except in convents (whose musical practices remain largely mysterious), women were excluded from participation in liturgical services, so the polyphony of church and cathedral was sung by all-male choirs. Lower lines were taken by tenors and basses, and the highest parts were typically given to falsettists. (Castrato singers were unknown before 1550 and relatively rare for the rest of the century.) Many churches also maintained a half-dozen or more choirboys, providing for their liberal-arts education and musical training (liturgy, notation, counterpoint, improvisation, and often one or more instruments). In some musical establishments choirboys were a regular feature, taking the top lines of polyphonic compositions; in others, the boys more often formed a separate ensemble by themselves and with their teachers. A number of polyphonic choirs in the 15th and early 16th centuries were proportioned in ways that may seem top-heavy by modern standards: in 1469, for example, Charles the Bold directed that the Burgundian court chapel choir should comprise at least six falsettists, three tenors, two contratenors (men with tenor-range voices but specializing in contratenor parts) and three basses when singing polyphony. Virtually every 15th-century choir whose voice distribution can be determined follows some variant of this pattern, whether the top be boys or adult falsettists; by the late 16th century, however, more equal distributions seem to have become the norm.

By the mid-16th century some churches employed a group of instrumentalists, normally playing loud instruments such as shawm, cornett, trombone and dulcian. Their precise role varied from place to place and should probably not be overestimated: in many churches they played only for wordless portions of the service, and in others their participation with the singers was carefully circumscribed. By the end of the century, however, musicians had begun to cultivate the sonorous possibilities of mixing voices and instruments in the concerted polychoral compositions of the Gabriellis and other Venetian musicians, for example, and in the music of the German italoophile Michael Praetorius, whose *Syntagma musicum* (1614–18) offers comprehensive instructions for scoring *concerti* in the early Baroque ‘colossal’ style. Unambiguous documentation for the use of wind instruments in church during the 15th and early 16th centuries is difficult to find, but the reluctance of church authorities to permit instrumental participation evidently did not extend to the organ. Organs, sometimes of substantial size, were commonplace in European churches well back into the Middle Ages, and throughout the Renaissance organists either doubled singers or alternated regularly with them. An extensive repertory of plainchant settings, toccatas and preludes, and examples of improvisatory technique, suggest the style in which they performed.

Because of the nature of much secular documentation, together with the traditional professional secrecy of the guilds, relatively little is known about the way instrumentalists were educated, or even about their repertory. The rigid medieval distinction between *haut* (loud) and *bas* (soft) bands relaxed but by no means disappeared over the course of the Renaissance. *Haut* ensembles followed an evolving but stereotyped pattern, beginning in the 15th century with typically a few shawms and a slide trumpet (later a trombone), growing by about 1500 to four or five players (sometimes with various sizes of shawm), and with cornetts and dulcians supplementing and later supplanting the shawms in the 16th century. *Bas* ensembles were much more various, admitting a vast array of plucked and bowed strings,

recorders, flutes, organs and other instruments. These bands, loud and soft alike, probably learnt to improvise dance music, typically in the 15th century by adding one or two contrapuntal lines around a tenor cantus firmus (e.g. a basse danse), and in the 16th century by harmonizing a melody played in the top voice and by embellishing the melody when it was repeated. But instruments also played all sorts of composed music, not only chansons, madrigals and other secular music (with or without singers) but motets and even mass movements as well. By the middle of the 16th century such publishers as Attaignant in Paris and Susato in Antwerp were producing little books of textless music, usually dances with unspecified and presumably very flexible instrumentation, for use by amateur and professional bands of all types; and, by the last decades of the century, independent instrumental ensemble music (e.g. the canzonas of such composers as Florentio Maschera and Giovanni Gabrieli, or the well-known English viol fantasias) had become very sophisticated indeed.



Trombone, shawm, cornett and bass viol accompanying dance: detail of engraving, 'The Aulterer's Bridge' (c1570), by Jost Amman

Mansell / Time Pix / Katz

The musical establishment at the court of a king or prince was a microcosm of the outside world. A choir with its organist supplied music for the ordinary services in the prince's chapel, and the chapel singers may also normally have taken part as soloists in secular entertainments sponsored by the court. Most princes also employed one or more bands of *haut* instrumentalists – cornett players, trombonists, shawm players and the like – who played for dancing and outdoor entertainments, and a corps of trumpeters and drummers who served to announce the prince ceremonially during peacetime as well as in battles. And some princes also engaged a few virtuoso *bas* instrumentalists – lutenists, recorder players, viol players and the like – to play chamber music.

Many courts may have enjoyed music at daily meals. Certainly, varied programmes by vocal, instrumental and mixed ensembles enlivened banquets and special meals when the prince entertained important guests. In his cookery book, *Banchetti, composizioni di vivande e apparecchio generale* (Ferrara, 1549), Cristoforo Messisbugo, steward to the Este family, described several typical occasions in the late 1520s when members of the court in Ferrara played host to visitors, and music was supplied by virtually all of the musical establishment; not only singers from the chapel choir took part, but also individual virtuosos, groups of shawms, cornetts and trombones, viols and flutes, and mixed *concerti* consisting of a group of singers, a group of viol players, and one or more groups of wind and string players. Similarly, Massimo Troiano, an Italian at the court of Munich in the 1560s, wrote a detailed account of the music performed at banquets and other celebrations when Duke Wilhelm of Bavaria married Renée of Lorraine in 1568; and Ercole Bottrigari, in *Il desiderio* (1594), explained how many of the townspeople of Ferrara joined the courtly musicians to prepare imposing *concerti* for performance at special events at the Este court late in the century. Doubtless the wind bands of princes played regularly for dancing, and chamber musicians were frequently called upon to entertain the prince and his courtiers with chansons, madrigals and the like.

In sum, a great deal of scholarship concerning the performing practices of the Renaissance has concentrated on basic questions of instrumentation: how many singers to put on a part, and what kind, and what instruments, if any. Apart from tablatures and other tell-tale notations, almost no Renaissance source gives a reliable clue to the composer's preference, and thus instrumentations must be reconstructed as probabilities based on surviving circumstantial evidence. For most mainstream repertoires of the 15th and 16th centuries it is now useful and possible, at least in broad terms, to imagine an 'ideal' instrumentation within the habits of the time and place. The ideals were often violated, of course; but over the years, again broadly speaking, they show a surprising consistency. For almost any piece of Renaissance Latin sacred polyphony, a *cappella* choral performance with falsettists on the top line represents a plausible ideal; for most vernacular songs, throughout the period, voices without accompaniment seem also to have been the preferred medium, but with one singer on a part and with boys, women, or girls on the top line or lines. The notion that textless lines in the sources, most famously in the 15th-century chansons, were meant for instruments has not survived close scrutiny: instruments (especially lute and harp) may have been at least a possibility, but singers, either supplying words or vocalizing on a neutral vowel sound, seem better to represent the usual ideal of the time.

The music sung by church and chapel choirs was prepared in large choirbooks set on a lectern around which the musicians gathered. In the 16th century much music was printed in partbooks. Scores were not in general use but were reserved for keyboard players and, in the second half of the 16th century, for students of counterpoint. Players of chordal instruments other than keyboards, particularly plucked string instruments such as the lute and the guitar, might prepare special parts in tablatures which

incorporated all or most of the melodic lines of the polyphonic music they wished to play. Before they performed a composition, Renaissance musicians (and indeed those of later times) had to agree about a number of things besides instrumentation: the tempo, which might not be implied by the mensuration sign; how the text was to be added to the notes in vocal music; which accidentals were to be added to the written notes following the rules of *musica ficta*; whether or not to embellish the written notes; and, if so, where and how.

The theory of one *tactus* of invariable speed can probably not be sustained for the 15th and 16th centuries, and therefore mensuration signs do not indicate absolute tempos. Various 16th-century writers commented that tempo was variable, dependent at least partly on the character of the words (or the choreography, in the case of dance music). Nevertheless, in extended compositions with changes of mensuration, the relationships between the various tempos seem often to have involved simple arithmetical relationships indicated by proportions. In principle, music in so-called duple proportion, indicated by a slash (and in C) moved twice as fast as music in *integer valor* (

C

); the *brevis* (and every other note value) sounded half as long under the proportional sign. Similarly, music in triple proportion, indicated by

C

3 or some other sign, moved three times as fast, three semibreves under the proportional sign sounding in the time of one *brevis* of *integer valor*; and in *proportio sesquialtera*, indicated by 3, 3/2 or some other sign, the music moved one and a half times as fast as in *integer valor*, three semibreves under the proportional sign taking the same time as two in *integer valor*. The four basic mensuration signs of the 14th and 15th centuries were

C

(*tempus imperfectum cum prolatione imperfecta*), \circ (*tempus perfectum cum prolatione imperfecta*), C (*tempus imperfectum cum prolatione perfecta*) and C (*tempus perfectum cum prolatione perfecta*). It is difficult to understand how these were interrelated when they followed directly one after another, with the changes occurring simultaneously in all voices. Mendel's rule of thumb that semibreves (and not breves) remain the same when the mensuration changes from

O

to

C

and vice versa is helpful and in most cases produces good musical results. Except for special instances, however, complex mensuration ceased to be a concern of composers from the late 15th century onwards. As



became by far the most common mensuration sign, appearing regularly at the beginning of a piece, it obviously lost its proportional significance and became essentially the new *integer valor*; the chief difficulties facing the performer of 16th-century music thus involve fairly elementary features of the mensural system: for example how



should be interpreted when juxtaposed with the old



or



. How



,



,



and



relate to one another when all voices change mensuration signs simultaneously is probably explained by saying that the *semibrevis* stayed the same in *integer valor* and was halved in value under the proportional signs. As to the question of when the composer intended *proportio tripla* and when *proportio sesquialtera*, it can be said that most shifts in tempo in the 16th century seem to involve *proportio sesquialtera* regardless of the sign used to indicate the change, although there are fairly frequent exceptions to this rule of thumb.

Like mensural practice, the principles of text underlay are more difficult to discover for 15th- than for 16th-century music. About 1500 Josquin des Prez and his contemporaries took more pains than any previous composers to write melodic lines that closely fitted the texts they set, and the following generation of composers (from about 1530 on), led by Adrian Willaert, perfected the union of notes and syllables. During the 15th century, however, most music was highly melismatic, and composers seem often not to have conceived their melodic lines so that text syllables fitted them in only one way. In short, text underlay in the 15th century was left to the performers. Principles of 15th-century text underlay may yet be formulated from the evidence supplied by some manuscripts of the time. But most manuscripts do not indicate precisely where the text syllables are to be sung, and no scholar has succeeded in demonstrating that scribes intended to supply that kind of information. Modern musicians, therefore, are forced to base their decisions on the theoretical evidence of the following century, and especially on the advice given by G.M. Lanfranco (*Scintille di musica*, 1533), Gioseffo Zarlino (*Le institutioni harmoniche*, 1558) and Gaspar Stoquerus (*De musica verbali libri duo*, c1570). Harrán (C1973) has shown that Zarlino's rules for text underlay derive from Lanfranco's, and Lowinsky (*Festschrift Heinrich Besseler*, 1961) explained that Stoquerus's importance lies in his awareness of changes in style between the period of Josquin and his own day. Zarlino's ten rules for text underlay may be summarized as follows: long and short syllables should be combined with notes or figures of corresponding value; only one syllable should be sung to a ligature; a dot augmenting a note should not be assigned a new syllable; a change of syllable should not normally be made on or immediately after a crotchet or shorter note; notes immediately following a dotted semibreve or minim and of smaller value than the dots are not usually assigned a syllable; if a syllable must be sung to a crotchet, another syllable may be given to the note following; a syllable should be sung to the first note of a piece (regardless of its value) and to the first note after a rest; individual words or syllables should not be repeated, although in very melismatic music it is acceptable to repeat a whole clause whose meaning is complete by itself; if the penultimate syllable of a composition is long it may be sung to a melisma; and the last syllable should coincide with the last note. Commonsense application of these rules gives a satisfactory text underlay, at least for most songs, motets and wordier movements of the mass; more serious difficulties, at least for the modern editor and performer, attend mass movements for which the sources give no hint of intended underlay (for example, a Kyrie whose scribe has written 'Kyrie' under the first notes, 'leison' under the last, and 'e' somewhere in the middle). These apparently caused no trouble to singers of the time (any such problem would have been very easy for composers and scribes to solve), and indeed text underlay for such movements is not hard to improvise today, at least when singing one to a part; whether it was thought important for sections to underlay text together, and, if so, how this was accomplished in practice, are not known.

Besides expecting performers to fit the syllables to the notes, 15th- and 16th-century composers also intended that they add sharps and flats to the written notes, following the rules of *musica ficta*. These rules, as summarized by Lowinsky, Berger and others from theoretical evidence, give two reasons for adding accidentals, *causa necessitatis* and *causa pulchritudinis*. Reasons of necessity govern perfect consonances: tritones, diminished 5ths and augmented octaves should normally be made perfect.

Aesthetic reasons dictate the rules governing imperfect consonances: perfect consonances should be approached by the nearest imperfect consonances; major 6ths expand to an octave, for example, and minor 6ths contract to a 5th. Related to this regulation, leading notes should be raised in all cadential formulae (except in Phrygian cadences, where the second degree descends to the *finalis* by a semitone). And, in the 16th century, the 3rd in final chords should be made major. While the rules themselves are quite simple, their application often creates difficulties. The largest body of evidence showing the way 16th-century musicians added unspecified accidentals, the intabulations for lute and other plucked string instruments of vocal music of every sort, reveals that instrumentalists disagreed in their solutions to particular passages, even though they generally followed the precepts of *musica ficta*, and, indeed, often added many more accidentals than a modern editor would think seemly.

Several instruction books on instrumental technique, notably those by Ganassi dal Fontego (*Fontegara*, 1535) and Diego Ortiz (*Trattado de glosas*, 1553), reveal that instrumentalists during the first two-thirds of the 16th century considered improvised or quasi-improvised ornamentation a necessary part of their technical equipment; and such works as Coclico's *Compendium musices* (1552) suggest that singers needed some of the same skills. Certainly virtually every lutenist who arranged sacred and secular music for his instrument included runs, turns and trills in his intabulations. Musicians performing in an ensemble probably did little more than decorate cadences and perhaps add divisions or *passaggi* to one or two passages within a composition. Ortiz supplied performers with numerous formulae which they could use for those purposes. Whenever a madrigal or motet was performed by a solo singer with lute accompaniment, and whenever instrumental arrangements (and dance music) allowed a single player to dominate the texture, embellishment probably became a more prominent feature of the performance. Ganassi's tables of ornaments seem to have been designed to transform a relatively simple solo melodic line into an elaborate vehicle for the virtuoso performer, and Ortiz included versions of several compositions for solo viol and keyboard in which the viol player imposes on the music a florid line which is more than merely an embellishment of the original. During the last quarter of the 16th century a series of instruction books, by Girolamo Dalla Casa, G.B. Bovicelli, Giovanni Bassano, Riccardo Rognoni and various others, described and explained the extremes to which virtuoso singers and players went in displaying their agility and inventiveness, even at the expense of the composer's intentions. Indeed, the excesses of the late 16th-century virtuosos probably led composers such as Caccini and Monteverdi to incorporate bravura elements into their music in an effort to reduce the extent to which the performer strayed from the written notes.

The 15th and 16th centuries were times of great change in the nature of instruments and the way they were played. Harpsichords and other similar keyboard instruments came into general use early in the 15th century. The trombone evolved from the slide trumpet in the middle of the century. Late in the 15th century lutenists developed a technique of playing polyphonic music with their fingers to replace the outmoded method of playing single lines with a plectrum. The crumhorn was probably invented later in the century and the viol evolved at the same time (relatively few years before the violin family came into existence, presumably during the first quarter of the 16th century). About 1500, too, many instruments came to be built in families tuned either in 4ths or 5ths (flutes, recorders, viols, crumhorns and various others) or less regularly, like lutes.

Consorts of like instruments, the instrumental equivalent of the *a cappella* choir, were particularly favoured during the early 16th century. Usually three sizes of instruments took part in a four-part ensemble, the smallest (e.g. a treble recorder in G) playing the top line, two middle-sized instruments (e.g. tenor recorders in C) playing the two middle lines, alto and tenor, and the largest instrument (e.g.

a bass recorder in F) playing the bottom line. Because of inherent weaknesses in some sizes of some instruments these pure consorts were sometimes modified. Alto trombones were musically less satisfactory than the standard tenor trombones, for example, and so the top parts in wind bands were often taken by either cornetts or shawms (depending on the quality of sound desired). Trombones, viols or some other bass instrument often played beneath three recorders. However, mixed consorts of unlike instruments were also common, and during the 16th century ensembles tended to become more elaborate and more varied. Often a chordal instrument, a lute or a keyboard, doubled all the voices in a polyphonic composition, and from the custom of supporting an ensemble in this way grew the Baroque technique of basso continuo. Similarly, 'terraced dynamics', traditionally associated with Baroque music, probably originated before 1600, when in so many of the instruments in general use the possibilities of controlling dynamic nuances were relatively limited. Crescendos and diminuendos are impossible, or nearly so, on many 16th-century instruments, such as flutes, recorders, crumhorns, harpsichords and organs.

Keyboard instruments in the 16th century were tuned by preference in mean-tone temperament, a practical method for dividing the Pythagorean comma so that 3rds and 5ths more closely approach just intonation than they do with equal temperament. But equal temperament was also widely adopted during the Renaissance – on all fretted string instruments, for example. Bottrigari (*Il desiderio*, 1594) and others discussed the problem of combining instruments of different temperaments.

Attempts to determine the pitch level at which Renaissance music was performed have met with varying success. A number of surviving 16th-century recorders and cornetts (two of the few contemporary instruments whose pitch can be tested more or less accurately) are tuned about a semitone above modern pitch, but this was by no means a universal standard: pitch clearly varied from place to place (and some places recognized more than one standard simultaneously), and in vocal ensembles pitch levels may have been set without reference to any outside source and may thus have been in effect flexible. Various theories of systematic pitch shiftings have been developed – for example, that English sacred music of the 16th century should be sung a minor 3rd higher than its apparent notated pitch, or that late 16th-century sacred music written in *chiavette* or high clefs (treble clef on the top line rather than soprano) should be transposed down a 3rd or 4th – but none has yet found universal favour or wide application.

Ganassi, Ortiz and other writers on string and wind instruments imply that single notes were generally played in a more or less detached manner during the 16th century. Ortiz's description of slurred notes suggests that they are something of an exception in his time, and both Ganassi and Dalla Casa (*Il vero modo di diminuir*, 1584) recommended varied and sophisticated double tonguings for even the fastest passage-work. Scattered references suggest that vibrato was available to 16th-century instrumentalists as a special effect (and thus presumably not as a constant presence), but most issues of style and interpretation are either ignored by the contemporary writers on music, or referred to so fleetingly or cryptically that they cannot be interpreted without doubt. Modern performers of Renaissance music are still, in many important respects, on their own.

5. 1600–1750.

Howard Mayer Brown and Peter Walls

Baroque performers enjoyed many of the same freedoms as earlier musicians. They were expected to make many of the same kinds of decisions about a wide range of problems as their counterparts in the Middle Ages and the Renaissance, although gradually the conventions changed. There was no sharp break with earlier traditions, merely a slow evolution. For example, early 17th-century performers still had to add a few unspecified accidentals to their parts, but composers came increasingly to write down all the sharps and flats they expected to hear, albeit following a slightly different practice from the modern one. Similarly, the older practice of expecting changes of tempo to follow simple arithmetical proportions, indicated by mensuration signs, did not die out completely until the 18th century, even though complex combinations of mensuration signs or time signatures seldom appeared in music of the Baroque era. Moreover, performers in the 17th and 18th centuries could still play much music on whatever instruments suited the parts. Scoring was not entirely fixed, in spite of the fact that composers began more and more to indicate precisely which instruments they intended, and to write parts idiomatically conceived for those instruments.

