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Oboe

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Oboe

(Fr. *hautbois*; Ger. *Oboe*; It. *oboe*).

Generic term in the system of Hornbostel and Sachs for an aerophone with a double (concussion) reed (for detailed classification *see* AEROPHONE). The name is taken from that of the principal treble double-reed instrument of Western art music (see §II below).

I. General

1. Oboes.

The AULOS of ancient Greece may sometimes have had a double reed, and some kind of reed aerophone was known in North Africa in pre-Islamic times. Instruments of the SURNĀY type became established with the spread of the Arab empire around the end of the first millennium CE; they were possibly a synthesis of types from Iran, Mesopotamia, Syria and Asia Minor. From there the instrument, then used in a military role, spread into conquered areas and areas of influence: to India, and later, under the Ottoman empire, to Europe (around the time of the fifth crusade, 1217–21; there may already have been bagpipes with double reeds there) and further into Asia (to China in the 14th century). As the instrument spread, it came to be made of local materials and fashioned according to local preferences in usage, shape and decoration: the ŚAHNĀĪ of north India has a flared brass bell; the SARUNAI of Sumatra has a palm leaf reed and a bell of wood or buffalo horn; the ALGAITA of West Africa is covered with leather and has four or five finger-holes.

The *surnāy* is the oboe of traditional music in the Islamic world; instruments of this type and with local names are played in the Near East, Turkey, south-east Europe, North Africa and many parts of Asia. The *surnāy* consists of a wooden conical tube widening at the end into a flared bell, a tuning-fork-shaped section (*nazik*) which is inserted fork end down into the instrument, a staple, inserted into the top of the instrument, a metal lip disc (PIROUETTE, a name taken by Hornbostel and Sachs from Mersenne) which may be part of the staple or separate from it and attached to it, and the reed, which fits over the top of the staple and is taken entirely into the mouth when playing. The tube usually has seven finger-holes and a thumb-hole. The instrument of the Middle East is made in three sizes. It has a loud and brilliant tone and is used for outdoor celebrations. It is usually played in small ensembles: with a double-headed drum (*ghayṭa* with *ṭabl* in North Africa (*see* GAITA (I)), *zurna* with *davul* in Turkey); in Egypt three *mazāmīr* (sing. *mizmār*) play with one or more drums, two of the *mazāmīr* acting as drones; in Macedonia a large *zurla* acts as a melody instrument, a smaller one as a drone, a reverse of the usual pattern. The technique of circular breathing is commonly used. The SUONA of China, which has a large flaring metal bell, and the European SHAWM are descendants of the *surnāy* (and have related names). The *śahnāī* of North India resembles the *surnāy* but is distinct in not having a lip disc. Large oboes of the *surnāy* type include the NĀGASVARAM, a wooden conical oboe of South India about 95 cm in length, with seven finger-holes, played with drums and *ottu* (a drone oboe with no finger-holes) for festivals, and the *rgya-gling* of Tibet, played in identical pairs for Buddhist rituals.

A small type of double-reed instrument originated in China where it was known as *bili*; it became

the GUANof China, the HICHIRIKI of Japan (imported to Japan in the 8th century), and the P'IRIof Korea. Instruments of this type are made in a variety of sizes. The *guan*has a cylindrical bore. The *hichiriki* has a reverse conical bore with seven finger-holes and two thumb-holes; the reed is made of a length of reed stalk, flattened and scraped. Such instruments are characterized by their capacity for subtle ornamentation and flexible pitch.

Rustic oboes without finger-holes, used for signalling or as noise makers, are found in England and France. The WHITHORN(England) and the *bramevac* (France) are made of a strip of coiled bark bound together with thorns; the reed is made of green bark. There are also idioglot oboes (with the reed formed from the material of the tube); they have been found in Europe, Korea and Malaysia. The *hodugi* of Korea is a tube of bark removed from a slender branch. At one end the upper layer of bark is shaved down to make a reed. It may have finger-holes and the sound may be modified with open or cupped hands.

2. Reeds.

The reed is not long-lasting and so tends to be made of a plentiful local material. The reeds of the modern Western oboe, and of most other European double-reed instruments, are made of a slip of the stem of a large semi-tropical grass (*Arundo donax*) folded in half, the two halves bound together and scraped thin to vibrate. *Arundo donax* grows around the Mediterranean Sea, in Spain, France and Italy (and also in other places with a similar climate such as California and South America). The *p'iri*, the *guan*and the *hichiriki* have reeds of flattened and scraped bamboo. The reeds of the *surnāy* and many related instruments are made from a section of soft cane, bound at one end and flattened at the other to an oval; when the reed is not in use a protective cover may be placed over the end to maintain the correct shape. The guard, spare reeds and staples, and a metal mandrel for making reeds are strung together and hung from the *śahnāī*during performance. The *charumera* of Japan has a reed of corn stalk. Many instruments of South-east Asia have reeds of palm or other leaf. The *selompret*of Indonesia has reeds of thin plates of bamboo cut into a fan shape and tied together in two sets of three; the reeds of the *pī* of Thailand are similar, but made of palm leaf. The *hnè* of Myanmar has a composite double reed made from young leaves of toddy palm, which are soaked, smoked, folded and cut to shape; six to eight fan-shaped layers are bound with a thick cord. (*See also* REED.)

Other oboes of Western music include the basson d'amour,BASSOON, cromorne (*see*CROMORNE(I)), curtal, DOLZAINA,HAUTBOIS D'ÉGLISE,HECKELPHONE,RACKET, SARRUSOPHONE,SORDUN, TARTÖLT, tenoroon andTRISTAN SCHALMEI. The *cleron pastoral*, cornamusa (*see* CORNAMUSA (I)),CRUMHORN,HAUTBOIS DE POITOU,SCHREYERPFEIFE,SCHRYARI and some types ofKORTHOLT andSHAWM are WIND-CAP INSTRUMENTS, oboes in which the reed is enclosed within a rigid wooden cap. Some bagpipes have double reeds; *see* BAGPIPE.

See also BŪQ;MIZMĀR; andPIFFARO.

For bibliography *see* individual entries.

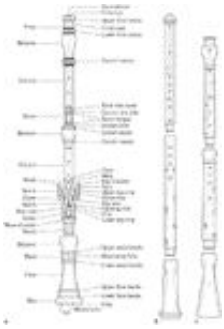
Janet K. Page

II. The European treble oboe

1. Introduction.

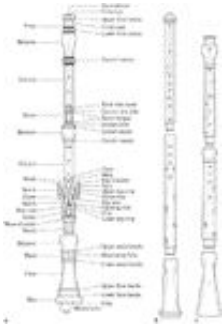
Diagrams comparing the bores and placement of holes on three…

The oboe family, as used in Western music, consists of a group of conical-bore double-reed woodwind instruments in a variety of sizes. The most common member of the family, and the one usually referred to as the oboe, is the treble instrument in C. The term 'hautboy', one of a number of spellings in use during the early history of the instrument and found occasionally into the early 20th century, has been revived to designate the two- or three-key oboe in use from the mid-17th century to the early 19th; it will be so used here. A terminology for identifying the parts of the oboe appears in fig.1.



Diagrams comparing the bores and placement of holes on three…

The oboe consists of a slender tube of wood some 60 cm long, in three sections united by tenon-and-socket joints. The modern oboe is made of grenadilla, occasionally of other woods, ebonite or plastic, and the hautboy usually of boxwood or fruitwood. The joints of the hautboy are generally decorated with turnery. The bore of the modern oboe, which is narrow and conoidal, expands fairly regularly for about five-sixths of its length and then opens out more rapidly to form a moderate bell (fig.1*b*). This expansion takes the shape of a smooth curve or a succession of cones, according to the formulae adopted by different makers and worked out experimentally by them. The effective length of the tube is made variable by means of 16 to 20 side holes, six of them directly under the player's fingers and the rest controlled by a mechanism of keys which is sometimes most ingenious and complicated. At least four systems of KEYWORK have been applied to the oboe. Since World War II the Conservatoire system, developed in France and adopted by the Paris Conservatoire in 1882, has become an international standard.



Diagrams comparing the bores and placement of holes on three…

The hautboy (fig.1*a*) has a contraction rim at the end of the bell, retained also in its descendant, the modern Viennese oboe (fig.1*c*). It has eight side holes, six under the control of the fingers, with holes three and four often split into two smaller twin holes, and keys for *c′* and E♭, the latter sometimes duplicated. Additional holes and keys for chromatic notes were added to this basic design during the 19th century.

Oboe reeds from the late 18th century to the 20th:…

Oboes are sounded by means of a reed formed of two hollowed-out blades of thin 'cane', actually the semi-tropical grass *Arundo donax* or *Arundo sativa* (fig.2). These are bound face to face with thread to a narrow tapered metal tube, slightly flattened at the tip, termed a 'staple'. Although the dimensions of the reed may not match the volume of the missing end of the instrument's conical bore, the reed nevertheless functions as an extension of the bore. At their free ends, the blades are scraped down to a feather edge. When placed between the lips and blown through, the blades of the reed vibrate together, alternately opening and closing the elliptical chink between them and thus transmitting bursts of energy to the air column in the body tube. The proper management of this very delicate apparatus is probably the most difficult part of oboe technique for the learner to acquire or for the teacher to impart.

On the hautboy, notes outside the basic scale are obtained by 'resistance fingerings' – cross- or forked fingerings and half-holed fingerings. The hautboy overblows an octave, giving a range of at least two octaves (*e′–d″*). The compass of the modern oboe extends from *b* to *a‴* – in all, 36 notes, of which the first 15 are fundamental notes. Acoustically, the remainder are harmonics of the first 15 and are produced by changes of 'lip' pressure on the reed, assisted by the use of

speaker or octave keys.

Intonation, tone-colour and dynamics are modified by the combined control of breath and embouchure pressure. Because the oboe requires very little air, the player is able to perform long phrases in one breath, but must learn to exhale stale air before inhaling. Articulation is achieved by stopping the vibrations of the reed with the tongue.

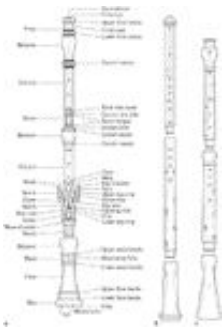
In addition to the treble or soprano oboe in C, the family includes a number of deeper-toned members. Lower oboes have appeared in a variety of forms, often with a bulb-shaped bell (see §III). The modern family includes the oboe d'amore in A, the english horn in F and the bass oboe in C. Smaller oboes were built for military use in the 19th century, and in the late 20th century a small oboe in F, the musette, was developed to complete the family.