Direct musical instruction is plentiful for the Baroque period where many publications dealt with specific instruments and with the voice. These range from treatises and prefaces addressing the needs of accomplished musicians to countless manuals aimed at amateurs. Two encyclopedic works – Praetorius's *Syntagma musicum* (1614–18) and Mersenne's *Harmonie universelle* (1636–7) – provide a wealth of information about instruments and performing practice at the beginning of the era, while at its close four great treatises provide something of a summation: Quantz's *Versuch einer Anweisung die Flöte traversiere zu spielen* (1752), on flute playing; C.P.E. Bach's *Versuch über die wahre Art das Clavier zu spielen*, i (1753), on keyboard playing; Leopold Mozart's *Versuch einer gründlichen Violinschule* (1756), on violin playing; and J.F. Agricola's *Anleitung zur Singekunst* (1757), on singing. Scholars continue to debate the precise character of these works. As composers, these four authors are orientated towards the new world of pre-Classical, Rococo and *galant* styles, but for all that their treatises must, to some extent, reflect their early training in the older techniques of the Baroque era. Agricola's volume is, in fact, an extensively glossed translation of P.F. Tosi's *Opinioni de' cantori antichi e moderni* (1723) and so enshrines the practices of the earlier period. How far these can be used to elucidate Baroque practice is a question to which a simple and definitive answer is unlikely to be forthcoming. So, too, is the question of whether they set down general principles valid for all 18th-century music, or whether their remarks merely clarified local usages and customs. These four volumes nevertheless supply the most comprehensive picture of the way music of the period was performed.

Treatises are usefully supplemented by other kinds of documentary evidence from the period: letters (by such eminent musicians and intellectuals as Monteverdi, Mersenne and Constantijn Huygens), the diaries and memoirs of a musically alert élite (Pepys, Evelyn, Ludovic Huygens, Charles Burney) and the accounts of musical performances which appeared in newspapers and periodicals (themselves a new development). Archival records relating to the musical establishments of courts and churches throw much light on such matters as the emergence of the orchestra in the 17th century. They can also sharpen our sense of the skills and versatility expected of musicians in this period.

THE SAURUS MUSICUS:
BEING, A
COLLECTION of the Newest SONGS

PERFORMED

At Their *Majesties Theatres*; and at the *Conforts* in
Viller-street in *York-Buildings*, and in *Charles-street*
Covent-Garden.

WITH A

Thorow-Bals to each SONG for the *Harpficord*, *Theorbo*, or *Bass-Viol*.

To which is Annexed

A *Collection* of *Aires*, Composed for two *Flutes*, by several *Masters*.

THE FIRST BOOK.



L O N D O N,

Printed by *J. Heptinstall* for *John Hudgebut*. And are to be Sold by *John Carr*, at
the *Middle-Temple Gate* in *Fleetstreet*, and by *John Money*, *Stationer* at the *Miter*
in *Miter Court* in *Fleet-street*. And at most *Musick-Shops* in *Town*. 1693.

Title-page of John Hudgebut's 'Thesaurus musicus' (1693)

Mansell / Time Pix / Katz

Paintings and engravings contribute greatly to our knowledge of performing practice in the era. It is still true, though to a much lesser extent than for earlier periods, that our knowledge of certain kinds of musical instrument (violin bows before the late 17th century, for instance) is heavily dependent on iconographical evidence. Pictures can throw light on such questions as the number of musicians involved and their disposition in certain kinds of ensemble.

The value of individual pictures as evidence is first and foremost determined by their accuracy (often a reflection of the artist's own interest in music). On the one hand, the interiors of Jan Vermeer (1632–75) and his contemporaries give beautiful and quasi-photographic depictions of people holding or playing instruments. There is, for example, typical Dutch realism in Pieter de Hooch's *The Music Party*, dating from the early 1660s, which gives informative illustrations of a violin, recorder, cittern and bass viol – though what repertory this rather irregular mixed consort might be playing remains a mystery. On the other hand, the caricatures of Pietro Longhi (1702–85) or William Hogarth (1697–1764) may give distorted images which nevertheless convey useful information about such matters as performing contexts. Caution is always needed in assessing the musical content of iconographical sources; we need to ask why it has been included (*see* Iconography).

Most of the really new performing practices of the Baroque period arose from three causes: an increased consciousness of national styles, and especially of the difference between French and Italian music and ways of playing it; the rise and development of the technique of improvising a chordal accompaniment over a basso continuo (a technique rooted in 16th-century conventions); and a new desire on the part of composers and performers to be brilliant and expressive in playing or singing melodies. This last is signalled by the rise of the violin family, the decline of the viol family (except for the bass viol), and the virtual disappearance of instruments, such as the crumhorn, which were incapable of dynamic nuance.

Many of the most important innovations of the 17th century – the invention of opera, the rise of an autonomous instrumental music, the development of the violin, the incredibly rapid increase in the amount of music requiring a thoroughbass accompaniment, and so on – are identified with Italian composers. The rhetorical style of the new and expressive recitative in opera (soon transferred to instruments in the early 17th-century canzona and sonata) and the 'singing' melodies in the arias of early and mid-Baroque operas, cantatas and oratorios, made different demands on performers from the balanced, classical, polyphonically intricate music of the 16th century. And the Italian manner soon dominated music in many parts of western Europe, especially in the Germanic countries. France, on the other hand, resisted Italian influence (except, paradoxically, for the most influential of all 17th-century French composers, the Italian Lully). The reticent declamation of classical theatre set to music in the *tragédies lyriques* of the second half of the 17th century differed significantly from the more flamboyant Italian operatic style. And French music was shaped by the predilection of musicians and audiences for dance music, with its emphasis on rhythmic detail; for lute music, with its need to elaborate single chords in order to keep the fragile sound alive; and for music that expressed some literary or at least non-musical idea (character-pieces, *hommages* and the like) and which thus placed great importance on subtle changes of sonority and on a rich, decorative surface. Before the Restoration, Britain remained largely untouched by the competing claims of French and Italian musical styles. Even after 1660 – and in the face of royal support for French and Italian music – composers continued to produce works which in their contrapuntal textures and mannered use of expressive dissonance demonstrate continuity with a quite specifically English tradition. This sense of a separate

musical identity is less strong in the 18th century, when the latest musical novelties imported from the Continent were much appreciated and foreign virtuosos often enjoyed remarkable successes in London (by far the largest and most cosmopolitan centre in Europe).

Each of the two main styles of the Baroque period presupposed a different technique of playing and singing, a fact that should always be kept in mind when considering particular aspects of performing practice during the period. French music was very different from Italian in its ornamentation, for example, and the principles for applying it. The extent to which the two competing national styles interpenetrated, particularly in 'peripheral' countries like Germany, remains debatable. Few other aspects of performing practice will elicit such diverse or such heated scholarly opinion as, for example, the question of the propriety of applying French ornaments or French rhythmic alterations to the music of J.S. Bach (see *Notes inégales*, §3). Paradoxically, the very fact of Germany's being outside these two main performing traditions helps explain why we owe to German musicians (Muffat, Quantz) the most thorough instructions on how to perform in the French and Italian styles: the conventions could not be taken for granted.

The technique of composing an independent bass line, which guided performers of keyboards and plucked string instruments in devising their chordal accompaniment, was something quite new in the early 17th century. The operas, secular monodies and sacred *concerti* by Peri, Caccini, Cavalieri and Viadana, published in the first decade of the 17th century, were the earliest volumes to include a figured or unfigured basso continuo. But the practice has its roots deep in the 16th century, when it was common for harpsichordists, organists and lutenists to double the singers of both secular and sacred music. Performers gradually realized that it was easier to invent a chordal part than to prepare a special score in order to follow the vocal lines exactly. Short scores and so-called 'organ basses' – with a *basso seguente* (a part made up of the lowest sounding line) and some sketchy indication of one or more upper parts – began to appear about 1575, and after 1600 more and more music was published with an obligatory thoroughbass.

A number of writers in the 17th and 18th centuries set down rules for playing from figured bass, among them Banchieri (1605), Agazzari (1607), Werckmeister (1698), Gasparini (1708), Heinichen (1728), Mattheson (1731) and C.P.E. Bach (1753–62). F.T. Arnold and Peter Williams have conveniently summarized the information about continuo playing to be found in these and other treatises of the period, which change slightly from generation to generation and from country to country. Most Baroque writers on thoroughbass stressed grammatical correctness – how to play the right harmony, which notes to double, how best to space chords, and so on – rather than instructing their readers as to how to make an accompaniment stylish and elegant. While it is impossible to formulate general principles that would be valid for the entire Baroque period about the most appropriate sort of accompaniment, it would not be unrealistic to attempt to describe ideal continuo realizations for a particular repertory (e.g. mid-17th-century French opera recitative, or mid-18th-century German solo song) by combing the theorists carefully for passing remarks about what constitutes good style, and by examining the relatively rare examples of written-out realizations. Nevertheless, the answers to questions about how full the accompaniment should be, the extent to which the accompanist might double the solo line (or lines), how imitative or contrapuntal the texture should be, how widely spaced the chords and so on depend not just on the style of a particular repertory, but on circumstances that may change with each performance – such as the instruments available and the skill of the performers.

The instruments used for accompaniments during the Baroque period similarly changed with the generations, the country and the genre. Early 17th-century Italian operas and grand concerted vocal music were apt to include a wide variety of chordal accompanying instruments among the members of the 'orchestra', not only harpsichords and organs, but also lutes, chitarroni, theorbos, harps, lironi and guitars, as well as one or more melodic instruments (bass viol or violone) to strengthen the written bass line; on the other hand, the chitarrone alone (without viol) was a favourite accompanying instrument for solo songs during the same period. Agazzari, in his treatise *Del sonare sopra il basso* (1607), distinguished between foundation and ornamenting instruments, that is, between chordal instruments such as organ and harpsichord, and melody instruments 'which disport themselves and play counterpoints' such as lutes, harps and violins. Thus he seemed to envisage the possibility that melody instruments, too, could play a more or less contrapuntal 'realization' of the harmonies over the written bass. In the 17th and early 18th centuries chamber music continuo practice seems to have been quite varied. There is little reason for assuming an obligatory partnership between a keyboard and a melodic bass-line instrument, and it is likely that Corelli and others who specified 'violone ò cembalo' for the bass parts of their sonatas really did regard either instrument as sufficient (although, for marketing reasons, title-pages tend to emphasize minimum requirements rather than ideal resources). By the mid-18th century, however, C.P.E. Bach was recommending a keyboard instrument and cello as 'the most complete accompaniment', one which could not be criticized.

In the orchestras of the Opéra in Paris in the late 17th and early 18th centuries, keyboard continuo was regarded as essential in vocal numbers and three-part *ritournelles* but took no part in dance music or *symphonies*. It seems likely that this practice was followed by the orchestras for the late 17th-century semi-operas in England. In larger orchestras of the 18th century it was not unusual to find two harpsichords, one (playing with cello and sometimes double bass) to support singers or instrumental soloists, and the other (playing with cello, bassoon and double bass) to support the principal string section of the orchestra; in a smaller orchestra one harpsichord usually sufficed. Even though the keyboard instrument is not always clearly heard while playing continuo, its presence is crucial, for it gives the orchestral sound brightness and a slight cutting edge.

The differences between French and Italian musical styles are apparent from the surviving music, and the differences in manner of performance were described in detail by a number of writers. The techniques and styles of realizing figured basses can be deduced from treatises, surviving realizations, and the nature of the composition to be performed (see Continuo). The third new aspect of Baroque performing practice – the expressiveness and brilliance in singing or playing melodic lines – is not so easy to reconstruct, since it is impossible to describe objectively qualities of sound and manners of performance. It is unclear, for example, how much dynamic contrast was cultivated in the 16th century, or to what extent Renaissance performers made use of crescendos and diminuendos in shaping the phrases of motets and madrigals. Baroque writers on the voice and vocal technique, such as Caccini in *Le nuove musiche* (1601/2), Christoph Bernhard in *Von der Singe-Kunst oder Maniera* (c1649) and Tosi in *Opinioni de' cantori antichi e moderni* (1723), all discussed dynamic nuance in detail, and encouraged singers to practise *messa di voce*, the gradual swelling and diminishing of a single pitch. Moreover, those instruments incapable of making crescendos and diminuendos because of their construction, such as the crumhorn and the wind-capped shawms in general, disappeared from common use in the 17th century, while instruments with only a limited capacity for dynamic nuance, such as the transverse flutes and recorders of the Renaissance, went into a decline. At the same time the brilliant and expressive violin and those instruments that could imitate its effects, such as the

cornett, came into a new prominence. Put another way, the instruments which flourished were those that could have a solo (rather than a predominantly consort) role. The less flexible, consort-orientated woodwind (which constituted the *haut* (loud) music so frequently referred to in early 17th-century sources) were displaced by more refined instruments with a solo potential developed (principally by the Hotteterre family) in France and the second half of the 17th century.

An inventory of instruments owned by the Württemberg court in 1718 (including such items as 15 'good Munich violins', seven French basses, oboes at different pitches and a couple of French bassoons) has a separate section listing disused items where we find sets of flutes, rackets, crumhorns and cornetts. All told, it gives a fascinating picture of a radical shift in taste which had rendered whole classes of instruments obsolete. Indeed, one of the principal differences between Renaissance and Baroque performing practice may well have been the greater reliance of earlier musicians on 'terraced dynamics' (abrupt changes of dynamic level from section to section). This practice is often incorrectly described as a new characteristic of Baroque music, though the technique better fits the nature of Renaissance instruments and instrumentation, and especially the habit of scoring festive motets and madrigals for several different self-contained groups – for example, an ensemble of singers, joined by a consort of wind instruments, one of plucked strings, another of bowed instruments and so on. The concept has continuing relevance in the Baroque period through, for example, the concertino-ripieno contrasts fundamental to the concerto grosso style; but it is important to recognize that this is structural – a matter of instrumentation rather than performing practice.

The relatively great power and brilliance of the violin, and the bel canto singer (particularly the virtuoso castrato, whose voice combined force with agility), could achieve the new rhetorical affects demanded by composers of the 17th and 18th centuries in a way that earlier instruments could not. The emphasis on dynamic nuance went hand in hand with the attitude to vibrato, which was treated as an ornament rather than as a constituent of good tone production. The amount of vibrato favoured seems to have varied greatly in the course of the 17th and 18th centuries. Mersenne (who praised the violinist Bochan's use of 'certains tremblemens qui ravissent l'esprit') noted that vibrato was less used in 1636 than it had been in the past. At the end of the 17th century, Roger North thought it was a 'late invention' (and eloquently described the ways in which it could be varied for different expressive effects). Some writers (Muffat, Bremner) insisted that vibrato should be suppressed in orchestral music, where it simply interferes with good tuning. But the character of performances in the Baroque period was determined also by new techniques of ornamentation and by new attitudes towards notated rhythm.

In their rather careful stipulation of the vocal ornaments required, composers of the early 17th century, including Monteverdi and Caccini, seem to have been reacting against the excesses of late 16th-century virtuosos, whose elaborate *passaggi* sometimes destroyed almost completely the composer's intended effects. Caccini, stressing that the function of ornamentation was to underline the emotional content of what was being sung, allowed some additional embellishment, and even encouraged the development of rubato and dynamic effects. Except perhaps for an occasional decoration at important cadences, complex division can have had no place in recitative (especially in view of its status as heightened speech). While simple strophic arias might well have been embellished profusely by some singers, Monteverdi and his contemporaries often made ornamental figures an integral part of their compositional style, so that additional embellishment can hardly have been tolerated. In *Orfeo* (1607) Monteverdi provided an elaborately decorated version above the basic vocal line for the aria 'Possente spirito' (which also has virtuoso instrumental ritornellos). Here – the point at

which Orpheus must summon all his rhetorical skills to persuade Charon to allow him across the Styx – the expressive function of such ornamentation is clear (although, ironically, Charon is lulled to sleep rather than moved by Orpheus's eloquence). As the ratio of arias to recitative scenes in Italian operas increased, so the conventions of embellishment changed. By the 18th century, with the firm establishment of the da capo aria as the chief musical 'number' in *opera seria*, singers were clearly expected to ornament the repetition of the initial section of each composition, and they were allowed, as well, to add brief cadenzas to the final cadences of each section, and possibly even to embellish modestly the initial statement of the first section as well as the second. Tosi described the practice, and several arias survive with embellishments written in by 18th-century musicians.

The practice of embellishing Italian instrumental music in the Baroque period involved a gradual evolution from a flexible convention rooted in earlier practice to a more rigidly defined set of options, where in some cases ornamentation was required and in others it was possible but not necessary. Performers were more or less free to add a variety of graces (short, clearly defined ornaments that apply to single notes) in both fast and slow movements, whether or not the composer had indicated them. Thus trills can always be added to cadences, and the music permits the addition of appoggiaturas, mordents, slides, turns and other changing or passing notes (*see* Ornaments and Improvisation). In some instances, notably in slow movements notated only with a structural outline of the melody, it was obligatory for the performer to add more elaborate ornamental figuration. Here one can see that, over the course of the 17th century, division or diminution techniques rooted in Renaissance practice (but still fostered, particularly in England) gave way to a more sweeping improvisatory style of florid embellishment. The most celebrated written-out exemplar in this style is the 1710 Roger edition of Corelli's op.5 violin sonatas, which has graces for the adagios of part 1 supposedly supplied by the composer. Other examples of florid embellishment for Corelli sonatas survive, most of them in manuscript. Telemann's *Sonate metodiche* (1728, 1732) were advertised as being 'very useful to those who wish to apply themselves to cantabile ornamentation', but the most systematic treatment of the subject comes in Quantz's *Versuch* (1752), where several chapters are devoted to the decoration of simple intervals and then to the manner of treating Adagio movements.

French musicians used a greater number of signs than Italians to indicate a more varied repertory of graces; moreover, they put much less emphasis on the performer's ability to add melodic figuration. Since they normally wrote out instrumental slow movements more completely than Italians, and did not make use of da capo forms in their operas, the principal opportunities for *passaggi* were lacking in French music. Composers such as François Couperin (ii), who prepared a detailed table of graces for his important treatise, *L'art de toucher le clavecin* (1716), advised the performer to pay close attention to the signs indicated in the printed music and to follow the composer's instructions closely – remarks symptomatic of the greater control French composers wished to exercise over the circumstances of performance, and, indeed, of the greater importance of surface detail and refinement of sonority in French musical style in general. Quantz made the point that whereas performers wishing to embellish pieces in the Italian style needed to understand harmony and the principles of composition, no such knowledge was needed for the ornamentation of French music.

Moreover, French musicians were more precise in their application of the principles of rhythmic freedom than musicians in other countries. Performers everywhere and in various historical periods have modified the rhythms notated by composers, and flexibility of rhythm is certainly desirable in Baroque music. The Italian Girolamo Frescobaldi, for example, wrote a series of enlightening prefaces to his volumes of keyboard music in the early 17th century which make clear, among other things, the

importance of *tempo rubato* in the performance of his compositions (significantly, he commented that the tempo should be as free in his toccatas as in the madrigals of his day). But 17th- and 18th-century French writers on music (Bacilly, Loulié, J.-M. Hotteterre, François Couperin (ii) and many others) described certain rhythmic modifications that came to be closely associated with the music of their countrymen and which were applied to the written notes in particular situations. Thus, some notes written in equal values were intended to be played unequally. Moderately fast quavers moving stepwise, for example, might be grouped in pairs and each pair played unequally, normally with the first note lengthened (either a lot or a little), but sometimes with the first note shortened and the second lengthened.

When and how to apply the conventions governing rhythmic alteration – especially for notated Dotted rhythms – in the Baroque era has been one of the most fiercely debated issues in recent years. In some compositions (for example, many French overtures) it may be that a dotted quaver followed by a semiquaver, or even a dotted crotchet followed by a quaver, ought to be performed with the short notes sounding even shorter than written. In some compositions the dotted figures are smoothed out and turned into triplets; and in others equal quavers are dotted, or quaver upbeats are played as semiquavers in order to maintain the pattern of rhythms evidently intended by a composer in a particular movement. Much French music (and indeed much Baroque music of all countries) was derived from dance forms and rhythms, and in performance the underlying rhythmic patterns of the dance must be brought out. All of these slight modifications of the written rhythms – Notes inégales, over-dotting, under-dotting and dance rhythms – give some of the music of the 17th and 18th centuries, especially that composed in France, its lilting, easy grace and its sophisticated refinement of surface detail.

Composers in the Baroque period, unlike those in earlier times, often used a word or phrase to indicate the approximate tempo at which they wished their compositions to be played: *lento*, *adagio pesante*, *allegro ma non tanto*, and the like. These are inevitably vague, and they often suggest the mood as much as the speed of a composition. Moreover, they were often used inconsistently by composers or defined in contradictory ways by different writers on music from the period. Georg Muffat (*Ausserlesener Instrumental-Music*, 1701) warned that the Italians played movements marked Adagio, Grave and Largo much more slowly than his compatriots, whereas they took those marked Allegro, Vivace and Presto ‘incomparably faster’. Yet these terms offer the most precise surviving information about the tempo of Baroque music. Various writers, such as Brossard and Grassineau in their dictionaries of musical terms and Leopold Mozart in his treatise on violin playing, defined these descriptive terms in prose. In addition, Quantz in his treatise on flute playing included a systematic table of groups of tempos, with an approximation of absolute speeds measured against the human pulse (Table 1), and he gave even more precise descriptions of the tempos proper to various dances.