Geoffrey Burgess

2. History to 1800.

The term 'hautboy' has been adopted here to refer to the form of oboe that gradually separated itself from the SHAWM in the first half of the 17th century and flourished until the first part of the 19th, when it was supplanted by the keyed oboe. Although the hautboy was revived in the 1960s for use in ensembles of historical instruments, only its past history will be considered here.

(i) Introduction.



Diagrams comparing the bores and placement of holes on three…

The normal size of hautboy was the treble, which gave a seven-fingered C. It was usually 58–9 cm in length and was made in three separate joints coupled by tenons and sockets, the top and centre being of about equal length and the bell somewhat shorter (see fig.1*a*). It had a conical bore with steps at the joints. The outer joints usually featured mouldings. There were six finger-holes, a key for E♭ (sometimes doubled), an open-standing and articulated key for *c′* (the lowest note), and two vent holes placed opposite each other on the bell. The larger tone holes were undercut (i.e. they expanded inwards). The bell normally had a thick contraction rim, called a 'lip', at the bottom.

Of an estimated 15,000 original treble hautboys, about 750, made between about 1680 and 1820, were known to survive at the end of the 20th century. The majority (about 85%) are made of boxwood, which also appears to be the wood of hautboys shown in paintings of the time. Other materials used include ebony, ivory and fruitwoods. Darker stain was sometimes used, and some early instruments imitate tortoiseshell. Close to half the surviving hautboys have ivory tips; others have ferrules of brass or silver or are tipped with horn or bone. The fourth hole was sometimes twinned (i.e. two small holes were drilled next to each other), as was the third.

The hautboy's outward form was based on concepts of architectural moulding. Physical features such as the shape of the keys, the type of wood, the presence of ornamental mounts or twin holes, the turning profile and turning details, and the shape of the bell, varied with time and from workshop to workshop.

Oboe reeds from the late 18th century to the 20th:…

No reeds made earlier than the late 18th century survive, and little written information on reeds and reed-making exists from before about 1780. It was not unusual for players (even some professionals) to purchase ready-made reeds from instrument makers. Pictures indicate that, dimensions apart, reeds were made much as they are for the key-system oboe (see fig.11 below). A staple, or metal tube, was used to connect the two blades of cane to the bore of the instrument; the reed could be separate or fixed permanently to the staple. The cane was shaped with parallel sides for at least half its length. Reeds must have varied considerably, as they do now (see fig.2), and no single way of making them can by itself be considered 'historical'. In general terms, reeds tended to become narrower and shorter during the course of the 18th century as the bore became correspondingly smaller and both tessitura and pitch moved upwards.

Throughout its history the hautboy shared with the other woodwind certain techniques that seem stylistically remote today. It used an elaborate system of paired tonguing patterns, the *flattement* or finger vibrato (not the modern breath vibrato), and the *messa di voce*. These techniques were used throughout Europe, and descriptions and demonstrations can be found in sources and handbooks to the end of the 18th century.

(ii) Before 1670.

In all European languages the hautboy's name was either taken over directly or transliterated from the French *hautbois* (pronounced 'oh-bway' in the 18th century). Later German and English sources described the hautboy as having originated in France. Lully probably began using an early form of hautboy in his ballet *L'amour malade* in 1657; such an instrument was introduced into the French military in 1663. The few surviving sources from this period indicate that the hautboy was a new conception, the result of a fundamental redesign. This change is difficult to date because in French both shawms and hautboys were called 'hautbois'. The shawms described by Michael Praetorius in 1619 were played with a pirouette and had a range of an octave and a 5th. Shawms had been played as an independent family, or consort; Lully's combining of wind with strings to form an 'orchestra' was thus a break with traditional practice. The reed instrument had to match the range and pitch of its new partner, the violin; it had to function well in more than a few tonalities, it needed a direct control of a wide range of dynamics, and it had to blend easily with the general sound. None of this had been required of the shawm.

The bore of the shawm was thus lengthened, and its tone holes were repositioned further down the instrument's length and drilled smaller. This had several effects. It increased the effectiveness of cross-fingering (also called 'forked fingering') and half-holing, which was how the accidentals were played. Examples are the notes *b*♭′ and *a*♭′: whereas *b*′, *a*′ and *g*′ were produced by closing respectively the top hole, the top two holes and the top three holes (or 1, 1 2, 1 2 3), *b*♭′ was played 1 3, and *a*♭′ used the half-hole fingering 1 2 3. These fingerings produced greater back-pressure and played less freely than the open-fingered notes. Not only did they feel different to play, their sound was covered or veiled, and they produced the characteristically uneven sound of Baroque woodwind scales, not unlike a singer using different vowels for each note.

To compensate for the greater built-in resistance caused by the hautboy's small tone holes and cross-fingerings, the reeds were wider and scraped thinner than those of the key-system oboe. The player thus used a lower pressure, which made it easier to perform the short intense musical gestures, quick and extreme changes of dynamics and tone, and frequent starts and stops demanded by the music written in the 18th century. The complex dynamic nuance of the Baroque period and the phrasing it implied was gradually abandoned in the 19th century in favour of the 'long line' phrase – an approach better served with the narrower, harder reeds of the key-system oboe and the greater, more constant pressure needed to play them.

These changes also caused the new treble instrument to sound a 4th lower than the treble shawm and a major 2nd above the alto. The lower pitch and covered fingerings darkened and decentralized the instrument's tone, helping it to blend.

This process has been attributed to woodwind players at the French court (members of the Hotteterre and Philidor families are mentioned). It evidently took place in stages. The shawms described by Mersenne in 1636 possessed a range of two octaves, and one of them appears to have had no pirouette. By the 1660s two new types of instrument that shared characteristics of both shawm and hautboy were shown on tapestries made by the royal Gobelins studios (figs.3 [not available online] and 4). These protomorphic hautboys retained the shawm's fontanelle to cover the key, but had twin 4th and 6th tone holes and, apparently, only a single pair of vent holes. The longer-belled instruments (which were also featured in another Gobelin of the same decade) resemble Mersenne's shawms, but they are about the same acoustic length as later treble hautboys at *A″* (392 Hz). The shorter-belled ones look very much like his *Haut-bois de Poitou* and, being considerably longer, were probably pitched a 5th lower.

After the production of *Les plaisirs de l'île enchantée* in May 1664, the hautboy seems to have vanished from Lully's next 14 large-scale ballets and *comédies-ballets*. It did not reappear until 1670, with *Le bourgeois gentilhomme*. It is thus possible that a new model, the definitive hautboy first shown in Blanchet's engraving of 1672 (see fig.24 below) was developed during this period.

(iii) 1670–1700.

The new instrument is also shown in a Gobelins tapestry made in 1684. The fingering used by the player is fictitious but is obviously inspired by a cross-fingering.

From the mid-17th to the late 18th century the French court employed 35 woodwind players in the *grande écurie*, most or all of them hautboists. No other European court used so many hautboists, many managing with two or three. The Opéra functioned separately from the court, and other musical activities took place in Paris that used hautboys.

Both Lully's monopoly of power and the revocation of the Edict of Nantes forced many musicians to leave France. Other countries were very receptive of French music, musical style, playing techniques and players, and the new hautboy was quickly adopted all over Europe. It was first heard in England in 1675 and was being used in English military circles by 1678. In 1677 the court at Turin was employing a military band of six hautboists, some of whom had French names. French hautboy players arrived in Madrid in 1679. A number of German courts hired French hautboists in the 1680s. The hautboy was being played in Vienna by 1697 at the latest, and it was admitted to the *cappella* of S Marco, Venice, in 1698, effectively replacing the cornett.

As the instrument took root abroad, local musicians were sent to France for instruction. And by the 1690s 'French' hautboys were being made in Germany, England and Holland. In some cases (like that of Christoph Denner and other Nuremberg makers) they were direct copies; in others, French makers (like Peter Bressan) emigrated to other countries. By the late 17th century Amsterdam was supporting a thriving woodwind-making industry.

Once the new hautboy had spread over Europe and had lost its primary French association, neither its playing style nor the way it was made had any particular national character. Players frequently circulated between countries, bringing with them techniques of playing and instruments of the latest design.

In its earliest decades, the hautboy was often heard in bands, continuing the consort tradition of the shawm. Repertory consisted of marches, dance suites and ceremonial music, much of which was played by heart and is now lost; surviving scores include the Philidor manuscript (***F-Pn*** Rés.F.671). The normal formation was 2 treble hautboys, 2 tenors and 2 bassoons, but, starting early in the 18th century, horns often replaced the tenor hautboys, making a band of 2 hautboys, 2 horns and 1 or 2 bassoons.

Hautboys also doubled strings in the orchestra and provided variety by playing short 'trios' by themselves. In Lully's works they inherited the symbolic attributes of shawms and appeared in direct connection with events occurring on stage; their presence was associated with certain dramatic situations, especially pastoral scenes.

The earliest chamber music that used the hautboy was usually conceived 'en symphonie', that is, it could be played on any treble instrument or combination of instruments. This music included the trios written in the 1690s by François Couperin, Marin Marais and Jean-Féry Rebel. In the

same decade Agostino Steffani, Johann Kusser and Reinhard Keiser began writing obbligatos in opera arias featuring the hautboy, many of them exceptionally beautiful; they represent the earliest solo use of the instrument.

(iv) 1700–30.

In Venice the hautboy had been used sporadically in operas during the last decade of the 17th century. Ignazio Rion, who played Handel's solos in Rome, had taught the hautboy at the Pietà orphanage in 1704–5. Other notable Venetian players included Onofrio Penati, Ludwig Erdmann and the girls at the Pietà, including Pellegrina ‘dall'Oboe’, for whom Vivaldi wrote some of his concertos and chamber music.

Among makers in France were Pierre Naust, the Hotteterres (nine individuals from three generations were at work during this period) and Jean Jacques Rippert. The elder Thomas Stanesby had worked in London since 1691, and his son also began making instruments about 1714. Building on an old craft tradition, Nuremberg was the first German centre for makers of the new French woodwind instruments; Christoph Denner and Johann Schell were making recorders and hautboys in the 1690s, and three hautboys survive by Benedikt Gahn, who died in 1711. Denner's eldest son Jacob opened his own workshop in 1707. The woodwind maker Joannes Maria Anciuti set up shop in Milan at this time.