Modern performers have concerned themselves not only with styles of playing Baroque music but also with the revival of precise sonorities. More often than not, increased knowledge about the details of Baroque instruments and performing practices has brought with it an increased sensitivity to the sound of older music and a heightened awareness of the connection between musical style and the history of technology. Thus 20th-century instrument makers copied ever more closely the details of surviving instruments of the 17th and 18th centuries in the realization that the so-called ‘improvements’ of modern technology (often intended to eliminate mechanical disadvantages) may destroy some essential quality of sound. Moreover, modern builders (especially of keyboard instruments) have come to appreciate the vast differences between, say, a 16th-century Italian

harpichord and its 18th-century French counterpart, and have passed on to players and listeners their conviction that the best instrument for a particular piece is the sort for which it was originally intended. The concept of a 'period instrument' is rather different for the violin family from what it is for keyboard and wind instruments where, by and large, the Baroque versions differ so much from their modern equivalents that they are essentially distinct instruments. (No amount of alteration could make an 18th-century flute or trumpet function as a modern instrument.) Violinists, however, still prize 17th- and 18th-century instruments above all others – and many internationally famous violinists perform Romantic and 20th-century repertory on instruments made in the Baroque era but extensively modified since (through resetting the neck, strengthening the bass-bar and substituting a thicker soundpost). One of the paradoxes of the modern world is that while Stradivari is acknowledged as the greatest violin maker of all time, every surviving Stradivari instrument has been altered ('improved') to conform to 19th-century notations of how a violin should sound. Those ('period-instrument') players who feel that Baroque and Classical repertory is best served by instruments set up as they were when the music was composed use either newly made replicas or older instruments restored to their pre-19th-century condition. And, of course, they use bows which, as far as possible, match those in use at the time the music they are playing was composed. Related to this concern to reproduce as exactly as possible the original timbre of older music is the persuasive case scholars have made that older conventions of performance should be observed even when they run counter to modern tastes. Thus, writers such as Winton Dean have argued that castrato roles in Baroque opera should be sung by women (a common 18th-century solution when no castratos were available) rather than by tenors or baritones in transposed versions which destroy the sonorities conceived by the composer. (Assigning castrato roles to countertenors is the most common modern solution to the problem, though it is virtually without historical precedent.)

The increasing use of old instruments or of accurate modern reproductions has in many cases required performers to relearn techniques by studying instruction books published during the 17th and 18th centuries. Thus keyboard players have studied and adopted the fingerings included in such sources as English virginal books or François Couperin's *L'art de toucher le clavecin* (1716; see *Fingering*, §I, 1). For wind players, the study of Baroque tonguing conventions provides similar insights into articulation and phrasing. Musicians who play on violins (that is to say, violins set up as they would have been in the 17th or 18th century: see *Violin*, §I, 4) have had to learn an entirely new technique, particularly in the use of pre-Tourte bows. While some useful information can be gleaned from the instrumental tutors published before 1750, it is not until the end of the Baroque era that we find treatises written by truly accomplished violinists (Geminiani, Herrando, Leopold Mozart, L'abbé *le fils* and Tartini) addressed to players of more than amateur aspirations. Moreover, violinists must take into account the differences between the more rhythmic, dance-orientated playing technique of the French (described in detail by Georg Muffat in the preface to *Florilegium secundum*, 1698) and the freer singing tone and more varied bowings of the Italian musicians of the period.

Once they have acquired the proper instruments and learnt to play them, modern performers of Baroque music must then decide at what pitch they should play and in which temperament. An international standard pitch was not established until the 20th century. Pitch seems to have varied fairly widely from place to place; and even within one city various pitches were used for different ensembles. Praetorius who (confusingly) reversed what even in 1619 appears to have been the usual application of the terms 'Chor Thon' and 'Cammer Thon', noted the use of other regional variations on these two basic pitch standards. In 18th-century Germany, chamber pitch (Cammerton) was a tone

lower than that to which church organs were tuned (Chorton); but a low chamber pitch a minor 3rd beneath Chorton was also used (*see* Pitch, §1, 2). Some modern performers of Baroque chamber music have adopted a lower pitch standard, normalized for convenience a semitone below the modern level (i.e. at $a' = 415$). It is, however, fast becoming recognized that such factors as vocal ranges or the kind of sound quality wanted from string instruments make it appropriate to regard pitch – like so many other aspects of performance – as something which needs to be considered in relation to particular repertoires. Similarly, investigation of the way instruments were tuned in earlier times (in various kinds of mean-tone temperament or in other more elastic tunings for keyboard instruments, for example) has shown that old techniques were not only practical but also capable of adding nuances unknown in performance of more recent music. Mean-tone tuning, favoured in the early Baroque period, produces a spectrum in which the most-used chords (broadly speaking, the pivotal chords in keys with fewest accidentals) have beautifully pure 3rds while those in more remote tonalities vibrate with dissonance (or, in the case of the ‘wolf’ chord, are unusable). The ‘circulating’ temperaments which became standard in the 18th century (and which are implied by the term ‘well tempered’) retain something of this chiaroscuro, while allowing modulation through any tonal area.

The modern orchestra had its origins in the lavish ensembles assembled for late 16th- and early 17th-century court festivities, such as the Florentine *intermedi*, the French *ballet de cour* and the English masque (Monteverdi’s *Orfeo* orchestra is essentially like this – a spectacularly varied ensemble assembled for a specific court festivity). It became regularized as a relatively fixed ensemble of instruments with strings as its core in the mid-17th century, with Lully’s *Petits Violons du Roi* and the opera orchestras of Venice. The size and disposition of 17th-century orchestras varied enormously. On the one hand, there are reports of Corelli directing ensembles which would be very large even by modern standards, while on the other we know that he performed *concerti grossi* in the 1690s with an ensemble of just nine players.

The practice of regularly including a 16’-pitch string instrument on the bass line seems to have originated in Italy in the late 17th century; such an instrument had no place in 17th-century French or English orchestras. A number of these organizations achieved great fame. Lully’s orchestral discipline set new standards everywhere in western Europe, and his elaborate instrumentation encouraged wind players to develop new and mechanically improved instruments; the oboe, and the Baroque flute and recorder, probably developed as a direct result of the need for more brilliant and more reliable wind timbres which could combine well with strings in French orchestras. And the orchestra at the court of Mannheim in the 18th century astounded listeners with its refined playing and its control of a variety of effects: *diminuendo*, *crescendo* and so on. But these organizations differed in many particulars from the modern orchestra, not only in the types of instruments used and their playing styles, but also in the number of musicians employed, the way they were arranged, and the kinds of balance between strings, wind and continuo instruments they aimed to achieve. The wind parts, for example, were often doubled in 18th-century orchestras, producing a substantial counter-force to the relatively few string players.

As with orchestral music, much choral repertory was likely to have been performed with quite small forces. In the early 1980s Joshua Rifkin initiated a debate (which still continues) when he suggested that Bach may have used very small instrumental and vocal ensembles with, typically, a single voice to each part for performances of his cantatas and Passion settings in Leipzig. Rifkin argued his case on the basis of surviving performing parts and on Bach’s own ‘*Entwurff einer wohlbestallten Kirchen*

Music' of 1730 in which he described the numbers of musicians he needed to fulfil his obligations to the various Leipzig churches. There is evidence that the situation in Leipzig may have been paralleled in many other German centres.

6. 1750–1800.

Janet K. Page

(i) Continuity and change.

Performing practices of the late 18th century followed on with little change from those of the earlier part of the century; however, changes in musical style, experimentation in the construction of musical instruments, and new performing situations and aesthetics all brought changes in performance. It is clear that performing styles continued to undergo gradual change during the course of the 19th and 20th centuries: by the end of the 19th century musicians were playing on instruments vastly different from those of Mozart's time and designed to be part of a new musical aesthetic; the advent of recordings has allowed us to hear the changes that took place during the 20th century, a period in which many performers believed that they continued to follow traditions reaching back to the late 18th. Most performers and audiences from the late 18th century onwards (at least until the mid-20th) were accustomed to performing and hearing most music, whether new or old, in a common style – that suited to the instruments and aesthetic of their own time. What is more, instruments, and in some cases musical perceptions, were considered to have improved with each generation. Thus Mozart reorchestrated Handel's *Messiah*; Beethoven and Brahms wrote cadenzas in their own styles for Mozart's Piano Concerto in D minor K466 (Beethoven's cadenza is much longer and has far wider-ranging modulations than any of Mozart's, and Brahms's has chains of orchestrally conceived tremolo accompaniments unlike anything used by Mozart); Wagner and others 'corrected' Beethoven's symphonies; and late 19th-century singers sang music by Mozart and Verdi very much alike.

Although there had been some interest from the 1950s and even earlier in how the music of Mozart might have been performed, a more general awareness that the study of performing practice could be relevant to music of the late 18th century came about only in the 1970s, as an extension of work on music of the Baroque and earlier periods. The corresponding entry in *The New Grove Dictionary of Music and Musicians* (1980) devoted little space to music after 1750, invoking the idea of continuity of tradition from the mid-18th century to the present, but *The New Grove Dictionary of Musical Instruments* (1984) added an extended discussion on this period. By the end of the 20th century much detailed work had been carried out on performing practices of music after 1750.

(ii) Performer and composer.

The relationship between performer and composer remained in the late 18th century much the same as that of the age that preceded it. In a concerto performance the performer was often also the composer, and the work was tailored to his or her talents. A manuscript might be written in a way that only the composer-performer could readily interpret. Leaving aside the cadenzas and *Eingänge* to be added (see Cadenza, Eingang and Improvisation, §II, 4, (i)), Mozart, for example, did not fully write out every detail in the solo part of some of his piano concertos but left some passages of figuration in shorthand (e.g. the third movement of K482 and the last movement of K491, in which long notes

provide an outline to be realized as passage-work; and K537, where the left-hand part is missing in a number of bars), notated few dynamic nuances, provided figures to indicate that the soloist was to realize a continuo accompaniment in tutti passages, and occasionally left a passage sparsely ornamented (as in the Andante of K451, for which Mozart composed an ornamented version at the request of his sister). Composers expected that other professional performers would ornament soloistic works such as concertos or arias as appropriate and in their own individual style: Dittersdorf could comment that as a boy he had once ornamented a piece 'quite in the Huber style' (that is, in a style recognizable as that of Karl Huber, principal violinist of the church orchestra in which Dittersdorf also played). Individualistic interpretation, yet within the bounds of accepted style, was also appreciated, certainly by the end of the century: the pianist Marie Bigot was praised at the beginning of the 19th century by both Haydn and Beethoven, Beethoven remarking 'That is not exactly the character which I wanted to give this piece, but go right on. If it is not wholly mine, it is something better'.

But performers (and audiences) otherwise expected a composer to write with someone particular in mind, providing music that showed off his or her strengths and downplayed weaknesses. Thus Mozart wrote stately old-fashioned arias in *Idomeneo* for the elderly Anton Raaff and remarked of the composition of *Die Entführung aus dem Serail* that he 'had sacrificed something to the flexible throat of Mlle Cavallieri'. Composers were likewise acutely aware of the capabilities of the particular instruments for which they wrote: Haydn lamented that Marianne von Genzinger, for whom he was composing some sonatas, did not own a piano by Schantz, his favourite maker, 'because everything can be better expressed' on such an instrument; he further wrote, 'I know I ought to have composed this sonata for the capabilities of your instrument, but I find this difficult because I am no longer used to writing this way' (1790).

In published works, intended for sale to performers not necessarily in direct contact with the composer, notation had to be complete enough to explain the composer's intentions. Thus it tended to become more detailed towards the end of the century, but still left up to the player many details of articulation, dynamic and rhythmic nuance, etc. Burney, for example, commented on hearing the Besozzi brothers (oboe and bassoon) play:

[Their compositions] are in a peculiar manner adapted to display the powers of the performers; but it is difficult to describe their style of playing. Their compositions when printed, give but an imperfect idea of it. So much expression! Such delicacy! Such a perfect acquiescence and agreement together, that many of the passages seem heart-felt sighs, breathed through the same reed. No brilliancy of execution is aimed at, all are notes of meaning. ... each *forte*, *piano*, *crescendo*, *diminuendo*, and *appoggiatura*, is observed with a minute exactness, which could be attained only by such a long residence and study together (BurneyFI, 2/1773).

(iii) Instruments.

During the second half of the 18th century the piano replaced the harpsichord, although not everywhere at once. The key-bed of the late 18th-century piano was shallower, the string tension less and the action lighter than those of a modern instrument, all combining to produce a delicate sound and to enable the pianist to play quickly and lightly. Two distinct types of action were in use: the *Prellmechanik* or 'Viennese', with an extremely light touch, favoured in Germany and Austria, and the

English, favoured in England and France (*see* Pianoforte, §I, 5). Mozart's works from the 1770s were written for a five-octave, wooden-framed piano with small, hard, leather-covered hammers and Viennese action. His own concert instrument (Anton Walter, c1780, now in the Mozart Geburtshaus, Salzburg) originally had hand stops to raise the dampers; the knee levers were added later. Detailed study of this instrument has revealed that it may have been altered considerably after Mozart's death to conform to the style in vogue around 1800 (Latham, E1997): thus this instrument, long held as a standard for the performance of Mozart's music, may not provide us with the information we would like to have concerning Mozart's style of playing. But the changes in timbre produced with either hand stops or knee levers were expressive options rather than an integral part of the sound as on a modern piano. The light action is fundamental to the concept of a piece such as the *perpetuum mobile* Presto of the finale of Mozart's concerto K271 (1777); this action also supports the flexibility of dynamics and delicate touch called for by Mozart's many small-scale articulation marks. Beethoven, in the Sonata op. 13 (*Pathétique*; 1797–8), used the limitations of the instrument to create a tension that is an essential part of the rhetoric of that work: the gradual crescendo from *p* to *ff* combined with an outward expansion to almost the highest and lowest notes of the instrument seems to push the limits of the instrument and of its musical expression, an effect entirely absent on a modern grand piano with its larger range, sturdier frame and even sound (ex.1). He continued to use instruments of the Viennese type throughout his life. By the mid-1790s Haydn was composing for an instrument with English action; the instrument had a range of five and a half octaves and was heavier than the Viennese piano, with a more sonorous sound and damping that was purposely less effective (Sonata in C, HXVI:50). It was the legato sound concept of the English instruments that came to dominate in the 19th and 20th centuries. According to Czerny, Beethoven described Mozart as having a 'fine but choppy [*zerhacktes*] way of playing, no *ligato*'; this comment must be understood in the context of the instrument in use and of changes in taste.

Woodwind instruments were constructed throughout most of this period, as in the Baroque era, with the idea that each individual note and thus also each scale had a characteristic sound. The oboe of the period, while it tended to have a narrower bore and smaller tone holes than earlier types, still had only two keys; chromatic notes were still produced by cross-fingerings, which had a more veiled sound. It was a softer instrument than the Baroque oboe and played more easily in the high register; the note *f*^{''} is used in Mozart's Quartet for oboe and strings K370/368b (1777) and began to appear in fingering charts in the 1790s. The variety of wind colourings was increased in the late 18th century with the rise of the clarinet and associated instruments such as the basset-horn. Many clarinetists played with the reed against the upper lip rather than the modern position: the reed-above position allowed the player to make rapid leaps and play especially high, while the reed-below position gave the softest tone. The flute began to acquire additional keys late in the century. Tromlitz, writing in 1791, still advocated the use of an instrument with two keys, for E^b and D[#] (just as Quantz had done), a register (tuning device in the foot joint) and a graduated screw-cork; additional keys could be used to make the first octave more even and trills better in tune, suggesting that players and makers were beginning to move towards a more even sound by the last decade of the century, if not earlier. The added keys, according to Tromlitz, were useful in slow movements but not in fast ones; their use for improved facility was a later development. Both flutes and oboes could be provided with several middle joints of varying lengths to accommodate variations in pitch standards in different regions (*see* Pitch).

Tromlitz makes it clear that singing remained the model for instrumental playing, and indicated that players were to use varied patterns of articulation based on tonguing syllables. He favoured finger vibrato (*flattement*), although others were using breath vibrato (*see* Vibrato). For brass instruments the ability to play the complete scale, so that the instrument could be used melodically, was gaining importance. The art of hand-stopping on the horn, developed around 1750, reached a high level, and by the end of the century various experimental trumpets, for example the keyed trumpet for which Haydn wrote, had appeared.

The late 18th century was a period of transition for string instruments. Greater volume and brilliance began to be required of these instruments in order to fill the larger halls now needed for new audiences. This was achieved in a variety of ways: greater tension was produced through use of higher pitch, the neck began to be tilted back, the strings became longer for more resonance, the bass-bar and soundpost were made more substantial. Gut strings remained the most common, but metal-wound strings were increasingly used on the lower strings of violin, viola and cello towards the end of the century. Treatises of the period recommend a variety of ways of holding the violin, varying from at the breast to the chin-braced grip that would be later universally adopted (*L'abbé le fils*); the latter allowed greater freedom of movement in the left hand for easier shifting, and freer vibrato. The cello was placed between the knees with the weight supported on the calves or supported on a footstool or small peg. Leopold Mozart's influential treatise (*Versuch einer gründlichen Violinschule*, 1756) recommended avoiding unnecessary finger activity, although Galeazzi (*Elementi teorico pratici di musica*, 1791–6) advocated the use of higher positions for expressive purposes, providing violin G-string fingerings up to the 8th position. Open strings were generally avoided when stopped notes were possible, and sequences were played with matching fingerings. Vibrato was generally used sparingly, as an expressive ornament, although Geminiani (*The Art of Playing on the Violin*, 1751) appears to have recommended a continuous vibrato in the modern fashion.

The construction of bows was the subject of much experimentation, with various versions of straight and concave bows being developed. The use of a greater amount of hair and of a ferrule to hold it flat also helped the player achieve greater volume and brilliance. Such bows produced greater volume and a larger dynamic range, and led to the development of new styles of articulation. Convex bows such as that employed by Leopold Mozart commonly produced an articulated, non-legato stroke, with dynamic nuances on long notes for variety of expression. Transitional and Tourte-style bows had a larger repertory of bow strokes, a more immediate attack, and a more sonorous cantabile style. But all these kinds of bow, of old and new design, were used together in the same orchestras, and uniformity of bowing was rare. The variety of instruments and bows in use makes the establishment of a suitable combination for a particular work a difficult matter, and in cases where the composer's preference is not known, the particular relationship that may have existed between the instrument used and the music itself remains unknown. (For further discussion of bows and bowing techniques *see* Bow).

(iv) Performances.

All kinds of performances took place, and performers and ensembles were praised for their nuanced dynamics, their ensemble and their good taste. Extensive rehearsal, insisted on by Haydn, and also employed by Mozart to reach his musical ends, (*see*, for example, his account of the preparations for *Idomeneo*), seems to have been uncommon. Performance traditions varied from place to place: it is clear that we must be careful about general comments. Sources of such information include:

documentary material (see, for example, Edge and Eisen, both in 'Performing Mozart's Music', E1991–2); manuscript music (Edge, in Zaslaw, E1996); newspaper reports (McVeigh, E1993); letters (Mozart, Haydn); diaries (Burney, Rosenbaum, Zinzendorf) and autobiographies (Dittersdorf, Dülon, Grétry) of musicians and audience members; works of literature (Fanny Burney); iconography; dictionaries (Rousseau, Koch); and the commentaries of travellers (Burney, Schubart). Burney, for example, provided many accounts of performances heard in the various places he visited in the 1770s, with comments on the performance of church music in various places (noting, for example, that the serpent was an especially favoured accompaniment in France); descriptions of opera houses he visited, with accounts of the sort of music performed, the behaviour of the audience and the technique and talents of the singers; and accounts of private academies and public concerts, noting the size and disposition of the performing forces, and commenting on the use of unusual instruments and on performing techniques, all from the perspective of an educated Englishman. Burney also noted that the French continued to maintain a pronounced independent style of performance and taste in spite of the encroachment of the Italian style.

A keyboard instrument continued to be used in the orchestra in many places to play the continuo line. The instrument was often a piano rather than a harpsichord by the 1780s, and the keyboard player played unobtrusively, doubling the principal parts in the right hand or, in louder passages, playing chords. Mozart played continuo in the tuttis of his piano concertos and according to one report was known to have conducted a symphony from the keyboard. Nannerl Mozart accompanied symphonies on the harpsichord in Salzburg in 1778. By the end of the century, however, as direction of the orchestra passed from the keyboard player to the principal violinist, the keyboard instrument disappeared or else the seat at the keyboard became a position of honour. Haydn 'presided at the keyboard' during performances of his London symphonies in that city, and the honorary function of the instrument was well enough established for Haydn to make it the subject of wit, bringing the instrument forward suddenly as a soloist in the coda of the finale of Symphony no.98.