In Amsterdam Richard Haka founded a school of makers that included Coenraad Rijkel, Jan Steenbergen and Abraham van Aardenberg, among at least ten others. The number of surviving Dutch hautboys from this period is remarkable. The only other region with as many is Germany. Considering the relatively small number of players who were active in the Dutch Republic, it must be assumed that some German, English and even French hautboists played Dutch hautboys.

The hautboy had one quality that made it unique among the instruments of the early 18th century: it was the sole instrument to be used in every imaginable kind of music. Philipp Eisel wrote in 1738, ‘It is used in the battlefield, in opera, in social gatherings, as well as in churches’.

The period 1700–30 contained the greatest quantity as well as some of the most profound and varied solo music of any period in the hautboy's history. It was rich in solo sonatas and suites with basso continuo, concertos, and obbligato solos for oboe with voice. Italian composers did not feature the obbligato hautboy in vocal scores as much as Handel or J.S. Bach, but they were probably responsible for starting the vogue for the solo hautboy concerto continued by, for example, Benedetto Marcello, Tomaso Albinoni and Vivaldi. France produced almost no concertos or vocal works with solo hautboy, but provided many solo and trio sonatas.

Tutors, written for amateurs, appeared from 1688 onwards. The information they offer is usually rudimentary; professional players probably received their training directly from masters rather than from books.

Fingering charts of the period generally give the range as *c′*–*d‴*. From early on there is mention of the possible use of *b* and of notes above *d‴*. Early solos exploit the entire range but usually stay within a compass of *d′* or *e′* to *b♭″*. Until the Classical period, fingering charts indicate that the high notes up to *b″* were fingered like their lower octaves, and *c‴* was played ‘all open’.

Choice of key was of prime importance. Each scale had a specific, individual sound, and different fingering combinations (including special fingerings for trills and other ornaments) determined its difficulty. Tonalities with too many cross-fingerings (i.e. those with more than four accidentals) were impractical and avoided. Any piece that used A or G frequently was awkward, as it involved the use of the half-hole on 3; the combination *e″* to *d♯″* set the technical limit of the hautboy because it involved moving the little finger between the two keys and was only imperfectly solved with alternative fingerings.

In relative volume, the hautboy was regularly equated with the violin, transverse flute and recorder in trio sonatas, and with the voice in arias. In the orchestra, the ratio of hautboys to violins varied greatly, from to 1:1 to 1:11. Hautboys were regularly muted by putting a piece of cloth, paper, damp sponge, cotton wool or wood in the bell.

Records of the *grande écurie* list the many hautboists who performed at the French court. Titles to those posts were sold or passed on to younger family members, and generations of Rousselets, Destouches, Hotteterres, Pièches, Philidors, Descoteaux and others filled them. Among the leading hautboists in Germany in this period were François La Riche, Michael Böhm, Peter Glösch, J.C. Richter, Jacob Denner, Jacques Loeillet and Alois Freymuth. It was primarily court musicians who were soloists, although Stadtpfeifer were responsible for church music; Caspar Gleditsch was Bach's soloist at Leipzig, and the solos Bach wrote for him in his sacred works are the greatest single monument to the talent of any hautboist in the history of the instrument. Bach must also have written chamber music with hautboy, but it is lost; the hautboy concertos (BWV1053, 1055, 1056, 1059 and 1060) survive only in arrangements for harpsichord. At the London opera, where Handel worked from 1711, hautboists (all foreigners) included B.J. Loeillet (i), J.C. Kytch, J.E. Galliard and Peter La Tour (the two last using hautboys made by Colin Hotteterre, principal at the Paris Opéra). In 1729 Giuseppe Sammartini, one of the foremost woodwind players of his day, settled in London.

Inventories of the Naust-Delerablée workshop (probably the most important French maker of the 1720s and 30s) list a number of prominent woodwind-playing clients. Some German players could well have been playing French or Dutch hautboys, but most probably obtained them from the Nuremberg makers, or from J.H. Eichentopf and J.C. Sattler in Leipzig. The principal source of hautboys from the Spanish Netherlands (now Belgium) was that of the Rottenburgh family, which produced many excellent instruments from about 1700. Hautboys continued to flow from the workshops of Amsterdam.

(v) 1730–70.

(a) An hautboist: portrait by an anonymous artist, ?c1750, with…

This period saw the fragmentation of the archetypal ‘French hautboy’ into several new models. By the 1730s the Italians had developed the straight-top and, somewhat later, the type associated with Palanca (see below). The straight-top became popular in England. The French, meanwhile, developed another type that looks as if it had been stretched lengthwise; these instruments are among the longest hautboys that survive, and the swellings at the balusters and bell flare are very gradual and ‘streamlined’ (fig.5). The music of this period was mostly played on these new models. As different as they were in outward turning style and pitch level, the hautboys of this period generally had one important feature in common: a distinctly narrower bore. While the earlier models had an average minimum bore of 5·95 mm or larger, the new ones scarcely averaged wider than 5 mm. The bores of hautboys in the period 1760–1820 were on average about 4·8 mm, and that of the modern key-system oboe is about 4·2.

Hautboy playing was dominated at this time by great Italian virtuosos: wherever one looks, Italians were playing solos in important musical centres. In Paris the appearance of the Besozzi brothers at the Concert Spirituel in 1735 changed the French hautboy world decisively. In Germany Italians like Giovanni Platti, Antonio and Carlo Besozzi, the Ferrandinis, Gioseffo Secchi and Vittorino Colombazzi transformed the hautboy's image. In England Sammartini left a lasting impression on players and audiences.

By mid-century, solo genres such as sonatas and obbligatos with voice were less frequently used. Concertos were the dominant solo medium, and it was at this time that the first hautboy quartets (hautboy and string trio without continuo) began to appear. The hautboy appeared regularly in the orchestra as a soloist, but over the course of the 18th century its relation to the violin changed. Originally it doubled the violin in tutti passages, but by mid-century orchestral composers were starting to give the wind a more harmonic function in the form of held chords against moving violin lines. As hautboy parts became simpler, the violins were gradually given more complex figuration, until by the Classical period the two instruments had taken on quite independent functions.

Foreigners, including the Catalan brothers Joan Baptista and Josep Pia, became popular in Paris. Virtuosos of international renown appeared in Italy: Alessandro Besozzi at Turin, Matteo Bissoli in Padua, and Gaetano Besozzi at Naples (the last went on to have a brilliant career in Paris). In England in the 1740s Sammartini and Thomas Vincent were frequent soloists in public

concert series. After Sammartini's death in 1750 Redmond Simpson emerged as London's pre-eminent hautboist.

In France the Naust-Delerablée workshop was continued from 1734 by Thomas Lot. He and Charles Bizey were the principal French woodwind makers of the period. Among the more interesting German makers were David Denner (who worked until mid-century, using his father Christoph's workshop stamp), the younger Wilhelm Oberlender and Thomas Gottlieb Crone. In London Thomas Stanesby (ii) worked until about 1754 and was succeeded by his assistant, Caleb Gedney. J.J. Schuchart, who may have worked for Bressan, established his shop shortly after the latter's death in 1731.

Alternative joints on hautboys (called 'Muttationen' in Austria) began to appear in the 1760s. Such joints, usually three in number, may have been used principally by travelling soloists; they allowed for small pitch changes (about a comma, or a ninth of a whole tone). In military bands starting in the 1750s the hautboy was gradually replaced by the clarinet as the principal instrument. In many cases the players were probably the same but had simply switched instruments.

(vi) 1770–1800.

By the 1770s the new 'Classical' hautboy was in vogue; it differed from its predecessors not only in outward form but also in its smaller bore, thinner walls and diminutive tone holes. The beginnings of such attributes can be seen in instruments made in Italy in the previous generation, especially those by Carlo Palanca of Turin. A year after Antonio Besozzi was appointed principal hautboy at Dresden in 1738, Augustin Grenser moved to Dresden, and Jakob Grundmann followed him in the early 1750s. These two makers developed a model that was the prototype almost everywhere for the rest of the century. The earliest surviving Grensers and Grundmanns closely resemble the instruments of Palanca and Giovanni Panormo.

The tone of the Classical hautboy was narrower and more focussed. It played more softly, especially in the upper register, and was extremely sensitive to corrections in intonation and to choice of fingering; it also played the high notes more easily. The hautboys of this period were built to be agile and mercurial rather than, as in earlier generations, rich and sensuous. Pitch was moving towards a relatively universal standard of *a′* = 440, which was in place by about 1770. It was probably no accident that *a′* = 440 had been traditional in Venice and northern Italy; its adoption all over Europe was no doubt the result of the important role of travelling Italian virtuosos in the preceding period. By 1770 the new 'long' high-note fingerings were in general use (see below).

As orchestral parts became increasingly simplified, the more enterprising players wrote concertos for themselves and began touring; hence the remarkable number of bravura pieces for hautboy and orchestra written in the second half of the 18th century. A number of travelling virtuosos left music for the instrument, including Joseph Fiala, Georg Druschetzky, Franz Joseph Czerwenka (recipient of Beethoven's variations on 'La ci darem la mano'), Ignaz Malzat (who probably wrote the 'Haydn' concerto), Carlo Besozzi (with J.C. Fischer, the best-known hautboist of his day), J.F. Braun, L.A. Lebrun, Fischer, and Friedrich Ramm (recipient of Mozart's Quartet). In the Habsburg lands prominent composers, including Mysliveček, the Wranitzky brothers and Vanhal, also wrote important works. Most of the solo and chamber genres that had previously provided showpieces had now fallen out of favour; the dominant genres were the hautboy quartet and quintet, which effectively replaced the solo sonata and the trio. Despite the popularity of these forms, the quantity of new compositions for solo hautboy was on a steady decline in the second half of the century.

By this period, the hautboy began to cede some of its former orchestral territory to the clarinet. The conscious use of instrumentation to create tone-colour meant that no specific wind instrument predominated in the orchestra, as the hautboy had formerly done. By 1802 François-Joseph Garnier wrote of the hautboy, 'The usage that most of the great masters made of it in their learned compositions attest sto its excellence and is a daily reproach to the present taste, which seems to neglect it'.