Orchestra size varied from place to place and according to the performance venue, but there were two general styles of orchestration: the French, followed also in some Austrian and German cities, and the Italian. In the French tradition there was a stronger middle part, and thus more violas; in the Italian, a strong treble and a treble–bass polarity. In many Italian orchestras, and also in Salzburg (see table of orchestra sizes in Zaslaw, E1989, pp.458–9), there were more basses than cellos (see Orchestra).

A subject of much discussion has been the use of articulation marks by composers, especially Mozart. In his case it seems most likely that whether the symbol appeared as a dot or a stroke or something in between was in most cases a result of the speed with which he wrote down the music (Riggs, E1997). Clear dots appear under slurs as an indication of *portato*, but otherwise there seems to be no attempt to distinguish between dots and strokes, and indeed it seems clear from examining copies of Mozart's music that his contemporaries did not recognize a distinction. Many theorists from the second half of the 18th century recognized only a single type of articulation marking, which was, according to C.P.E. Bach, to be executed 'according to the length of the note ... whether the tempo is fast or slow, whether the dynamic is *forte* or *piano*'. Others recognized two signs, but there was no agreement as to their intended articulation. No specific style of performance is implied by either dots or strokes in Mozart's music, except in the case of long strokes in certain works with organ (for example, the church sonata K144) where they appear to indicate that the organ line is to be played unison rather than realized (Eisen, E1991). Rather, interpretation is to be determined by context, according to an understanding of the meaning of the passage. Theorists recognized that different styles of articulation were needed also

for notes not provided with articulation marks. Thus according to J.F. Reichardt (*Ueber die Pflichten des Ripien-Violinisten*, 1776): 'the bowstroke in an Adagio is very different from that in an Allegro, and contrasts mainly in that the former remains more on the string than in the Allegro'.

7. The 19th century.

D. Kern Holoman, Robert Winter and Janet K. Page

It had become increasingly apparent by the end of the 20th century that the idea of continuity of tradition even from the 19th century into the 20th was problematic. In a period of such experimentation and change as the 19th century, exactly whose traditions were continued? And how are they related to what a composer might have heard or envisaged? What especially distinguishes this period is the vast amount of source material: owing to advances in technology and the rise of literacy, there are literally thousands of eyewitness accounts of performers and performances. In part because of this sometimes bewildering variety of material, but also because tradition was long considered eminently satisfactory as a guide, many of even the central works of the modern repertory have not yet appeared in scholarly editions.

(i) Sources.

As in any other period of music history, the materials used by musicians themselves are primary evidence of their practices. Manuscript parts and conducting scores from the 19th century exist in abundance, although many were lost in fires or wars or just thrown away to make room for the new. A complete set of manuscript material associated with the origin of a work is usually as good a record of its early performance history as of its compositional genesis. Players liked to sign and date their parts; alterations to the musical text bespeak the decisions made while preparing the work for its première, the compromises reached between composers and performers, and the lessons learnt by composers from the players. The number of parts alone tells a great deal about the size of the performing forces. Original manuscript parts often resolve dilemmas resulting from printer's errors or other interruptions in the transmission of the composer's intention to the printed page. Assessment of such materials – without which there would be neither a Paris *Don Carlos* nor a viable *Benvenuto Cellini* – is one of the most intriguing tasks of modern musicology. Standards in such musicological investigation have been set by new complete editions of the works of Rossini, Verdi and Wagner.

Published music too needs careful study. Chopin, for example, published works simultaneously in France, Germany and England, resulting in as many as half a dozen authentic sources for a single work. Editors must separate the intentional discrepancies from the unintentional, and determine which variants are so substantial as to merit publication of separate versions, considering at the same time that some elements may have been considered variable by the composer: there may be no one 'correct' version.

Other useful material includes opera production books, the manuscript notebooks in which singers kept track of their cadenzas (e.g. those of Laure Cinti-Damoreau) and the corrected or amplified published editions of composers' works prepared for their pupils, as in the case of Jane Stirling's copies of Chopin. Iconographical sources, including lithographs and photographs, depict costumes, sets, and the disposition of the singers at an opera, the number and disposition of orchestral players,

methods of holding instruments, and performance spaces and situations. Method books, many intended for the training of professional performers, offer information on instruments, sound production, performing techniques and interpretation (a useful bibliography of these appears in Brown and Sadie, A1989). Treatises on orchestration (Kastner, 1837; Berlioz, F1843; Gevaert, 1863 and 1885; Prout, 1876, 1897–9) discuss instruments, their tone qualities and their use, orchestral placement and what the writer felt could be improved; those on conducting (Berlioz, 1856; Wagner, F1869) discuss techniques and philosophies of performance. Berlioz insisted on the conductor's responsibility to follow the composer's intent, while later treatises, such as that of Wagner, favour schemes for modernizing works to suit the large symphony orchestra.

The writings of composers (Berlioz, Spohr, Wagner), performers (William Thomas Parke, Gustave-Hippolyte Roger) and bystanders (Chorley) provide much important material. Berlioz in his *Mémoires*, for example, described musical conditions in Paris, and also recounted in vivid style the problems encountered in the course of his tours: the logistics of raising orchestras and hiring halls, playing standards, rehearsal practices, and practices of substitution when instruments such as the english horn were unavailable. Accounts in periodicals provide information about dates of performance, the progress of tours and performance repertory. The reports of critics are often revealing. Composer-critics (E.T.A. Hoffmann, Weber, Schumann, Berlioz, Liszt, Wagner) in particular were sensitive to details of performance, sometimes even discussing a particular artist's style of ornamentation. In any event, newspaper journalism is more accurate as to who actually played than the printed programmes, and it is our chief source for understanding how performances were received by the public. The RIPM project (Répertoire International de la Presse Musicale) indexes 19th-century periodicals, providing scholars with access to much useful material.

Edison's tinfoil phonograph (1877) inaugurated the era of sound reproduction, offering an important new type of source for the study of performing practice. The early technology worked most successfully with solo instrumentalists, who could get close to the recording apparatus: Joachim and Sarasate both left revealing recorded performances. Joachim, for example, played in a style using little vibrato. Singers too were successfully recorded, and many of their earliest recordings document 19th-century styles. Maurel and Tamagno, the first Othello and Iago (Verdi, *Otello*), made recordings in the early years of the 20th century, as did Adelina Patti, a singer well known to Verdi, who praised her 'purest style of singing'. The last castrato of the Cappella Sistina, Alessandro Moreschi, also left recordings, our only aural documents of this voice quality of such importance to Roman Catholic church music and to 18th-century opera. Although he was the last of a dying tradition, his voice is like nothing else, reaching into the high range with great power and clarity. But even more astonishing to modern ears is his singing style, which is truly that of his age, making heavy use of portamento and dramatic sobbing effects. The seriousness of intent of the modern discipline of performing practice still finds such obvious emotion a little embarrassing.

(ii) The orchestra.

Central to the musical life of the 19th century was the rise of the philharmonic society and the symphony orchestras. The Paris Société des Concerts du Conservatoire was founded in 1828, inspired by curiosity about Beethoven's music; the Philharmonic Symphony Society of New York and the Vienna Philharmonic both trace their origin to 1842. The Leipzig Gewandhaus Orchestra flourished under Mendelssohn from 1835. Concerts sponsored by the Philharmonic Society of London can be traced to

1813, as can those of the Vienna Gesellschaft der Musikfreunde. Characteristic of these orchestras was a clear breach with continuo practice, public concert series supported by subscription and leadership by a true conductor. The orchestra of the 19th century was a youthful institution, not yet constrained by precedents. Spohr experimented in the 1810s with his *Taktirstäbchen* ('directing baton'), which replaced the violin bow, and along with Weber gave rise to modern conducting and to discussions of the proper role of the composer-conductor. By contrast, Spontini and others conducted with a baton held in the centre, and all manner of stamping of the floor and tapping on candle racks was considered by many to be the only successful way to coordinate a performance (although these practices, it must be added, were deplored by many).

Orchestral seating arrangements were varied. The members of the Gewandhaus Orchestra stood to perform, but other orchestras were seated. Proper balance between chorus and orchestra was achieved by Berlioz and others by placing the orchestra behind the chorus on raised tiers. For the popular monster concert the conductor was to be found in the centre of his forces, surrounded by assistant conductors and mirrors. From the 1860s Verdi devoted considerable attention to the seating arrangement of his orchestras, insisting that the double basses be placed together to improve ensemble and that the strings surround the wind instruments to create a homogeneous sound (*see Orchestra*).

Four bassoons had been common in many orchestras since the 18th century, but the practice of doubling the wind section gained momentum as the century progressed. The addition of piccolo, english horn, contrabassoon and other instruments vastly enhanced the symphonic palette. An equally sweeping change in the sound of orchestras resulted from new mechanisms for the traditional instruments. These allowed instrumentalists to master the vivid melodic figurations and the new spectrum of keys that progressive composers required. But the increase in the number of keys on woodwind instruments was only part of the story of the performing practice of those instruments: there were many experiments in key configuration, in bore proportions and sound-producing mechanisms: some clarinettists (especially in England and Italy) were still playing with the reed against the upper lip in the 1830s, and for all the woodwinds there were several competing concepts of sound, which led to different styles of instrument in different places and sometimes even to the use of radically different instruments within the same orchestra (*see Flute*). This lack of uniformity kept orchestras individual and colourful in sound.

From the same period come piston and rotary valves for brass instruments (*see Valve*). By the end of the 1820s piston-valves were common in Paris, and by mid-century rotary valves of increasing technical perfection were widely used. But, as with woodwinds, local tastes varied. There was considerable resistance to the valve horn, as the characteristic inequalities of tone of the natural horn were considered essential to the nature of the instrument. Although a valve horn class was established under Meifred at the Paris Conservatoire in 1833, it was discontinued on his retirement in 1864 and not reformed until 1896. Brahms's Trio op.40 (1865) was conceived with the natural horn in mind. Schumann, on the other hand, worked to develop an idiomatic technique for the valve horn. The bass of the brass section was particularly variable as early valves were not effective with the wide bore of the large instruments: the serpent was employed by Berlioz and Mendelssohn, and the ophicleide remained in use at the Paris Opéra until 1874 and in English orchestras until the end of the century. Different styles of instrument developed in different places: Wieprecht's Bass-Tuba in F (1835) in

Germany; the tuba in 8' C, with its large four-octave range, in France (works written with this instrument in mind pose difficulties for players using other instruments); the bombardon in Italy; and Červený's large-bore instrument in eastern Europe and Russia (from the early 1880s).

The conversion of string instruments into the high-powered models now almost universally in use resulted in a dramatic change in string sonority. It is thought that fewer than 30 or so good violins escaped remodelling for volume, a process that lengthened necks and fingerboards, heightened bridges and permitted the increased tension of metal strings. The widespread adoption of the Tourte bow almost completed the modernization of the violin: gut E and A strings remained in use into the 20th century.

The philharmonic societies were adventurous in their choice of repertory, at least in the first half of the century (music by Beethoven held a special fascination for many) but by the 1850s works by popular favourites such as Weber and Mendelssohn were programmed season after season. Old masters began to dominate concert programmes just as they do today. Enthusiasm for novelty slackened as the decades passed, and responsibility for promotion of new music largely shifted to more progressive organizations.

(iii) The piano.

Like other instruments, the piano developed along somewhat different lines in different places. The simple and light action of the enlarged Viennese piano of Graf and Stein was favoured in parts of Europe for most of the century, though the London instruments of Broadwood and Clementi had their admirers. By the 1820s metal framing had been added to the piano to allow it to support the greater string tension required for greater volume, at the expense, it was held, of some degree of nuance. The repetition action patented by Sébastien Erard in 1821 made the heavier-tensioned instruments workable. Combined with the greater mass of felt-covered hammers (from the 1840s) and carefully devised striking points (in which Erard was also a pioneer), the resultant tone was more sustained, richer in overtones and more uniform throughout the compass of the instrument. But the widespread assumption that by the 1860s the piano, with its one-piece cast-iron frame, had reached a final plateau of development is demonstrably false. The tone of the 1892 Steinway concert grand in the Smithsonian Institution, used by Paderewski for an American tour, projects a velvety mellowness quite unlike the steely, more brilliant tone of comparable instruments of the late 20th century.

(iv) Performance and interpretation.

During the 19th century, advances in technology allowed music, and musicians, to travel further afield. Travelling virtuosos required modern instruments and skilled instrumentalists when they arrived to perform, and often stimulated progress in cities and towns formerly content with indifferent standards. As early as the 1830s a successful opera at La Scala would be required within a season or two in London, Paris, Vienna and St Petersburg (the commercial ramifications of this were quickly recognized, by the house of Ricordi in particular). Wagner's music reached Boston within a few months. Musical compositions, in short, strayed further and further from home, and the increasingly complex annotations in published music reflect these developments (*see also* Ornaments, §9).

Even so, individual markings were not always interpreted in the same way. Spohr, for example, used vertical strokes over notes to indicate, in different contexts, legato bowing and short, sharp *martelé* strokes. Many composers employed both dots and strokes, but the notation did not always have the same meaning. The French generally followed J.L. Adam (*Méthode du piano du Conservatoire*, 1802) in using the marks to indicate the length of notes: he gave the strokes as the shortest, the dots as longer and dots under slurs as the longest. But Germans emphasized the degree of accent: Fröhlich (*Kontrabass-Schule*, 1829) considered that strokes indicated the more powerful staccato, the dots a more gentle style. Baillot (*L'art du violon: nouvelle méthode*, F1834) used the dot for *martelé*, where the bow stays in contact with the string, and the wedge for light bouncing strokes, whereas Ferdinand David (*Violinschule*, 1863) used the marks in the opposite way (Brown, E1993). (For further discussion of bowing in this period, see Bow, §II, 3).

The existence of different pitch standards in different places as well as a general rising trend brought demands for an international standard (see Pitch, §I). A standard of $a' = 435$ (the *diapason normal*) was established in Paris in 1859. It was soon adopted in Britain, and more generally at an international conference in Vienna in 1885. But although some Italian opera houses adopted the new standard in the late 1860s, Verdi found it necessary to inquire in 1871 whether the wind in the orchestra and the stage band at La Scala would play at a uniform pitch level, and when on tour in the final decade of the century the clarinettist Richard Mühlfeld sent a tuning-fork ahead so that the piano might be tuned to his preferred pitch; his instruments suggest that this was about $a' = 440$, lower than was usual in many places by that time.

The rise of the modern conservatory considerably elevated standards of performance. Important conservatories existed in Paris (1794, reorganized 1816), Prague (1811), Vienna (1817), Leipzig (1843) and St Petersburg (1862). Graduates had a systematic training and attained a new technical security, prompting them to extend the technical possibilities of their instruments. The Paris Conservatoire was especially influential through the many method books produced by its instructors. As the century progressed, conservatory teachers seem to have done much to establish what has become the standard repertory.

Amateur music-making was similar to that in the preceding century. Properly bred young ladies studied the piano and harp; aristocratic dilettantes still played the flute. As mechanization made the piano cheaper to produce, it found its way into the parlour of every tasteful family. Music was more popular than ever, and a proper view of the performance history of, say, Meyerbeer's *Robert le diable* will not exclude the piano fantasies and the promenade quadrilles based on it, just as the study of performing practice in general must also deal with such durable traditions as the performance of Handel's *Messiah* by a large massed chorus, with soloists producing a sound capable of filling the large halls in which the performances took place.

The musical text was often treated with greater freedom in the 19th century than was acceptable in the 20th. Liszt, for example, noted after his retirement from concert-giving that

I then frequently performed ... the works of Beethoven, Weber and Hummel, and I confess to my shame that in order to compel the bravos of an audience ... I had no scruples against changing their tempos and intentions; I even went so far as insolently to add to them a host of passages and cadenzas.

One can therefore understand Berlioz's surprise on the occasion when Liszt performed Beethoven's Hammerklavier Sonata with 'not a note ... left out, not one added'. In spite of his penitence, the 'tradition' passed on by Liszt in his later years to numerous pupils like the young Rosenthal was one in which editorial licence was taken for granted. In private and public performances solo works and sometimes even concertos were preceded by improvised (or prepared) preludes designed to set the mood. Sometimes works were joined together with similar interludes.

The invention of the metronome gave composers another means of documenting their wishes. Beethoven, in his initial enthusiasm, wrote down metronome marks for all the symphonies and quartets to op.95 (as well as for the Piano Sonata op.106 and a few slighter works). He placed great faith in the metronome, yet new markings devised as substitutes for those he had lost were often significantly different: Beethoven's marks represent how he imagined the work in his head at the time. Whether these marks are performable or not has been the subject of much discussion. Schumann provided metronome markings in most major genres except the songs (those for the piano music were revised after his death by his wife and may indicate her tempos rather than his). The belief that Robert Schumann's metronome was faulty was not shared by the composer. But how is a marking such as the 'Nicht schnell ♩ = 100', given in the first edition (1850) of the third of his *Romanzen* op.94 for oboe and piano, to be used? This work, like many others, progresses through a detailed series of tempo modifications: *ritard*, *in tempo*, *zurückhaltend*, and so on, and the metronome marking can indicate only a starting-point. Later in the century Brahms and Wagner registered their strong reservations about metronome markings, Brahms noting that 'As far at least as my experience goes, everybody has, sooner or later, withdrawn his metronome marks'. Brahms seems to have considered his painstaking written designations as the best indications of tempo, and contemporary timings and his own metronome markings provide clues about what the speed might have been. He considered tempo to be fluid, and that *accelerando* and *ritardando* were essential in achieving the desired expression. (For further discussion of the implications of metronome markings for performing practice see Metronome.)

It is not clear how much freedom to vary the pulse was sanctioned by 19th-century performers. Czerny considered rubato to be an important means of expression, recognizing 11 types of subtle rhythmic deviation (all determined by the emotion of the passage) within the framework of constant tempo. As used by Chopin in his early works, 'rubato' probably referred to the practice of allowing the melody to fall behind the regular pulse provided by the bass. According to Liszt, rubato was a matter of taste: 'a metronomical performance is certainly tiresome and nonsensical: time and rhythm must be adapted to and identified with the melody, the harmony, the accent and poetry'.

Practices of ornamentation were varied. Italian opera was embellished well into the century and a number of examples of the practice are preserved, including those for arias by Rossini, Donizetti, Bellini and others prepared by the soprano Laure Cinti-Damoreau (*Méthode*, 1849). Both Rossini and Verdi, however, disapproved of the excessive interpolation of embellishments into their music. At the end of the 20th century the question of adding embellishment to Schubert's music was the subject of discussion. Johann Michael Vogl, who often sang with Schubert, left ornamented versions of many songs. Yet the musical style with which Schubert can be more generally associated seems to have used little added embellishment, even though contemporaries such as Hummel allowed some. With composers such as Hummel, whose *Anweisung* (1828) advocates principal-note starts for trills, the trill became less an intensifier of harmony and more an element of texture. Beginning with the generation

of Mendelssohn and Schumann, most trills are to be played starting on the main note and unterminated unless specified otherwise. However, Fétis and Moscheles (*Méthode des méthodes*, 1840) continued to advocate an upper-note start.

Attempts in the final decades of the 20th century to produce performances of 19th-century music in historically informed styles revealed excellent reasons for doing so and for continuing to investigate and experiment with the repertoires and performance styles of the century: a metronome marking close to Beethoven's own points up, for example, the multi-level metric complexity of a movement such as the Scherzo of the Third Symphony (Orchestre Révolutionnaire et Romantique, cond. John Eliot Gardiner, DG 445 944-2, 1994); the characteristic sound of the ophicleide creates a colourful bass, admirably suited to Mendelssohn's luminous orchestration (*Midsummer Night's Dream* overture, Orchestra of the Age of Enlightenment, cond. Charles Mackerras, Virgin VC 90725-2, 1988); the four Erard harps in the *Valse* of Berlioz's *Symphonie fantastique*, placed in Roger Norrington's recording (London Classical Players, EMI CDC 7 49541 2, 1989) at the front of the orchestra as Berlioz had recommended, stunningly dominate the texture. Many such popular works had been, by the end of the 20th century, recorded in several different historically informed interpretations.

8. The 20th century.

Robert Philip

Music historians are able to study the performing practice of the 20th century quite differently from that of earlier centuries because of the development of sound recording. For the first time in history, the performances themselves were preserved, rather than just documentary evidence about them. This had a profound effect on performance during the 20th century. The dissemination of recordings meant that musicians could hear themselves, and could influence each other more directly than in earlier periods. The performing practice of one generation was also preserved for study by later generations, giving them unprecedented insight into the development of their own performing practice.