Starting about that time, solos began to show a preference for sharper tonalities, a higher tessitura and an extended upper range. Mozart's Quartet for oboe and strings K370/368*b*, for

instance, shows a mean range about a major 3rd higher than Bach's average for hautboy solos. Upward slurs of intervals larger than a 3rd (virtually unplayable on earlier hautboys) were required more frequently, explaining the general adoption of long high-note fingerings based on harmonics, and the eventual addition of a speaker key. The note *f″* appears first in a sonata by Bissoli written about 1750, but it was still exceptional when Mozart used it in his Quartet in 1781. L.J. Francoeur noted the use of *g‴* as early as 1772, but it did not appear in a fingering chart until 1792 (Wragg: see Haynes, 1978). Lebrun (who died in 1790) avoided *g‴* in one of his concertos. In 1802 Garnier discouraged the use of notes above*d‴* in his *Méthode* written for for the two-key hautboy.

In France the principal hautboists of this period were François Sallantin and Gaetano Besozzi. Sallantin was the first professor of oboe at the Paris Conservatoire (for which institution Garnier wrote his *Méthode*), and François Devienne's Sonatas opp.70 and 71 (1793) are dedicated to him; they are unusual in French music for being specifically for hautboy. In 1776, after a successful career in Munich, Secchi returned to Turin to replace the aging Alessandro Besozzi. Giuseppe Ferlendis was the principal hautboist at Salzburg (Mozart wrote the concerto for him there) and later played in Vienna and Venice. Sante Aguilar was active at Bologna, 1761–1808. Besides Fischer, leading players in London included John Parke and his brother W.T. Parke.

In the latter part of the 18th century, members of the Lot family, Prudent, and Christophe Delusse were the most celebrated makers in France. Andrea Fornari began making hautboys at Venice some time before 1791. Among several active makers in Germany, the Dresden makers Grundmann and his assistant Johann Friedrich Floth, together with Grenser and his nephew Heinrich, dominated the market in much of Europe during the last quarter of the 18th century (nearly a fifth of all the hautboys that now survive are by these makers). Numerous English hautboys from this period have also survived, made to meet the demands of a large amateur clientèle; William Milhouse had the best reputation. By this time instruments were also being made in Vienna and Prague by such makers as Friedrich and Martin Lempp and Jakob Baur. Haydn preferred the hautboys of the Viennese maker Rocko Baur.

From the 1780s additional keys began to appear on the hautboy. Keys had been used for centuries, usually to close holes beyond the reach of the fingers, but dedicated key systems did not find acceptance until the Industrial Revolution. The purpose of many of the new keys was to eliminate cross-fingerings by providing a separate tone hole, opened by its own key, for each semitone. This development affected fingering technique, but, more basically, it also altered the sound and character of the instrument: accidentals were clearer, so that the whole scale became brighter and more focussed. A few cross-fingerings remained (the forked *f′* is still used on the key-system oboe), but they came to be used as alternatives or for special effects. The advent of the key systems indicates a rejection of the basic characteristic of the hautboy and thus represented a turning-point in the history of the oboe.

Bruce Haynes

3. The 19th century.

During the 19th century the oboe changed more than in any other period. Most accounts have dwelt on the mechanism, with little consideration of other less obvious alterations and how they influenced the instrument's playing characteristics. Taken together, these changes not only allowed the hautboy to meet the technical demands of new musical aesthetics but also affected its pitch, timbre, carrying power, intonation, balance of registers and ultimately its character and function. In the 19th century the oboe remained a specialist's instrument. Because of the difficulties associated with reeds and the patience required to produce an acceptable tone quality, the oboe never became popular as an amateur instrument and was little used in domestic music-making. Oboe classes in conservatories across Europe were small, and the size of the market was responsible for consistently high production costs.

(i) Characteristics and repertory.

By the mid-19th century the oboe had lost the dynamic power of the hautboy, rendering it unsuited to military and ceremonial music, while in the orchestra it fought a losing battle against the increasing power of the brass and string sections. Players saw themselves as successors to the tradition established by the Besozzis, Lebrun and Fischer, all renowned for their virtuosity and sweet tone. The Romantic attitude to the oboe was summed up by Berlioz:

> "Candour, artless grace, soft joy, or the grief of a fragile being, suits the hautboy's accents; it expresses them admirably in its cantabile. A certain degree of agitation is also within its powers of expression; but care should be taken not to urge it into utterances of passion – the rash outburst of anger, threat or heroism; for then its small acid-sweet voice becomes ineffectual, & absolutely grotesque … The theme of a march, however manly, grand or noble, loses its manliness, its grandeur, and its nobility, if a hautbois deliver it."

Cantabile became the oboe's characteristic mode of expression: according to the French oboist Henri Brod, ‘great composers use the oboe soloistically only in melodic passages, and most often in slow tempos’ (1825–35, i, 1). Characteristic examples include the soaring line of Florestan's aria in *Fidelio* (Act 2 scene i), ‘Tristesse’ in Berlioz's *Roméo et Juliette*, the solo at the beginning of the slow movement of Brahms's Violin Concerto and many examples in Wagner's scores, such as the moment in Act 2 of *Tannhäuser* where, in the words of Richard Strauss, ‘no other instrument could reveal the sweet secret of love's innocence in such affecting tones’ (*Instrumentationslehre*, 1904).