A survey of recordings over the 20th century reveals a number of clear trends: the growing use of continuous vibrato, the decreasing use of portamento, a trend towards a narrower range of tempos within movements, a trend towards more accurate and literal interpretation of note values, a growing insistence on rhythmic clarity, a trend towards greater homogeneity of ensemble (in tone quality, phrasing and rhythm) and a general rise in standards of accuracy and discipline. There was also a tendency towards increasing volume, and greater force and intensity of expression, which was associated with changes in instruments during the century.

The brilliant-toned metal flute, first adopted by the French, largely replaced the softer-toned wooden flute (except in period performance) by the second half of the century; the fuller-toned German bassoon largely replaced the quieter, more subtle French bassoon; violinists increasingly adopted the metal E string from the 1930s onwards, and more powerful bow-holds came to predominate over the traditional 19th-century grips used by Joachim's generation. Brass instruments tended during the century to become wider in bore, producing a broader, more massive tone. The powerful concert Steinway piano came to predominate in the second half of the century; earlier pianists had used a variety of makes of piano, many of them lighter in touch and more delicate in tone.

The increasing power of instruments was associated with a general increase in the use of vibrato to intensify tone. In the early years of the century, vibrato was used only to a very limited extent by wind players, and most did not use it at all. Many string players adhered to Joachim's advice: 'A violinist whose taste is refined and healthy will always recognize the steady tone as the ruling one'. Ysaÿe encouraged a trend towards a more liberal (though delicate) use of vibrato, but it was Kreisler, closely followed by Heifetz, who initiated the continuous use of vibrato on the violin, which was echoed in viola and cello playing. The use of vibrato by woodwind players similarly increased during the century. It was led by the French, particularly pupils of the flautist Paul Taffanel, and it had spread, on both the flute and the oboe, to most of Europe and the USA by the 1940s. The spread of vibrato was less general on the bassoon, and only sporadic among clarinettists.

Singing followed the general trend towards greater power, together with wider, more continuous vibrato. Though vocal styles in the early years of the century varied greatly, much of the singing of the period was more delicate, and more restrained in its vibrato, than later in the century.

While power and the use of vibrato generally increased, the use of portamento decreased. Until the 1930s, the habitual use of emphatic portamento was common among string players. The trend towards more sparing and subtle portamento was encouraged by a number of prominent players and teachers, including Flesch on the violin and Casals on the cello. This involved not only changes in shifting technique and choice of fingerings, but also a fundamental change in attitude to portamento as an ornament in a melodic line. Portamento which occurred simply as a convenient way of moving from one position to another gradually became unacceptable. Among singers there was a similar trend from frequent and prominent portamento towards a preference for lines in which portamento was reserved for points of particular emphasis or softening.

There were major changes during the century in approaches to rhythm, with a general tendency towards the more literal interpretation of note values. In the early part of the century, musicians often 'over-dotted' dotted rhythms (see above, §5) and lightened and hurried groups of short notes. This freedom on the small scale was paralleled by freedom on the larger scale: tempo was often flexible within movements, tending to accelerate in loud and vigorous passages, and to slow down in quieter and more gentle ones, so that a second subject in a movement of a sonata or symphony would often be given a quite different tempo from the first subject. Such freedom, both in detail and on the large scale, gradually lessened. The hurrying of short notes and the over-dotting of dotted rhythms came to be regarded as undisciplined and unclear, and acceleration came to denote lack of control. That is not to say that all freedom was lost, only that it was more restrained than earlier in the century.

This development was associated with a trend towards greater clarity and rhythmic precision, which was linked in turn with discipline and rehearsal. Most early 20th-century orchestras were rhythmically imprecise by later standards, partly because many of them were under-rehearsed and irregular in their membership (the sending of deputies to rehearsals in Paris and London, for example, was deplored by Stravinsky and Henry Wood). But the trend towards modern precision was not simply a matter of more rehearsal time. Session musicians in the late 20th century routinely achieved rhythmic precision with little rehearsal, whereas regular and thoroughly rehearsed ensembles of the early 20th century, such as Stokowski's Philadelphia Orchestra, and the Léner and Bohemian quartets, played with a looser approach to rhythmic detail. The difference was a matter not just of competence but also of expectation and style. Even solo pianists of the early 20th century were, compared to later pianists,

informal in their approach to rhythm. The arpeggiating of chords, and styles of rubato which often led to lack of synchronization between melody and accompaniment, were practised, to a varying extent, by pianists of many different schools and nationalities.

Such freedom was not restricted to pianists. Solo instrumentalists and singers in the early 20th century were often freer in relation to accompanists than musicians of later generations. This kind of freedom, between solo and accompaniment, and between the two hands of a pianist, was clearly linked to earlier styles of *tempo rubato* described in the 18th and 19th centuries. The trend later in the 20th century was towards a stricter approach to rhythmic coordination.

Alongside these general trends, various forces were at work during the century, including the development of recording and its industry. At the beginning of the century, all musicians played either to themselves or to an audience which heard the performance only once. By the end of the century the principal means of hearing classical music was by recordings, which could be repeated many times. This development had a subtle but profound influence on performing practice. At the beginning of the century there were substantial contrasts between performers in different countries and of different schools, but as the century wore on a growing uniformity of style and approach could be discerned, as the availability of recordings (and the general development of international communication and transport) enabled musicians to be influenced by each other. At the beginning of the century, minor inaccuracies during a performance were of little importance; the overriding aim was to convey the thrust of the piece of music to an audience which might rarely hear it again. By the end of the century, recordings had accustomed both musicians and audiences to expect a very high standard of competence and accuracy, an expectation enhanced by the development of sophisticated editing techniques. Recordings also enabled musicians to listen to themselves and to learn exactly what they sounded like. The late 20th-century musician was therefore selfconscious to a degree which had been impossible before the invention of recording. This too contributed to the general increase in accuracy, and to the gradual refinement of the habits associated with a less selfconscious age, such as the routine use of portamento and the rhythmic looseness of traditional rubato. The abandonment of old habits, however, was largely restricted to performers of 'classical' music. Rubato independent of the beat continued to be an essential component of the new jazz and popular performing styles. As the split between classical and popular music widened, classical performance became more strictly controlled and more concerned with precision of detail and faithfulness to the text, leaving some of the traditional freedoms to the popular genres. It is as if classical performers felt obliged to demonstrate that they were serious by distancing their styles from those of popular performers.

A new influence on performance in the second half of the century was the growth of interest in the reconstruction of historical performing practice. A few musicians (notably the Dolmetsch family) had pioneered the use of period instruments since the late 19th century, and the performance of 'old music' had always been carried on by small numbers of specialists. But from the 1960s onwards there was an enormous growth in the performance of Renaissance and medieval music by groups performing on period instruments (originals or reproductions) and attempting period vocal styles. The use of period instruments not only extended the performed repertory back to earlier and earlier music, but also provided a new approach to the familiar repertory of the 18th and 19th centuries. For further discussion *see* Early music.

The end of the century saw contrasted approaches to performance co-existing side by side. In new music, late 20th-century composers ranged from those who wished to exert strict control over every detail of performance to those who wished to control almost nothing (*see* Aleatory), or for whom conventional concepts of performance had ceased to be meaningful. As the period movement reached early 20th-century repertory, such as the music of Elgar, a new contrast became apparent: between period-style Elgar as performed in the late 20th century, and Elgar's own recorded performances from the 1920s. Knowledge of historical recordings began to reveal, for the first time, the extent to which attempts to reconstruct earlier performing styles take place within the conventions of the performer's own time.

Bibliography

A: General

A. Beyschlag: *Die Ornamentik der Musik* (Leipzig, 1908/R)

A. Schering: 'Vom musikalischen Vortrage', *JbMP* 1930, 9–23

R. Haas: *Aufführungspraxis der Musik* (Potsdam, 1931/R)

A. Schering: *Aufführungspraxis alter Musik* (Leipzig, 1931)

E.T. Ferand: *Die Improvisation in der Musik* (Zürich, 1938)

W. Apel: *The Notation of Polyphonic Music 900–1600* (Cambridge, MA, 1942, 5/1961)

F. Dorian: *The History of Music in Performance: the Art of Musical Interpretation from the Renaissance to our Day* (New York, 1942/R)

M.F. Bukofzer: 'The Beginnings of Choral Polyphony', *Studies in Medieval & Renaissance Music* (New York, 1950), 176–86

H.-P. Schmitz: *Prinzipien der Aufführungspraxis alter Musik* (Berlin, 1950)

J.M. Barbour: *Tuning and Temperament: a Historical Study* (East Lansing, MI, 1951/R, 2/1953)

C. Sachs: *Rhythm and Tempo* (New York, 1953)

T. Dart: *The Interpretation of Music* (London, 1954, 4/1967/R)

H. Keller: *Phrasierung und Artikulation: ein Beitrag zu einer Sprachlehre der Musik* (Kassel, 1955; Eng. trans., 1965)

D.J. Grout: 'On Historical Authenticity in the Performance of Old Music', *Essays on Music in Honor of Archibald Thompson Davison* (Cambridge, MA, 1957), 341–7

S. Corbin: *L'église à la conquête de sa musique* (Paris, 1960), 150–89

R. Donington: *The Interpretation of Early Music* (London, 1963, 4/1989)

G. Frotscher: *Aufführungspraxis alter Musik* (Wilhelmshaven, 1963, 8/1997; Eng. trans., 1981)

A.J. Ellis and A. Mendel: *Studies in the History of Musical Pitch* (Amsterdam, 1969/R)

M. Vinquist and N. Zaslav: 'Bibliography of Performance Practice', *CMc*, no.8 (1969) [whole issue]; no.10 (1970), 144–72; pubd separately as *Performance Practice: a Bibliography* (New York, 1971); suppl., *CMc*, no.12 (1971), 129–49; no.15 (1973), 126–40

J. Westrup: *Musical Interpretation* (London, 1971)

J.A. Bank: *Tactus, Tempo and Notation in Mensural Music from the 13th to the 17th Century* (Amsterdam, 1972)

D. Barnett: *The Performance of Music: a Study in Terms of the Pianoforte* (New York, 1972)

C. MacClintock, ed.: *Readings in the History of Music in Performance* (Bloomington, IN, 1979)

L. Dreyfus: 'Early Music Defended against its Devotees: A Theory of Historical Performance in the Twentieth Century', *MQ* 49 (1993), 297–322

N. Hamoncourt: *Der musikalische Dialog* (München and Kassel, 1984); trans. as *The Musical Dialogue* (London, 1989)

D. Leech-Wilkinson, R. Taruskin, and N. Temperley: 'The Limits of Authenticity: a Discussion', *EMc* 12 (1984), 3–25

H. Haskell: *The Early Music Revival: a History* (London and New York, 1988)

R. Jackson: *Performance Practice, Medieval to Contemporary: a Bibliographical Guide* (New York, 1988)

N. Kenyon, ed.: *Authenticity and Early Music* (Oxford and New York, 1988)

H.M. Brown and S. Sadie, eds.: *Performance Practice: Music after 1600* (London, 1989)

P. Kivy: *Authenticities: Philosophical Reflections on Musical Performance* (Ithaca and London, 1995)

C. Lawson and R. Stowell: *The Historical Performance of Music: an Introduction* (Cambridge, 1999)

B: Medieval

(i) Sacred

L. Lambillotte: *Antiphonaire de saint Grégoire: fac-similé du manuscrit 359 de Saint-Gall* (Brussels, 1851, 2/1867)

L. Lambillotte: *Esthétique, théorie et pratique du chant grégorien* (Paris, 1855)

A. Dechevrens: *Du rythme dans l'hymnographie latine* (Paris, 1895)

G.L. Houdard: *Le rythme du chant dit grégorien d'après la notation neumatique* (Paris, 1898)

P. Wagner: *Einführung in die gregorianischen Melodien*, 2 (Fribourg, 1905, 2/1912/R)

J. Jeannin: *Etudes sur le rythme grégorien* (Lyons, 1926)

E. Jammers: *Der gregorianische Rhythmus: antiphonale Studien* (Strasbourg, 1937, 2/1981)

S.J.P. Van Dijk: 'St Bernard and the *Instituta patrum* of St Gall', *MD*, 4 (1950), 99–109

- E.A. Bowles: 'Were Musical Instruments Used in the Liturgical Service during the Middle Ages?', *GSJ*, 10 (1957), 40–56
- H. Huckle: 'Zum Problem des Rhythmus im gregorianischen Gesang', *IMSCR VII: Cologne 1958*, 141–2
- W. Krüger: *Die authentische Klangform des primitiven Organum* (Kassel, 1958)
- J.W.A. Vollaerts: *Rhythmic Proportions in Early Medieval Ecclesiastical Chant* (Leiden, 1958, 2/1960)
- H. Anglès: 'Die Mehrstimmigkeit des Calixtinus von Compostela und seine Rhythmik', *Festschrift Heinrich Besseler*, ed. E. Klemm (Leipzig, 1961), 91–100
- E.A. Bowles: 'The Organ in the Late Medieval Liturgical Service', *RBM*, 16 (1962), 13–29
- E. Jammers: *Musik in Byzanz, im päpstlichen Rom und im Frankenreich: der Choral als Musik der Textaussprache* (Heidelberg, 1962)
- F. Müller-Heuser: *Vox Humana: ein Beitrag zur Untersuchung der Stimmästhetik des Mittelalters* (Regensburg, 1963, rev. 2/1997 by D. Gutknecht and K.W. Niemöller)
- S.J.P. Van Dijk: 'Gregory the Great, Founder of the Urban "Schola cantorum"', *Ephemerides liturgicae*, 77 (1963), 335–56
- R.G. Weakland: 'The Performance of Ambrosian Chant in the 12th Century', *Aspects of Medieval and Renaissance Music: a Birthday Offering to Gustave Reese*, ed. J. LaRue and others (New York, 1966/R), 856–66
- H. Tischler: 'How were Notre Dame Clausulae Performed?', *ML*, 50 (1969), 273–7
- E. Rohloff: *De Quellenhandschriften zum Musiktraktat des Johannes de Grocheio* (Leipzig, 1972)
- J. Dyer: 'Singing with Proper Refinement from *De modo bene cantandi* (1474) by Conrad von Zabern', *EMc*, 6 (1978), 207–27
- J. McKinnon: 'Representations of the Mass in Medieval and Renaissance Art', *JAMS*, 31 (1978), 21–52
- T. Bailey, ed.: *Commemoratio brevis de tonis et psalmis modulandis: Introduction, Critical Edition, Translation* (Ottawa, 1979)
- E. Roesner: 'The Performance of Parisian Organum', *EMc*, 7 (1979), 174–89
- J. Dyer: 'A Thirteenth-Century Choirmaster: the *Scientia artis musicae* of Elias Salomon', *MQ*, 66 (1980), 83–111
- H. Schmid, ed.: *Musica et Scolica enchiridis: una cum aliquibus tractatulis adiunctis* (Munich, 1981)
- E. Nowacki: 'The Gregorian Office Antiphons and the Comparative Method', *JM*, 4 (1985–6), 243–75
- C. Page: 'The Performance of Ars Antiqua Motets', *EMc*, 16 (1988), 147–64
- D. Hiley: 'Chant', *Performance Practice: Music before 1600*, ed. H.M. Brown and S. Sadie (London, 1989), 37–54
- C. Wright: *Music and Ceremony at Notre Dame of Paris, 500–1550* (Cambridge, 1989)
- A.W. Robertson: 'The Mass of Guillaume de Machaut in the Cathedral of Reims', *Plainsong in the Age of Polyphony*, ed. T.F. Kelly (Cambridge, 1992), 100–39
- C. Page: 'Johannes de Grocheio on Secular Music: a Corrected Text and a New Translation', *PMM*, 2 (1993), 17–41

R. Bowers: 'To Chorus from Quartet: the Performing Resource for English Church Polyphony, c.1390–1559', *English Choral Practice c.1400–c.1650: a Memorial Volume to Peter le Huray*, ed. J. Morehen (Cambridge, 1995), 1–47

J.W. McKinnon: 'Lector Chant versus Schola Chant: a Question of Historical Plausibility', *Laborare fratres in unum: Festschrift László Dobszay*, ed. J. Szendrei and D. Hiley (Hildesheim, 1995), 201–11

C.V. Palisca, ed.: *Musica enchiriadis and Scolica enchiriadis* (New Haven, CT, 1995) [Eng. trans. by R. Erickson, incl. introduction and notes]

C. Page: 'An English Motet of the 14th Century in Performance: Two Contemporary Images', *EMc*, 25 (1997), 7–32

(ii) Secular

P. Aubry: *Trouvères et troubadours* (Paris, 1909, 2/1910; Eng. trans., 1914)

J.B. Beck: *La musique des troubadours* (Paris, 1910/R)

S.M. Cserba, ed.: *Hieronymus de Moravia O.P.: Tractatus de musica* (Regensburg, 1935)

L. Hibberd: 'On "Instrumental Style" in Early Melody', *MQ*, 32 (1946), 107–30

G. Reaney: 'Voices and Instruments in the Music of Guillaume de Machaut', *RBM*, 10 (1956), 3–17, 93–104

E.E. Lowinsky: 'Early Scores in Manuscript', *JAMS*, 13 (1960), 126–73

F.Ll. Harrison: 'Tradition and Innovation in Instrumental Usage 1100–1450', *Aspects of Medieval and Renaissance Music: a Birthday Offering to Gustave Reese*, ed. J. LaRue and others (New York, 1966/R), 319–35

G. Reaney: 'The Performance of Medieval Music', *Aspects of Medieval and Renaissance Music: a Birthday Offering to Gustave Reese*, ed. J. LaRue and others (New York, 1966/R), 704–22

J. Smits van Waesberghe: 'Singen und Dirigieren der mehrstimmigen Musik im Mittelalter: was Miniaturen uns hierüber lehren', *Mélanges offerts à René Crozet*, ed. P. Gallais and Y.-J. Riou (Poitiers, 1966), 1345–54

I. Bent: 'A 12th-Century Extemporizing Technique', *MT*, 111 (1970), 33–7

H. Van der Werf: *The Chansons of the Troubadours and Trouvères* (Utrecht, 1972)

L. Gushee: 'Two Central Places: Paris and the French Court in the Early Fourteenth Century', *GfMKB: Berlin 1974*, 135–51

K. Polk: 'Ensemble Performance in Dufay's Time', *Dufay Conference: Brooklyn, NY, 1974*, 61–75

G. Foster: *The Iconology of Musical Instruments and Musical Performance in Thirteenth-Century French Manuscript Illumination* (diss., CUNY, 1977)

C. Page: 'Machaut's "Pupil" Deschamps on the Performance of Music', *EMc*, 5 (1977), 84–91

D. Hoffmann-Axthelm: 'Instrumentensymbolik und Aufführungspraxis: zum Verhältnis von Symbolik und Realität in der mittelalterlichen Musikanschauung', *Basler Jb für historische Musikpraxis*, 4 (1980), 9–90

A. von Ramm: 'Style in Early Music Singing', *EMc*, 8 (1980), 17–20

B. Thornton: 'Vokale und Gesangstechnik: das Stimmideal der aquitanischen Polyphonie', *Basler Jb für historische Musikpraxis*, 4 (1980), 133–50

Studies in the Performance of Late Mediaeval Music: New York 1981 [incl. H.M. Brown: 'The Trecento Harp', 35–73; W. Arlt: 'The "Reconstruction" of Instrumental Music: the Interpretation of the Earliest Practical Sources', 75–100; D. Fallows: 'Specific Information on the Ensembles for Composed Polyphony, 1400–1474', 161–92]

J. McKinnon: 'Iconography', *Musicology in the 1980s: Boston 1981*, 79–93

J. Nadas: 'The Structure of the MS Panciatichi 26 and the Transmission of Trecento Polyphony', *JAMS*, 34 (1981), 393–427

K.-J. Sachs: 'Arten improvisierter Mehrstimmigkeit nach Lehrtexten des 14. bis 16. Jahrhunderts', *Basler Jb für historische Musikpraxis*, 7 (1983), 166–83

C. Page: *Voices and Instruments of the Middle Ages: Instrumental Practice and Songs in France, 1100–1300* (Berkeley, 1986)

J. Stevens: *Words and Music in the Middle Ages: Song, Narrative, Dance and Drama, 1050–1350* (Cambridge, 1986)

N. Kenyon, ed.: *Authenticity and Early Music* (Oxford, 1988)

S. Huot: 'Voices and Instruments in Medieval French Secular Music: on the Use of Literary Texts as Evidence for Performance Practice', *MD*, 43 (1989), 63–113

C. Page: 'Polyphony before 1400', *Performance Practice: Music before 1600*, ed. H.M. Brown and S. Sadie (London, 1989), 79–106

L. Welker: 'Some Aspects of the Notation and Performance of German Song around 1400', *EMc*, 18 (1990), 235–46

J. Caldwell: 'Plainsong and Polyphony 1250–1550', *Plainsong in the Age of Polyphony*, ed. T.F. Kelly (Cambridge, 1992), 6–31

T. Knighton and D. Fallows, eds.: *Companion to Medieval and Renaissance Music* (London, 1992)

D. Leech-Wilkinson: 'Le voir dit and La Messe de Nostre Dame: Aspects of Genre and Style in the Late Works of Machaut', *PMM*, 2 (1993), 43–73

T.J. McGee: 'Singing without Text', *Performance Practice Review*, 6 (1993), 1–32

M.L. Switten: *Music and Poetry in the Middle Ages: a Guide to Research on French Occitan Song, 1100–1400* (New York, 1995)

C. Page: 'Listening to the Trouvères', *EMc*, 25 (1997), 638–59

T.J. McGee: *The Sound of Medieval Song: Ornamentation and Vocal Style according to the Treatises* (Oxford, 1998)

C: Renaissance

R. Molitor: *Die nachtridentinische Choral-Reform zu Rom* (Leipzig, 1901–2/R)

M. Kuhn: *Die Verzierungs-Kunst in der Gesangs-Musik des 16.–17. Jahrhunderts (1535–1650)* (Leipzig, 1902/R)

H. Bessler: *Die Musik des Mittelalters und der Renaissance* (Potsdam, 1931/R)

M. Bukofzer: 'On the Performance of Renaissance Music', *Music Teachers National Association: Proceedings*, 36 (1941), 225–35

- A. Mendel: 'Pitch in the 16th and Early 17th Centuries', *MQ*, 34 (1948), 28–45, 199–221, 336–57, 575–93
- I. Horsley: 'Improvised Embellishment in the Performance of Renaissance Polyphonic Music', *JAMS*, 4 (1951), 3–19
- E.T. Ferand: 'Improvised Vocal Counterpoint in the Late Renaissance and Early Baroque', *AnnM*, 4 (1956), 129–74
- C. Jacobs: *La interpretación de la música española del siglo XVI para instrumentos de teclado* (Madrid, 1958)
- C. Dahlhaus: 'Zur Theorie des Tactus im 16. Jahrhundert', *AMw*, 17 (1960), 22–39
- H.K. Andrews: 'Transposition of Byrd's Vocal Polyphony', *ML*, 43 (1962), 25–37
- M.B. Collins: 'The Performance of Sesquialtera and Hemiola in the 16th Century', *JAMS*, 17 (1964), 5–28
- Mother Thomas More [M. Berry]: 'The Performance of Plainsong in the Later Middle Ages and the 16th Century', *PRMA*, 92 (1965–6), 121–34
- E.T. Ferand: 'Didactic Embellishment Literature in the Late Renaissance: a Survey of Sources', *Aspects of Medieval and Renaissance Music: a Birthday Offering to Gustave Reese*, ed. J. LaRue and others (New York, 1966/R), 154–72
- D. Wulstan: 'The Problem of Pitch in Sixteenth-Century English Vocal Polyphony', *PRMA*, 93 (1966–7), 97–112
- C. Jacobs: 'Spanish Renaissance Discussion of Musica ficta', *Proceedings of the American Philosophical Society*, 112 (1968), 277–98
- H.M. Brown: 'Accidentals and Ornamentation in Sixteenth-Century Intabulations of Josquin's Motets', *Josquin des Prez: New York 1971*, 475–522
- H.M. Brown: 'On the Performance of Fifteenth-Century Chansons', *EMc*, 1 (1973), 3–10
- H.M. Brown: Sixteenth-Century Instrumentation: the Music for the Florentine Intermedii, *MSD*, 30 (1973)
- D. Harrán: 'New Light on the Question of Text Underlay Prior to Zarlino', *AcM*, 45 (1973), 24–56
- R.B. Lynn: *Renaissance Organ Music for the Proper of the Mass in Continental Sources* (diss., Indiana U., 1973)
- H.M. Brown: 'Embellishment in Early Sixteenth-Century Italian Intabulations', *PRMA*, 100 (1973–4), 49–83
- P. Gossett: 'The Mensural System and the "Choralis Constantinus"', *Studies in Renaissance and Baroque Music in Honor of Arthur Mendel*, ed. R.L. Marshall (Kassel and Hackensack, NJ, 1974), 71–107
- M. Lindley: 'Early 16th-Century Keyboard Temperaments', *MD*, 28 (1974), 129–51
- W.F. Prizer: 'Performance Practices in the Frottola', *EMc*, 3 (1975), 227–35
- H.M. Brown: *Embellishing Sixteenth-Century Music* (London, 1976)
- H.M. Brown: 'The Performance of Fifteenth-Century Chansons: Problems of Instrumentation and Ornamentation', *Current Thought in Musicology*, ed. J.W. Grubbs and L. Perkins (Austin, 1976)
- B. Dickey: 'Untersuchungen zur historischen Auffassung des Vibratos auf Blasinstrumenten', *Basler Jb für historische Musikpraxis*, 2 (1978), 77–142
- L. Litterick: 'Performing Franco-Netherlandish Secular Music of the Late Fifteenth Century: Texted and Untexted Parts in the Sources', *EMc*, 8 (1980), 474–85

- D. Bonge: 'Gaffurius on Pulse and Tempo: a Reinterpretation', *MD*, 36 (1982), 167–74
- E. Schroeder: 'The Stroke Comes Full Circle: ϕ and \sharp in Writings on Music, ca. 1450–1540', *MD*, 36 (1982), 119–48
- A.M.B. Berger: 'The Relationship of Perfect and Imperfect Time in Italian Theory of the Renaissance', *EMH*, 5 (1985), 1–28
- R. Stewart: 'Voice Types in Josquin's Music', *TVNM*, 35 (1985), 97–189
- H.M. Brown: 'Notes (and Transposing Notes) on the Transverse Flute in the Early Sixteenth Century', *JAMIS*, 12 (1986), 5–39
- D. Harrán: *Word-Tone Relations in Musical Thought from Antiquity to the Seventeenth Century* (Neuhausen-Stuttgart, 1986)
- T.J. McGee: 'Instruments and the Faenza Codex', *EMc*, 14 (1986), 480–90
- R. Greenlee: '*Dispositione di voce*: Passage to Florid Singing', *EMc*, 15 (1987), 47–55
- R. Sherr: 'Performance Practice in the Papal Chapel during the 16th Century', *EMc*, 15 (1987), 453–62
- J. Rosselli: 'The Castrati as a Professional Group and a Social Phenomenon, 1550–1850', *AcM*, 60 (1988), 143–79
- H.M. Brown: 'Bossinensis, Willaert and Verdelot: Pitch and the Conventions of Transcribing Music for Lute and Voice in Italy in the Early Sixteenth Century', *RdM*, 75 (1989), 25–46
- W. Elders: 'The Performance of Cantus firmi in Josquin's Masses based on Secular Monophonic Song', *EMc*, 17 (1989), 330–41
- R.C. Wegman: 'Concerning Tempo in the English Polyphonic Mass, c.1420–70', *AcM*, 61 (1989), 40–65
- S. Bonta: 'The Use of Instruments in Sacred Music in Italy 1560–1700', *EMc*, 18 (1990), 519–535
- G. Houle: '*Doulce memoire*': *a Study of Performance Practices* (Bloomington, IN, 1990)
- L. Korrick: 'Instrumental Music in the Early 16th-Century Mass: New Evidence', *EMc*, 18 (1990), 359–70
- G. Towne: 'A Systematic Formulation of Sixteenth-Century Text Underlay Rules', *MD*, 44 (1990), 255–87; xlv (1991), 143–68
- Le concert des voix et des instruments à la Renaissance: Tours 1991*
- L. Earp: 'Texting in 15th-Century French Chansons: a Look Ahead from the 14th Century', *EMc*, 19 (1991), 195–210
- D. Slavin: 'In Support of "Heresy": Manuscript Evidence for the *a cappella* Performance of Early 15th-Century Songs', *EMc*, 19 (1991), 179–90
- S. Bonta: 'The Use of Instruments in the Ensemble Canzona and Sonata in Italy, 1580–1650', *Recercare*, 4 (1992), 23–43
- S. Keyl: '*Tenorlied, Discantlied*, Polyphonic Lied: Voices and Instruments in German Secular Polyphony of the Renaissance', *EMc*, 20 (1992), 434–45
- T. Knighton and D. Fallows, eds.: *Companion to Medieval and Renaissance Music* (London, 1992)
- T. Knighton: 'The *a cappella* Heresy in Spain: an Inquisition into the Performance of the Cancionero Repertory', *EMc*, 20 (1992), 560–81

- K. Kreitner: 'Minstrels in Spanish Churches, 1400–1600', *EMc*, 20 (1992), 532–46
- K. Polk: *German Instrumental Music of the Late Middle Ages: Players, Patrons, and Performance Practice* (Cambridge, 1992)
- A.M.B. Berger: *Mensuration and Proportion Signs: Origins and Evolution* (Oxford, 1993)
- G. Dixon: 'The Performance of Palestrina: Some Questions, but Fewer Answers', *EMc*, 22 (1994), 666–75
- J.G. Kurtzman: 'Tones, Modes, Clefs and Pitch in Roman Cyclic Magnificats of the 16th Century', *EMc*, 22 (1994), 641–65
- R. Sherr: 'Competence and Incompetence in the Papal Choir in the Age of Palestrina', *EMc*, 22 (1994), 606–29
- N. Mitchell: 'Choral and Instrumental Pitch in Church Music, 1570–1620', *GSJ*, 48 (1995), 13–32
- J. Morehen, ed.: *English Choral Practice c.1400–c.1650: a Memorial Volume to Peter le Huray* (Cambridge, 1995)
- M.A. Roig-Francolí: 'Playing Consonances: a Spanish Renaissance Technique of Chordal Improvisation', *EMc*, 23 (1995), 461–71
- B. Turner: 'Spanish Liturgical Hymns: a Matter of Time', *EMc*, 23 (1995), 472–82
- D. Fallows: *Songs and Musicians in the Fifteenth Century* (Aldershot, 1996)
- N. O'Regan: 'The Performance of Palestrina: Some Further Observations', *EMc*, 24 (1996), 145–54

D: Baroque

BoydenH

- H. Goldschmidt: *Die italienische Gesangsmethode des XVII. Jahrhunderts und ihre Bedeutung für die Gegenwart* (Breslau, 1890, 2/1892/R)
- M. Kuhn: *Die Verzierungskunst in der Gesangs-Musik des 16.–17. Jahrhunderts (1535–1650)* (Leipzig, 1902/R)
- A. Schering: 'Zur instrumentalen Verzierungskunst im 18. Jahrhundert', *SIMG*, 7 (1905–6), 365–85
- H. Goldschmidt: *Die Lehre von der vokalen Ornamentik* (Charlottenburg, 1907/R)
- A. Dolmetsch: *The Interpretation of the Music of the XVIIth and XVIIIth Centuries Revealed by Contemporary Evidence* (London, 1915, 2/1946/R)
- P. Brunold: *Traité des signes et agréments employés par les clavecinistes français des XVIIe et XVIIIe siècles* (Lyons, 1925/R)
- H. Keller: *Die musikalische Artikulation, insbesondere bei Joh. Seb. Bach* (Stuttgart, 1925)
- F.T. Arnold: *The Art of Accompaniment from a Thorough-Bass as Practised in the XVIIth and XVIIIth Centuries* (London, 1931/R)
- C.S. Terry: *Bach's Orchestra* (London, 1932/R)
- E. Borrel: *L'interprétation de la musique française (de Lully à la Révolution)* (Paris, 1934/R)

- A. Carse: *The Orchestra in the XVIIIth Century* (Cambridge, 1940/R)
- J.A. Westrup: 'Monteverdi and the Orchestra', *ML*, 21 (1940), 230–45
- J.M. Barbour: 'Bach and "The Art of Temperament"', *MQ*, 33 (1947), 64–89
- M.F. Bukofzer: 'Checklist of Baroque Books on Music', *Music in the Baroque Era* (New York, 1947), 417–31
- P. Aldrich: 'Bach's Technique of Transcription and Improvised Ornamentation', *MQ*, 35 (1949), 26–35
- P. Aldrich: *Ornamentation in J.S. Bach's Organ Works* (New York, 1950/R)
- D.D. Boyden: 'The Violin and its Technique in the 18th Century', *MQ*, 36 (1950), 9–38
- W. Emery: *Bach's Ornaments* (London, 1953/R)
- F. Rothschild: *The Lost Tradition in Music, i: Rhythm and Tempo in J.S. Bach's Time* (London, 1953/R)
- W. Kolneder: *Aufführungspraxis bei Vivaldi* (Leipzig, 1955, 2/1973)
- A. Mendel: 'On the Pitches in Use in Bach's Time', *MQ*, 41 (1955), 332–54, 466–80
- H.-P. Schmitz: *Die Kunst der Verzierung im 18. Jahrhundert* (Kassel, 1955, 4/1983)
- E.T. Ferand: 'Die Improvisation in Beispielen aus neun Jahrhunderten abendländischer Musik', *Mw*, 12 (1956, 2/1961; Eng. trans., 1961)
- E.T. Ferand: 'Improvised Vocal Counterpoint in the Late Renaissance and Early Baroque', *AnnM*, 4 (1956), 129–74
- P. Aldrich: 'The "Authentic" Performance of Baroque Music', *Essays on Music in Honor of Archibald Thompson Davison* (Cambridge, MA, 1957), 161–71
- D.D. Boyden: 'Dynamics in Seventeenth- and Eighteenth-Century Music', *Essays on Music in Honor of Archibald Thompson Davison* (Cambridge, MA, 1957), 185–93
- V. Duckles: 'Florid Embellishment in English Song of the Late 16th and Early 17th Centuries', *AnnM*, 5 (1957), 329–45
- D.D. Boyden: 'Monteverdi's *violini piccoli alla francese* and *viole da braccio*', *AnnM*, 6 (1958–63), 387–402
- E.T. Ferand: 'Embellished "Parody Cantatas" in the Early 18th Century', *MQ*, 44 (1958), 40–64
- D.D. Boyden: 'Geminiani and the First Violin Tutor', *AcM*, 31 (1959), 161–70 [postscript in xxxii (1960), 40–47]
- E. Bodky: *The Interpretation of Bach's Keyboard Works* (Cambridge, MA, 1960/R)
- D.D. Boyden: 'The Missing Italian Manuscript of Tartini's *Traité des agréments*', *MQ*, 46 (1960), 315–28
- N. Broder: 'The Beginnings of the Orchestra', *JAMS*, 13 (1960), 174–80
- R. Donington: *Tempo and Rhythm in Bach's Organ Music* (London, 1960)
- J. Eppelsheim: *Das Orchester in den Werken Jean-Baptiste Lullys* (Tutzing, 1961)
- S. Babitz: 'On Using J.S. Bach's Keyboard Fingerings', *ML*, 43 (1962), 123–8
- A. Geoffroy-Dechaume: *Les 'secrets' de la musique ancienne* (Paris, 1964/R)

- F. Neumann: 'La note pointée et la soi-disant "manière française"', *RdM*, 51 (1965), 66–92; Eng. trans. in *EMc*, v (1977), 310–24
- G.J. Buelow: *Thorough-Bass Accompaniment according to Johann David Heinichen* (Berkeley, 1966, 2/1986)
- S. Babitz: 'Concerning the Length of Time that Every Note must be Held', *MR*, 28 (1967), 21–37
- R. Donington: 'A Problem of Inequality', *MQ*, 53 (1967), 503–17
- F. Neumann: 'The Use of Baroque Treatises on Musical Performance', *ML*, 48 (1967), 315–24
- M. Collins: 'A Reconsideration of French Overdotting', *ML*, 1 (1969), 111–23
- A. Schnoebelen: 'Performance Practices at San Petronio in the Baroque', *AcM*, 41 (1969), 37–55
- P. Williams: *Figured Bass Accompaniment* (Edinburgh, 1970)
- R. Donington: *A Performer's Guide to Baroque Music* (London, 1973)
- M. Seares: 'Aspects of Performance Practice in the Recitatives of Jean-Baptiste Lully', *SMA*, 8 (1974), 8–16
- I. Smit Duyzentkunst and K. Vellekoop, eds.: *Bachboek* (Utrecht, 1975) [incl. bibliography]
- S. Babitz: *Note-Separation in Musical Performance and Other Matters*, *Early Music Laboratory Bulletin*, 13 (1976)
- G.J. Buelow: 'A Lesson in Operatic Performance Practice by Madame Faustina Bordoni', *A Musical Offering: Essays in Honor of Martin Bernstein*, ed. E.H. Clinkscale and C. Brook (New York, 1977), 79–96
- R. Donington: 'What is Rhythmic Alteration?', *EMc*, 5 (1977), 543–4
- D. Fuller: 'Dotting, the "French Style" and Frederick Neumann's Counter-Reformation', *EMc*, 5 (1977), 517–43
- F. Neumann: 'Facts and Fiction about Overdotting', *MQ*, 63 (1977), 155–85
- E. Harris: 'Baroque Vocal Performance Practice', *Alte Musik als ästhetische Gegenwart: Bach, Händel, Schütz: Stuttgart 1985*, 1, 263–4
- A. Newman: *Bach and the Baroque: a Performing Guide to Baroque Music with Special Emphasis on the Music of J.S. Bach* (New York, 1985)
- P. Walls: "'Ill compliments and arbitrary taste'? Geminiani's directions for performers', *EMc* 14 (1986), 221–35
- G. Moens-Haenen: *Das Vibrato in der Musik des Barock* (Graz, 1988)
- J. Butt: 'Improvised Vocal Ornamentation and German Baroque Compositional Theory: an Approach to "Historical" Performance Practice', *JRMA*, 116 (1991), 41–62
- M. Cyr: *Performing Baroque Music* (Portland, OR, 1992)
- M.A. Parker, ed.: *Eighteenth-Century Music in Theory and Practice: Essays in Honor of Alfred Mann* (Stuyvesant, NY, 1994)
- P.F. Broman: 'The Emperor's New Clothes: Performance Practice in the 1990s', *STMf*, 76–77 (1994–5), 31–56
- R.W. Duffin: 'Performance Practice: Que me veux-tu? What do you Want from me?', *Early Music America*, 1 (1995), 26–36

P. Downey: 'Performing Purcell's "Exotick" Trumpet Notes', *Performing the Music of Henry Purcell*, ed. M. Burden (Oxford, 1996), 49–60

M. Vanscheeuwijck: 'The Baroque Cello and its Performance', *Performance Practice Review*, 9 (1996), 78–96

A. Parrott: *The Essential Bach Choir* (Woodbridge, 2000)

E: Classical

GroveI (§6; R. Winter)

A. Dolmetsch: *The Interpretation of the Music of the XVIIth and XVIIIth Centuries Revealed by Contemporary Evidence* (London, 1915, 2/1946/R)

O. Schreiber: *Orchester und Orchesterpraxis in Deutschland zwischen 1780 und 1850* (Berlin, 1938/R)

E. and P. Badura-Skoda: *Mozart-Interpretation* (Vienna, 1957; Eng. trans., 1962/R, as *Interpreting Mozart on the Keyboard*)

P. Mies: 'Die Artikulationszeichen Strich und Punkt bei Wolfgang Amadeus Mozart', *Mf*, 11 (1958), 428–55

A. Gottron: 'Wie spielte Mozart die Adagios seiner Klavierkonzerte?', *Mf*, 13 (1960), 334 only

F. Rothschild: *The Lost Tradition of Music*, ii: *Musical Performance in the Times of Mozart and Beethoven* (London and New York, 1961)

Der junge Haydn: Graz 1970

O. Biba: 'Die Wiener Kirchenmusik um 1738', *Jb für österreichische Kulturgeschichte*, 1/2 (1971), 7–79

J. Webster: 'Violoncello and Double Bass in the Chamber Music of Haydn and his Viennese Contemporaries', *JAMS*, 29 (1976), 413–38

T.E. Warner: 'Tromlitz's Flute Treatise: a Neglected Source of Eighteenth-Century Performance Practice', *A Musical Offering: Essays in Honor of Martin Bernstein*, ed. E.H. Clinkscale and C. Brook (New York, 1977), 45–62

J. Webster: 'The Bass Part in Haydn's Early String Quartets', *MQ*, 63 (1977), 390–424

L.F. Ferguson: *Col basso and Generalbass in Mozart's Keyboard Concertos: Notation, Performance, Theory, and Practice* (diss., Princeton U., 1983)

L.F. Ferguson: 'The Classical Keyboard Concerto: Some Thoughts on Authentic Performance', *EMc*, 12 (1984), 437–45

L.F. Ferguson: 'Mozart's Keyboard Concertos: Tutti Notations and Performance Models', *MJb* 1984–5, 32–9

H. Macdonald: 'To Repeat or Not to Repeat?', *PRMA*, 111 (1984–5), 121–37

A.P. Brown: *Performing Haydn's "The Creation": Reconstructing the Earliest Renditions* (Bloomington, IN, 1986)

F. Neumann: *Ornamentation and Improvisation in Mozart* (Princeton, NJ, 1986)

J. Spitzer and N. Zaslav: 'Improvised Ornamentation in Eighteenth-Century Orchestras', *JAMS*, 39 (1986), 524–77

S.P. Rosenblum: *Performance Practices in Classic Piano Music: their Principles and Applications* (Bloomington, IN, 1988)

N. Zaslaw: 'When is an Orchestra Not an Orchestra?', *EMc*, 16 (1988), 483–95

M.S. Morrow: *Concert Life in Haydn's Vienna: Aspects of a Developing Musical and Social Institution* (Stuyvesant, NY, 1989); see also review by D. Edge, *Haydn Yearbook 1992*, 108–67

N. Zaslaw: *Mozart's Symphonies: Context, Performance Practice, Reception* (Oxford, 1989)

J. Webster: 'On the Absence of Keyboard Continuo in Haydn's Symphonies', *EMc*, 18 (1990), 599–608

C. Eisen: 'The Mozarts' Salzburg Copyists: Aspects of Attribution, Chronology, Text, Style, and Performance Practice', *Mozart Studies*, i, ed. C. Eisen (Oxford, 1991), 253–99

P. Whitmore: *Unpremeditated Art: the Cadenza in the Classical Keyboard Concerto* (Oxford, 1991)

'Performing Mozart's Music', *EMc*, 19/4 (1991 [incl. C. Eisen: 'The Old and New Mozart Editions', 513–32]); xx/1 (1992 [incl. D. Edge: 'Mozart's Viennese Orchestras', 64–88; C. Eisen: 'Mozart's Salzburg Orchestras', 83–103]); xx/2 (1992)

C. Brown: 'Dots and Strokes in Late 18th- and 19th-Century Music', *EMc*, 21 (1993), 593–610

D. Charlton: "'A maître d'orchestre ... Conducts": New and Old Evidence on French Practice', *EMc*, 21 (1993), 340–53

S. McVeigh: *Concert Life in London from Mozart to Haydn* (Cambridge, 1993)

J. Spitzer: 'Players and Parts in the 18th-Century Orchestra', *Basler Jb für historische Musikpraxis*, 17 (1993), 65–88

L.E. Miller: 'C.P.E. Bach and Friedrich Ludwig Dülon: Composition and Improvisation in Late 18th-Century Germany', *EMc*, 23 (1995), 65–80

V.W. Goertzen: 'By Way of Introduction: Preluding by 18th- and Early 19th-Century Pianists', *JM*, 14 (1996), 299–337

N. Zaslaw, ed.: *Mozart's Piano Concertos: Text, Context, Interpretation* (Ann Arbor, 1996) [incl. D. Edge: 'Manuscript Parts as Evidence of Orchestral Size in the Eighteenth-Century Viennese Concerto', 427–60]

B. Harrison: *Haydn's Keyboard Music: Studies in Performance Practice* (Oxford, 1997)

R. Riggs: 'Mozart's Notation of Staccato Articulation: a New Appraisal', *JM*, 15 (1997) 230–77

M. Latcham: 'Mozart and the Pianos of Gabriel Anton Walter', *EMc*, 25 (1997), 382–400

C. Brown: *Classical and Romantic Performing Practice 1750–1900* (Oxford, 1999)

F: Romantic

BerliozM

W.T. Parke: *Musical Memoirs* (London, 1830/R)

P. Baillot: *L'art du violon: nouvelle méthode* (Paris, 1834)

M. Garcia: *Traité complet de l'art du chant* (Paris, 1840–47/R; Eng. trans., 1893, as *Hints on Singing*; new Eng. trans., 1975–84)

-
- H.F. Chorley: *Music and Manners in France and Germany* (London, 1841/R)
- H. Berlioz: *Grand traité d'instrumentation et d'orchestration modernes* (Paris, 1843, 2/1855/R; Eng. trans., 1856, rev. 2/1882/R by J. Bennett)
- H. Berlioz: *Les soirées de l'orchestre* (Paris, 1852/R, 5/1895; Eng. trans., 1956/R); ed. L. Guichard (Paris, 1968)
- A. Elwart: *Histoire de la Société des concerts du Conservatoire impérial de musique* (Paris, 1860, enlarged 2/1864)
- L. Spohr: *Selbstbiographie* (Kassel, 1860–61; Eng. trans., 1865/R, 2/1878/R); ed. E. Schmitz (Kassel, 1954–5)
- H.F. Chorley: *Thirty Years' Musical Recollections* (London, 1862/R, abridged 2/1926/R by E. Newman)
- R. Wagner: *Über das Dirigieren* (Leipzig, 1869; Eng. trans., 1887, 4/1940/R)
- E. Hanslick: *Geschichte des Concertwesens in Wien* (Vienna, 1869–70/R)
- R. Wagner: *Mein Leben* (pubd privately, 1870–81); ed. M. Gregor-Dellin (Munich, 1963; Eng. trans., 1983)
- F. Weingartner: *Ueber das Dirigieren* (Leipzig, 1896, 5/1920); Eng. trans., 1906, 2/1925; repr. in *Weingartner on Music & Conducting* (New York, 1969)
- A. Dandelot: *La Société des concerts du Conservatoire de 1828 à 1897* (Paris, 1898, many later edns, enlarged 1923 as *La Société des concerts du Conservatoire (1828–1923)*)
- H. Knödt: 'Zur Entwicklungsgeschichte der Kadenzen im Instrumentalkonzert', *SIMG*, 15 (1913–14), 375–419
- A. Carse: *The Orchestra from Beethoven to Berlioz* (Cambridge, 1948/R)
- A.G. Huber: *Ludwig van Beethoven: seine Schüler und Interpreten* (Vienna, 1953)
- P. Badura-Skoda, ed.: *Carl Czerny: Über den richtigen Vortrag der sämtlichen Beethoven'schen Klavierwerke* (Vienna, 1963; Eng. trans., 1970)
- D. Shawe-Taylor and others: 'Schubert as Written and as Performed', *MT*, 104 (1963), 626–8
- H. Grundmann and P. Mies: *Studien zum Klavierspiel Beethovens und seiner Zeitgenossen* (Bonn, 1966, 2/1970)
- P. Stadlen: 'Beethoven and the Metronome: I', *ML*, 48 (1967), 330–49
- N. Temperley: 'Berlioz and the Slur', *ML*, 50 (1969), 388–92
- F. Weingartner: *Weingartner on Music & Conducting* (New York, 1969)
- W.S. Newman: 'Beethoven's Pianos versus his Piano Ideals', *JAMS*, 23 (1970), 484–504
- W.S. Newman: 'On the Rhythmic Significance of Beethoven's Annotations in Cramer's Etudes', *GfMKB: Bonn 1970*, 43–7
- W.S. Newman: *Performance Practices in Beethoven's Piano Sonatas* (New York, 1971)
- G. Beechey: 'Rhythmic Interpretation', *MR*, 33 (1972), 233–48
- K. Drake: *The Sonatas of Beethoven as he Played and Taught them*, ed. F.S. Stillings (Cincinnati, 1972)
-

-
- A. Caswell: 'Mme Cinti-Damoreau and the Embellishment of Italian Opera in Paris: 1820–1845', *JAMS*, 28 (1975), 459–92
- W.S. Newman: 'Freedom of Tempo in Schubert's Instrumental Music', *MQ*, 61 (1975), 528–45
- W. Weber: *Music and the Middle Class: Social Structures of Concert Life in London, Paris, and Vienna* (London, 1975)
- W.S. Newman: 'The Performance of Beethoven's Trills', *JAMS*, 29 (1976), 439–62
- R. Winter: 'Second Thoughts on the Performance of Beethoven's Trills', *MQ*, 63 (1977), 483–504
- R. Winter: 'Performing Nineteenth-Century Music on Nineteenth-Century Instruments', *19CM*, 1 (1977–8), 163–75
- D. Coe: 'The Original Production Book for *Otello*: an Introduction', *19CM*, 2 (1978–9), 148–58
- R.W. Oldani: 'Boris Godunov and the Censor', *19CM*, 2 (1978–9), 245–53
- L. Wright: 'A New Source for *Carmen*', *19CM*, 2 (1978–9), 61–71
- E.M. Frederick: 'The "Romantic" Sound in Four Pianos of Chopin's Era', *19CM*, 3 (1979–80), 150–53
- O. Biba: 'Concert Life in Beethoven's Vienna', *Beethoven, Performers, and Critics: Detroit 1980*, 77–93
- T. Higgens: 'Whose Chopin?', *19CM*, 5 (1981–2), 67–75
- D.K. Holoman: 'The Emergence of the Orchestral Conductor in Paris in the 1830s', *Music in Paris in the Eighteen-Thirties: Northampton, MA, 1982*, 374–430
- W. Schenkman: 'Beyond the Limits of Urtext Authority: a Contemporary Record of Early Nineteenth-Century Performance Practice', *College Music Symposium*, 23/2 (1983), 145–63
- W. Crutchfield: 'Vocal Ornamentation in Verdi: the Phonographic Evidence', *19CM*, 7 (1983–4), 3–54
- R. Winter: 'The Emperor's New Clothes: Nineteenth-Century Instruments Revisited', *19CM*, 7 (1983–4), 251–65
- W.A. Bebbington: *The Orchestral Conducting Practice of Richard Wagner* (diss., CUNY, 1984)
- R. Stowell: *Violin Technique and Performance Practice in the Late Eighteenth and Early Nineteenth Centuries* (Cambridge, 1985)
- D.J. Koury: *Orchestral Performance Practices in the Nineteenth Century: Size, Proportions, and Seating* (Ann Arbor, 1986)
- G. Harwood: 'Verdi's Reform of the Italian Opera Orchestra', *19CM*, 10 (1986–7), 108–34
- C. Brown: 'Bowing Styles, Vibrato and Portamento in Nineteenth-Century Violin Playing', *JRMA*, 113 (1988), 97–128
- E. Galkin: *A History of Orchestral Conducting* (New York, 1988)
- W.S. Newman: *Beethoven on Beethoven: Playing his Piano Music his Way* (New York, 1988)
- R. Taruskin: 'Resisting the Ninth', *19CM*, 12 (1988–9), 241–56
- A.B. Caswell, ed.: *Embellished Opera Arias* (Madison, WI, 1989)
- C. Brown: 'Historical Performance, Metronome Marks and Tempo in Beethoven's Symphonies', *EMc*, 19 (1991), 247–58
-

- H.J. Macdonald: 'Berlioz and the Metronome', *Berlioz Studies*, ed. P. Bloom (Cambridge, 1992), 17–36
- D. Rowland: *A History of Pianoforte Pedalling* (Cambridge, 1993)
- R. Stowell, ed.: *Performing Beethoven* (Cambridge, 1994)
- D. Montgomery: 'Modern Schubert Interpretation in the Light of the Pedagogical Sources of his Day', *EMc*, 25 (1997), 101–18
- B.D. Sherman: 'Tempos and Proportions in Brahms: Period Evidence', *EMc*, 25 (1997), 462–77
- D.M. Di Grazia: 'Rejected Traditions: Ensemble Placement in Nineteenth-Century Paris', *19CM*, 22 (1998–9), 190–209

G: 20th century

CampbellGC

- F. Weingartner: *Ueber das Dirigieren* (Leipzig, 1896, 5/1920); Eng. trans., 1906, 2/1925; repr. in *Weingartner on Music & Conducting* (New York, 1969)
- L. Auer: *Violin Playing as I Teach it* (New York, 1921/R)
- D. Alexanian and P. Casals: *L'enseignement du violoncelle: traité théorique et pratique du violoncelle* (Paris, 1922)
- C. Flesch: *Die Kunst des Violinspiels*, 1 (Berlin, 1923, 2/1929; Eng. trans., 1924, 2/1939); ii (Berlin, 1928; Eng. trans., 1930)
- P. Taffanel and P. Gaubert: *Méthode complète de flûte* (Paris, 1923, 2/1958)
- H. Becker and D. Rynar: *Mechanik und Ästhetik des Violoncellspiels* (Vienna, 1929/R)
- I. Yampol'sky: *Osnovī skripichnoy applikaturī* [The principles of violin fingering] (Moscow, 1933, enlarged 3/1955; Eng. trans., 1967)
- C. Flesch: *Memoirs* (London, 1957/R, 2/1958; Ger. orig., Freiburg, 1960, 2/1961)
- I. Galamian: *Principles of Violin Playing and Teaching* (Englewood Cliffs, NJ, 1962, 2/1985)
- H.C. Schonberg: *The Great Pianists* (New York, 1963, 2/1987)
- B. Schwarz, ed.: *Carl Flesch: Violin Fingering, its Theory and Practice* (London, 1966/R)
- B. Bartolozzi: *New Sounds for Woodwind* (London, 1967, 2/1982; It. orig., Milan, 1974)
- H.C. Schonberg: *The Great Conductors* (New York, 1967)
- D. Wooldridge: *Conductor's World* (London, 1970)
- J.B. Steane: *The Grand Tradition: Seventy Years of Singing on Record* (London, 1974)
- R.M. Philip: *Some Changes in Style of Orchestral Playing, 1920–1950, as Shown by Gramophone Recordings* (diss., U. of Cambridge, 1975)
- B. Boretz and E.T. Cone, eds.: *Perspectives on Notation and Performance* (New York, 1976)

E. Brody: 'Viñes in Paris: New Light on Twentieth-Century Performance Practice', *A Musical Offering: Essays in Honor of Martin Bernstein*, ed. E.H. Clinkscale and C. Brook (New York, 1977), 45–62

E.W. Galkin: *A History of Orchestral Conducting: in Theory and Practice* (New York, 1988)

R. Philip: *Early Recordings and Musical Style: Changing Tastes in Instrumental Performance, 1900–1950* (New York, 1992)

R. Hudson: *Stolen Time: the History of Tempo rubato* (Oxford, 1994)

R. Taruskin: *Text and Act: Essays on Music and Performance* (Oxford, 1995)

II. Non-Western and traditional music

Benjamin Brinner

1. Introduction.

This section will focus on studies of performing practices worldwide conducted primarily by ethnomusicologists. An outline of the range of meanings denoted by performing practice is followed by a survey of sources for the study of performing practice and their approaches, the central issues that have arisen and some applications of knowledge about performing practice.

Not all ethnomusicologists use the term performing practice, but most have studied it. The term, or its more common variant 'performance practice', figures relatively rarely in titles of books or articles and is missing from the index of definitive works on ethnomusicology, but this does not indicate a lack of interest. Rather, performing practice is so central to knowledge of the world's musics that it has usually been integrated into studies rather than set aside as an independent field of study. Performing practice has, in fact, been one of the prime areas of ethnomusicological investigation, particularly in the third quarter of the 20th century, when many studies of non-Western and other traditional musics were devoted to defining normative performance.

While some ethnomusicologists have studied questions of performing practice as a direct outgrowth of Western musicology and have brought to this study the issues raised by historical musicologists, others have been impelled by their involvement in performance and a consequent need to make sense of musical practice. Still others are motivated by anthropologically or sociologically informed interests in human behaviour. The influence of practice theory and the work of Pierre Bourdieu, in particular, is extensive and growing.

The issues that occupy scholars and performers of Western art music, specifically those concerning authenticity and the feasibility and desirability of re-creating earlier European performing practices, have no direct analogies in ethnomusicology. There is widespread and largely tacit agreement, however, that performing practice can and should be studied. Conflicts may arise between champions of contemporary practice and scholars of older ones, but these are relatively infrequent. A notable instance is the mixed reception in Japan of revisionist histories of Japanese court music by Laurence Picken and associates (see Picken, 1982–90). Considerable efforts have been made in various parts of the world to document older practices that appear to be changing or vanishing altogether, but this is rarely done for the sake of historically accurate reconstruction. The vast majority of performer-scholars do not attempt to reinstate earlier practices, by choice or for lack of evidence. Rather, fidelity to

teachers' models and observed practice are the rule. This is due in part to the predominance of non-native scholarship and the resultant deference towards experts born into the tradition. As scholars (and some performers) have developed more sophisticated understanding of longstanding processes of cultural exchange and change in virtually every part of the world, notions of purity and authenticity have become irrelevant except as tropes in local discourses on music that may themselves become the subject of study. Similarly, musics which were once presumed to be 'hybrid' or 'impure' and therefore unworthy of study are now the focus of considerable scholarly attention as are processes of change.

2. Definition.

Performing practice is generally understood by ethnomusicologists to refer to the conventions that govern music-making and accompanying activities, such as dance, theatre and ritual in a socially, culturally and historically defined context. These conventions delimit a range of appropriate choices in performance and, increasingly, are understood to be situated, negotiable and often gendered. In other words, despite their apparent stability they are subject to change and highly dependent on context and power relations between performers and others who influence performances, such as patrons, scholars and audiences. For the most part, the conventions of performing practice are unwritten and, in some cases, unarticulated, but they are nonetheless observable in performance. They extend beyond a single composition, being linked to or defined for a particular time period, group of musicians, set of pieces – a single genre, an entire repertory – and types of performance.

Ethnomusicologists have been mostly concerned with that which is traditional and typical and with variations thereon. Ethnomusicological research stresses the synchronic over the historical; most publications concern contemporary performing practice, not because of a lack of interest in earlier practices or an assumption that current practice is essentially the same as earlier practice, but because of the difficulty of pursuing historical research in musical traditions that are primarily or exclusively transmitted orally/aurally.

In ethnomusicological writing there is overlap between the concepts of 'performing practice' and 'style' since both terms refer to ways of doing. Yet the two concepts are usually distinguishable; 'style' often refers to the way a piece is composed regardless of the way it is performed (performing practice), or about certain ways of performing those pieces. Style does not cover such aspects as piece selection, a piece's transformation within performance, or instrumentation and orchestration (role assignment), which define the constitution of ensemble. These issues belong to the domain of performing practice.

Performing practice is thus related to but at least partly separable from the pieces performed. But what is the piece? Transferring performing practice as it is used in Western musicology requires that ethnomusicologists distinguish between an item (song, composition or piece) and its normative realizations. Studies of performing practice for notated musics may deal with aspects of interpretation similar to those considered by scholars of European art music. But the concept of performing practice is also viable in traditions where notation either does not exist or plays a less central role, such as when it is used for archival or pedagogical reasons, but not in performance. Thus, it is more useful to think of performing practice as a range of possibilities for realizing some sort of representation of a piece; this representation may be written in great detail, sketched in mnemonics or a completely mental phenomenon.

Almost every kind of music-making is less reifiable as text than most European art music, partly because much of it is not notated. Even for Japanese, Chinese, Arab and Javanese traditions of musical notation, where this distinction between 'text' and 'act' (Taruskin, 1995, p.356) might seem clear, there may be problems due to the necessity of aurally transmitted knowledge for interpretation. When no notation is used, defining realization in performance can be complicated. For instance, solo improvisations such as the Middle Eastern *taqsim* are open to such variations that one can only describe a performance, not prescribe a specific *taqsim*. Yet much can be said about the performing practice associated with *taqsim*, as Scott Marcus does in his study of common patterns of modulation in Middle Eastern improvisation (1992). Even when a piece is notated, one must ask whether the notation represents the most important aspects of the piece or simply the ones that are easiest to write down or are most likely to be needed by less experienced performers. In Javanese gamelan music, for example, the commonly notated *balungan* is only one melodic strand and may not be the most important. Some performers and scholars maintain that an unplayed melody abstracted from the live sound and heard only in the musicians' heads is the best representation of the piece. This has generated substantial discussion of the nature of this essence and its realizations (Sutton, 1979; Sumarsam, 1984; Perlman, 1994).

Even in the most integrated cases, such as improvised performances where the abstract concept of a constant composition hardly applies, distinguishing between the structure that is created in performance and the performing practice with which that structure is created provides two complementary perspectives on the performance. The problem of filtering performing practice can be reformulated by defining performing practice not with respect to the details of a particular piece, but as the things musicians must know in order to perform a certain group of pieces or even an entire repertory suitable for ceremonies, nightclub shows or formal concerts. The questions that could be asked concern appropriateness: which sort of piece, performed by whom, when and how.

3. Sources.

Sources for the study of performing practice, and hence the methods of study, vary greatly among different musics. Ethnomusicologists undertake ethnographic studies of current practice, elicitation of oral histories and analysis of notation that draw on written and iconographic materials. They also rely on older recordings and archaeological evidence where available.

(i) Ethnographic data and performance study.

Since the early 1960s ethnomusicologists have favoured working in the present, conducting interviews, observing performances, recording and, perhaps most important, pursuing practical study from a variety of musicians. Ethnographic work contrasts with the methods of historical musicologists owing to the availability of living sources. Often a substantial portion of performing practice is implicit, deducible from the actions of experienced performers in particular circumstances. The scope of the unsaid varies greatly, requiring a variety of approaches to eliciting that which has not yet been articulated in words. Often the most fruitful approach is practical study which enables the scholar to participate in performance, experiencing the working of conventions from within and gauging responses to his or her musical choices (Kippen, 1992; Brinner, 1995).

(ii) Oral history.

In order to study both performing practice of earlier times and change over time, observation of and participation in contemporary practice are clearly insufficient. Eliciting oral histories is an approach used worldwide. Interviewers seek to document changes within living memory and hope for echoes of still earlier practices. For completely non-literate societies this is the primary and often sole resource of historical study.

(iii) Notation.

Many musical traditions rely on some form of notation, but the 'notes themselves' often lack crucial information as to how they are to be performed. Tablature for the Chinese *qin*, for example, includes precise indications for playing techniques, but durations are left to the player's interpretation, which is informed though not fully determined by performing practice handed down from teacher to pupil. In this case, as in many others, the notation serves largely as a set of mnemonics for a repertory that has been transmitted and memorized in a fundamentally aural manner. Practice can change substantially under these conditions, as demonstrated by Picken and other researchers who examined early notation of music exported to medieval Japan from Tang dynasty China; evidence demonstrates that crucial aspects of performing practice, particularly tempo and ornamentation, must have changed significantly over the past 1000 years, even as the same pieces continued to be played by *gagaku* musicians (Marett, 1986). Based on this material, as well as evidence from medieval Europe and Central Asia, Picken has proposed a far-reaching continuum of performing practice in dance music (1982–90, ii). The introduction of notation is likely to alter performing practice substantially in a formerly aural tradition, as shown in Ruth Davis's study of Tunisian performing practice (1992).

(iv) Textual evidence.

Written sources that document earlier performing practice include comments attached to notation, descriptions of performances and lists of performers or ensembles. Comments on notation may convey information about variations in performing practice, with possible repetitions or substitutions indicated, for example. Texts concerning performances and performers may indicate what was played in particular circumstances, including the constitution of an ensemble, the sequence of pieces or genres and the interaction between performers and audience. For instance, George Sawa has shown continuities between medieval and modern Arab performing practice in his interpretation of 10th-century Arab treatises (1989) and Carol Meyers has speculated on the type of music performed by Jewish women in biblical times, based on passages in the Bible (Marshall, 1993). There are also examples of recent music traditions. The recovery of African retentions in early African-American musical practice based on accounts of slaves written by whites is a particularly large and varied project of this sort.

(v) Archaeological and iconographic evidence.

Meyers's speculation on questions of gender and performing practice in biblical Israel also relied on terracotta figurines to support the interpretation of textual evidence. Lise Manniche's marshalling of a panoply of iconographic, textual and other archaeological evidence from ancient Egypt is a particularly comprehensive undertaking (1991). Working with manuscript illustrations from Mughal India, Bonnie

Wade has recovered aspects of performing practice at a crucial juncture in Indian music history, namely the mixing of Indian and foreign instruments and practices occasioned by the Mughal conquest (1998).

(vi) Recordings.

Recordings are an important source for studying performing practice from the late 19th and early 20th centuries onwards. Jihad Racy (1988) and, more recently, Henry Spiller (1996) and Amy Stillman (1996) have used early recordings of Arab, Sundanese and Hawaiian musics to ascertain changes in performing practice. In the Middle East, for example, this wealth of early recordings bears witness to a period of great change, a shift from smaller ensembles with one performer to a part and substantial improvisation, divergent interpretations and ornamentations to larger orchestras with unified sound ideals, string sections, greater stress on composition and more unified conceptions of the piece, greatly aided in many cases by notation (see Davis, 1992). Of course, the severe time limitations of early recordings, the decontextualization of performance and the difficulty of recording large ensembles limit the types of questions one can approach. Nevertheless, performers involved in the revivals of musics as disparate as Jewish klezmer and Amerindian songs have made use of early recordings not only for repertory but to learn earlier ways of performing that repertory (Witmer, 1991). Recordings, especially those made in the field by the researcher, are also particularly helpful for tackling the difficult problem of distinguishing between ornamentation and the simpler, more basic, or more essential aspects of a piece. Ethnomusicologists sometimes compare differing performances of a piece or repetitions within a piece in order to separate the varying details, the so-called surface of the music, from what is presumed to be the more permanent or stable core.

4. Scholarly approaches and issues.

Studies of performing practice vary in scope, focus, theoretical assumptions, methodology and emphasis. The scope of generalization in studies of performing practice may be as limited as a short time period, a single community, or a lineage of performers, and it may be as broad as a continent or other large cultural area, such as the Indian subcontinent (Wade, in Béhague, 1984), Jewish musical traditions (Shiloah, 1992) or the African diaspora (Brown, 1992). The focus of a study may be the piece as independent entity, the scholar then asking what is the range of ways that it can be performed (Nettl and Foltin, 1972; Vetter, 1981) or the way in which components are assembled into larger performance sequences (Picken, 1982–90; Racy, 1983; Schuyler, in Béhague, 1984; al-Faruqi, 1985). Others address a more generalized, systemic level as Robert Garfias has done for Japanese *gagaku* (1975), David Morton for Thai music (1976), Anderson Sutton for Javanese gamelan (1993) and Lawrence Witzleben for Chinese instrumental music (1995). The phenomena studied under the rubric of performing practice range from aspects of intonation, ornamentation and playing techniques (Garfias, 1975; Wade, in Béhague, 1984) to the constitution of ensembles (Berliner, 1978, p.112), from the realizations of individual pieces to the considerations that govern the choice of repertory for an entire occasion (Nettl and Foltin, 1972; Vetter, 1977 and 1981; Schuyler, 1984; Sugarman, in Béhague, 1988).

The theoretical assumptions methodologies and emphases that shape studies of performing practice have changed rapidly over time. Though early reports from missionaries, explorers and other travellers during the age of exploration can hardly be considered ethnomusicological studies, such sources convey more information about aspects of performing practice, however tersely and subjectively, than about other aspects of foreign musics (Harrison, 1973). These accounts constitute the bulk of early textual evidence for ethnomusicologists working in many parts of the world (Bohlman, 1988; Bor, 1988). Comparative musicologists working from the late 19th century to the mid-20th focussed on scales, instruments and items of repertoires rather than on practice though contextual information is often scattered in field reports. The dominance of so-called armchair analysis, removed from sites of performance, precluded the analysis of processes of musical performance.

It was with the rise of ethnomusicology in the mid-20th century that aspects of performing practice began to receive considerable attention. This body of work exhibits a tendency to normative generalizations, often based on an individual or a small sample. This is taken to an extreme in the work of Alan Lomax, whose cantometrics project sought correlations between social structure and song style. For Lomax, cantometrics is a term that means style of performance, i.e. performing practice, including aspects such as the type of ensemble, the musical relationships between singer and instrumentalist, and the degree of ornamentation (Lomax, 1968; see critique in Henry, 1976). At the same time a large body of ethnomusicological work has filtered out performing practice by looking for essential features of compositions or pieces to find points of connection between them, just as comparative musicologists had done earlier.

The new emphasis on performance advocated in the 1970s by folklorists such as Richard Bauman urged ethnomusicologists to pay more attention to events and the processes played out in them as opposed to the more systemic accounts of earlier work. This led to the development of new field methodologies and to collections of articles devoted to performing practice (McLeod and Herndon, 1980; Béhague, 1984). The authors in Gerard Béhague's collection, in particular, showed how performing practice is contingent on context.

In the 1990s, alongside a continued interest in process and event, attention has shifted to individual agency, to the multiplicity of viewpoints within a community or tradition and to the constructedness of norms in which performers, critics and scholars are implicated. The relationship between practice and theory, both oral and written, has been one such direction (Zemp, 1979; Schuyler, 1990; Marcus, 1992; Weintraub, 1993; Barz and Cooley, 1997). Much of this change in orientation is due to recent sociological and anthropological concerns such as the growing influence of Bourdieu's concept of 'habitus' in ethnomusicological work (Waterman, 1991, pp.50-54). Concurrently, many scholars have given closer attention to the intersection of gender and performing practice, demonstrating that one can study which pieces are appropriate for a given occasion, for example, or how an ensemble for a particular performance context should be constituted with regard not only to instrumentation but also, for example, to gender and social status (Meyer, Teeter and Weiss, in Marshall, 1993; Sugarman, 1997; Walton, 1997). Scholars have also broadened the scope of musical investigation to include popular musics (Booth, 1991-2) and the performance of traditional musics in new contexts (Rasmussen, 1989).

Perhaps the most important contribution of ethnomusicology to the study of performing practice is that performing practice itself becomes the subject of interpretation. Going beyond analyses of source materials for the purpose of determining what performing practice is for a given music, ethnomusicologists attempt to analyse why those particular conventions have formed in order to

determine what relationship this formation may have with other cultural and social aspects. Interpretation may focus on aesthetics, sociological concerns, world-view or other cultural issues. Lomax's ambitious and methodologically flawed global mapping of song style and social structure is one example (1968). In a far more focussed and successful study, Anthony Seeger not only describes how men of the Suya people in Brazil perform *Akia* songs, but he also interprets the social significance of this practice (McLeod and Herndon, 1980). Studying the performing practice associated with Balinese *gender wayang*, Lisa Gold has shown the narrative and ritual links that join shadow play and life-cycle ceremonies (1992, 1998). Benjamin Brinner has analysed the interaction that takes place in the performance of Javanese gamelan, explaining it in terms of the intertwining of musical and social forces and issues (1995).

Writings on performing practice in the world's musics are not usually as concerned with prescriptive agendas as many writings on historical practice in European art music are, yet some research on performing practice is practically motivated and more prescriptive than descriptive; such research is conducted with the goal not only of documenting current, or somewhat older, practice but of seeking out the 'best' or the most representative practice as a basis for standardized teaching. Such work is generally associated with and often instigated by national institutions for education in performing arts, and the standardization or codification of performing practice may serve a political agenda. Nationalist works are further differentiated from most other works on performing practice in that they are conducted by local researchers rather than foreign scholars. In the case of Central Java the displacement of the royal courts by national conservatories as training-grounds and extravagant patrons of the arts led to a similar shift in the custodianship of court-based performing practices, although these did not remain unmodified (Brinner, 1995, pp.158-9). Certain performing practices also became emblematic of regional identity and thus politically charged (Sutton, 1991). Similar processes have been played out elsewhere as post-colonial governments created national arts institutes with far-reaching pedagogical and curatorial mandates (Davis, 1997, p.2). Even when creation of a unified standard is not the goal, standardization may take place at a lower level as examples of regional practices are simplified to fill curricular needs at conservatories (Witzleben, 1995, p.132).

Study of performing practice has been a standard part of the training of many ethnomusicologists, due in part to Ki Mantle Hood's championship of the ideal of bi-musicality. Bi-musicality is primarily a pedagogical tool rather than a field of intellectual inquiry; the student absorbs the conventions of the music to be studied rather than researching them. As instruction in a broad variety of musical traditions has become more widespread and readily available through much of the Western world, many musicians in addition to ethnomusicologists have developed an eclectic musicianship based not only on acquisition of playing techniques and specific items of repertory, but also on absorption of some aspects of performing practices from highly diverse sources.

Bibliography

A. Lomax: *Folk Style and Culture* (Washington DC, 1968)

B. Nettl and B. Foltin jr: *Daramad of Chahargah: a Study in the Performance Practice of Persian Music* (Detroit, 1972)

F.Ll. Harrison: *Time, Place and Music: an Anthology of Ethnomusicological Observation c.1550 to c.1800* (Amsterdam, 1973)

- R. Garfias: *Music of One Thousand Autumns: the Tōgaku Style of Japanese Court Music* (Berkeley, 1975)
- E.O. Henry: 'The Variety of Music in a North Indian Village: Reassessing Cantometrics', *EthM*, 20 (1976), 49–66
- D. Morton: *The Traditional Music of Thailand* (Berkeley, 1976)
- R. Vetter: *Formal Aspects of Performance Practice in Central Javanese Gamelan Music* (thesis, U. of Hawaii, 1977)
- P. Berliner: *The Soul of Mbira: Music and Traditions of the Shona People of Zimbabwe* (Berkeley, 1978)
- R.A. Sutton: 'Concept and Treatment in Javanese Gamelan Music, with Reference to the Gambang', *AsM*, 11/1 (1979), 59–79
- H. Zemp: 'Aspects of 'Aré'aré Musical Theory', *EthM*, 23 (1979), 5–48
- N. McLeod and M. Herndon, eds.: *The Ethnography of Musical Performance* (Norwood, PA, 1980) [incl. A. Seeger: 'Sing for your Sister: the Structure and Performance of Suya Akia', 7–42]
- R. Vetter: 'Flexibility in the Performance Practice of Central Javanese Music', *EthM*, 25 (1981), 199–214
- L. Picken, ed.: *Music from the Tang Court* (Oxford, 1982–90), esp. 'Aspects of the Suite-Form in East Asia', 2, 100–08 [vol.ii co-edited by R.F. Wolpert]
- A.J. Racy: 'The Waslah: a Compound-Form Principle in Egyptian Music', *Arab Studies Quarterly*, 5 (1983), 396–403
- G. Béhague, ed.: *Performance Practice: Ethnomusicological Perspectives* (Westport, CT, 1984) [incl. B.C. Wade: 'Performance Practice in Indian Classical Music', 13–52; R. Knight: 'The Manding Contexts', 53–90; P. Schuyler: 'Berber Professional Musicians in Performance', 91–148]
- Sumarsam: 'Inner Melody in Javanese Gamelan', *Karawitan: Source Readings in Javanese Gamelan and Vocal Music*, 1, ed. J. Becker and A. Feinstein (Ann Arbor, 1984), 245–304
- R.A. Sutton: 'Who is the Pesindhèn? Notes on the Female Singing Tradition in Java', *Indonesia*, 37 (1984), 118–31
- L.I. al-Faruqi: 'The Suite in Islamic History and Culture', *World of Music*, 27/3 (1985), 46–64
- A. Maret: 'In Search of the Lost Melodies of Tang China: an Account of Recent Research and its Implications for the History and Analysis of Tōgaku', *Musicology Australia*, 9 (1986), 29–38
- J. Baily: *Music of Afghanistan: Professional Musicians in the City of Herat* (Cambridge, 1988)
- P.V. Bohlman: 'Missionaries, Magical Muses, and Magnificent Menageries: Image and Imagination in the Early History of Ethnomusicology', *World of Music*, 30/3 (1988), 5–26
- J. Bor: 'The Rise of Ethnomusicology: Sources on Indian Music c.1780–1890', *YTM*, 20 (1988), 51–73
- A.J. Racy: 'Sound and Society: the Takht Music of Early Twentieth-Century Cairo', *Selected Reports in Ethnomusicology*, 7 (1988), 139–70
- J. Sugarman: 'Making Muabet', *Selected Reports in Ethnomusicology*, 7 (1988), 1–42
- A. Rasmussen: 'The Music of Arab Americans: Performance Contexts and Musical Transformations', *Pacific Review of Ethnomusicology*, 5 (1989), 15–33

- G. Sawa: *Music Performance Practice in the Early Abbasid Era, 132–320 AH/750–932 AD* (Toronto, 1989)
- P. Schuyler: 'Hearts and Minds: Three Attitudes towards Performance Practice and Music Theory in the Yemen Arab Republic', *EthM*, 34 (1990), 1–18
- L. Manniche: *Music and Musicians in Ancient Egypt* (London, 1991)
- R.A. Sutton: *Traditions of Gamelan Music in Java: Musical Pluralism and Regional Identity* (Cambridge, 1991)
- C.A. Waterman: 'Juju History: toward a Theory of Sociomusical Practice', *Ethnomusicology and Modern Music History*, ed. S. Blum, P.V. Bohlman and D.M. Neuman (Urbana, IL, 1991), 49–67
- R. Witmer: 'Stability in Blackfoot Songs, 1909–1968', *Ethnomusicology and Modern Music History*, ed. S. Blum, P.V. Bohlman and D.M. Neuman (Urbana, IL, 1991), 242–53
- G. Booth: 'Disco *Laggi*: Modern Repertoire and Traditional Performance Practice in North Indian Popular Music', *AsM*, 23/1 (1991–2), 61–83
- E. Brown: 'The African/African American Idiom in Music: Family Resemblances in Black Music', *African Musicology: Current Trends*, 2, ed. J.C. Djedje (Los Angeles, 1992), 115–34
- R. Davis: 'The Effects of Notation on Performance Practice in Tunisian Art Music', *World of Music*, 34/1 (1992), 85–114
- L. Gold: 'Musical Expression in the Wayang Repertoire: a Bridge between Narrative and Ritual', *Balinese Music in Context*, ed. H. Oesch and D. Schaareman (Winterthur, 1992), 245–75
- J. Kippen: 'Tabla Drumming and the Human-Computer Interaction', *World of Music*, 34/3 (1992), 72–98
- S.L. Marcus: 'Modulation in Arab Music: Documenting Oral Concepts, Performance Rules and Strategies', *EthM*, 36 (1992), 171–95
- J.M. Schechter: *The Indispensable Harp: Historical Development, Modern Roles, Configurations, and Performance Practices in Ecuador and Latin America* (Kent, OH, 1992)
- A. Shiloah: *Jewish Musical Traditions* (Detroit, 1992)
- K. Marshall, ed.: *Rediscovering the Muses: Woman's Musical Traditions* (Boston, 1993) [incl. S. Weiss: 'Gender and Gender: Gender Ideology and the Female Gender Player in Central Java', 21–48; C. Meyers: 'Drum-Dance-Song Ensemble: Women's Performance in Biblical Israel', 49–67; E. Teeter: 'Female Musicians in Pharaonic Egypt', 68–91]
- A. Miner: *Sitar and Sarod in the 18th and 19th Centuries* (Wilhelmshaven, 1993)
- R.A. Sutton: *Variation in Central Javanese Gamelan Music: Dynamics of a Steady State* (DeKalb, IL, 1993)
- A.N. Weintraub: 'Theory in Institutional Pedagogy and "Theory in Practice" for Sundanese Gamelan Music', *EthM*, 37 (1993), 29–39
- C. Perlman: *Unplayed Melodies: Music Theory in Postcolonial Java* (diss., Wesleyan U., 1994)
- B. Brinner: *Knowing Music, Making Music: Javanese Gamelan and the Theory of Musical Competence and Interaction* (Chicago, 1995)

-
- R. Taruskin: *Text and Act: Essays on Music and Performance* (Oxford, 1995)
- J.L. Witzleben: *'Silk and Bamboo' Music in Shanghai: the Jiangnan Sizhu Instrumental Ensemble Tradition* (Kent, OH, 1995)
- M. Perlman: 'Conflicting Interpretations: Indigenous Analysis and Historical Change in Central Javanese Music', *AsM*, xxviii/i (1996–7), 115–40
- H. Spiller: 'Continuity in Sundanese Dance Drumming: Clues from the 1893 Chicago Exposition', *World of Music*, 38/2 (1996), 23–40
- A.K. Stillman: 'Sound Evidence: Conceptual Stability, Social Maintenance and Changing Performance Practices in Modern Hawaiian Hula Songs', *World of Music*, 38/2 (1996), 5–22
- G.F. Barz and T.J. Cooley, eds.: *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology* (New York, 1997)
- R. Davis: 'Cultural Policy and the Tunisian *Ma'lûf*: Redefining a Tradition', *EthM*, 41 (1997), 1–21
- J.C. Sugarman: *Engendering Song: Singing and Subjectivity at Prespa Albanian Weddings* (Chicago, 1997)
- S.P. Walton: *Heavenly Nymphs and Earthly Delights: Javanese Female Singers, their Music, and their Lives* (diss., U. of Michigan, 1997)
- L. Gold: *The Gender Wayang Repertoire in Theater and Ritual: a Study of Balinese Musical Meaning* (diss., U. of California, Berkeley, 1998)
- B. Wade: *Imaging Sound* (Chicago, 1998)