Both lyricism and virtuosity had a place in the concerto and in chamber music. Oboe with string trio or quartet was a favourite combination in the early 19th century. A profusion of concertos, *pièces de salon* and operatic fantasies emanated from the Paris Conservatoire, many written by the professors for their own and their students' use. Few concertos were written outside France; those by Kalliwoda and Bellini were exceptions. Among the works for oboe and piano, the *Drei Romanzen* op.94 by Robert Schumann (1849, with clarinet and violin as alternatives) are the most important; these pieces are more lyrical than virtuoso. At the end of the century, music by the Italian oboe virtuoso Antonio Pasculli (1842–1924) introduced an unprecedented level of virtuosity (e.g. the *Fantasia sull'opera Poliuto di Donizetti* and the *Grand concerto sul I vespri siciliani di Verdi*). The oboe's pastoral associations were perpetuated in works such as Brod's *Sur le retour du petit Savoyard* for oboe and piano (*c*1835) and the *Notturno Alpenreigen und Rondoletto pastorale* by Rudolf Tillmetz as well as in the ‘Scène aux champs’ in Berlioz's *Symphonie fantastique*.

Most of this music was written by lesser-known composers or by oboists for their own use. Judging from quantity and the difficulty of the music, many oboists reached a high technical standard. That few prominent composers produced solo or chamber music for the instrument was perhaps due at least in part to the limited range and expressive capabilities of the oboe relative to other instruments: it was considered unequal on its own to the aspirations of Romantic expression.

The independent traditions of oboe making that arose in France and Germany came about to meet different musical demands. While the French oboe quickly lost the qualities associated with the hautboy, the construction of the German oboe encouraged a more robust tonal character. By 1840 most modern oboes of the two schools had almost identical keywork, but were distinguished by other features of construction. The German oboes had a slightly wider bore and the keys were supported on wooden mounts, which tended to damp resonance; and these characteristics, together with the use of relatively hard reeds, produced a dark sound. The profile of the French oboe was more streamlined and it was played with lighter, narrower reeds. The sweet, bright tone of the French oboe added brilliance in the orchestra, while the heavy, dark tone preferred in the German lands was better able to blend with other instruments. Other European countries gravitated towards one or other of the two schools: Italy towards the German school and England likewise, until French influence began to predominate around the middle of the century. Oboe methods of the 19th century dwell on technical rather than musical aspects and contain much information relevant to the chronological development of the instrument.

(ii) Additional keys, 1800–40.

For over a century two keys had served the oboist's needs, and although the technology for adding keywork was available, it was rarely applied. The development of keywork was stimulated by the challenge of adapting to the new musical style together with the economic viability provided by the Industrial Revolution. The oboe was the last wind instrument to be equipped with additional keywork, but this does not mean that it was disadvantaged: the double reed provided it with the flexibility to overcome the limitations of minimal keywork. Some oboists thought that too many keys could damage tone quality – Gustave Vogt (1781–1870) was one of the most outspoken on this issue. By the mid-1820s the evenness of tone provided by keyed fingerings was widely accepted, but cross-fingerings continued to be used for much of the century. Not all oboists stayed abreast of the latest developments, and orchestration manuals cautioned composers against demanding techniques available only on the most mechanically advanced instruments.

The exact circumstances and order in which keys were added to the oboe are difficult to track: priorities varied according to local preference. The first keys were added by German makers. A small percentage of the oboes made in Dresden by Heinrich Grenser (1764–1813), J.F. Grundmann (1727–1800), J.F. Floth (1760/61–1807) and his apprentice C.G. Bormann (1770/71–1839) have up to ten keys. In 1823 the oboist Wilhelm Braun considered four keys essential (C, C ♯, E♭ and the speaker key), and a further four advisable. Two years later Josef Sellner (1787–1843), professor of the oboe at the Vienna Conservatory, published his *Theoretisch-praktische Oboeschule*, which promoted the 13-key oboe he had developed in collaboration with the maker Stephan Koch. This model did not force other oboes into immediate extinction but was to remain the most advanced Austrian/German oboe for the next several decades.

Delusse oboe from F.-J. Garnier's 'Méthode raisonnée pour le haut-bois'…

French oboists were more cautious about adding keys; developments in the first two decades of the century concentrated on improving the much-admired oboes of Christophe Delusse (*fl* 1781–9; fig.6). François Sallantin (1775–1861), first oboe at the Opéra to 1812 and professor at the Conservatoire to 1816, added two keys, which Gustave Vogt, his pupil and successor, described in his *Méthode* (*c*1816–25) as essential for correct intonation, although he rejected the addition of further keys. However, by 1825 Vogt, then the pre-eminent player in France, had adopted a seven-key instrument (Musée de la Musique, Paris, 481/E263) similiar to the oboes described in methods by his pupils Brod (1825–35) and Auguste Vény (1828). French builders of the period such as Guillaume Triébert, Brod and F.G. Adler (*d* 1854) also respected the Delusse tradition.

Two-key oboes remained in use in Italy perhaps longer than in other countries; Andrea Fornari continued to make such instruments until 1832. The virtuoso solos in Rossini's operas – notably *La scala di seta*(1812) and *La gazza ladra* (1817) – were written for Baldassare Centroni (1784–1860), who for most of his career played a two-key oboe.

The keys added in this first phase served six main functions: to extend the range; to modify the tuning of certain notes; to provide alternatives to cross-fingerings; to improve the high notes; to improve trills; and to expand the range of tonalities in which the instrument was technically fluent and tonally effective.

The range of the hautboy in late 18th-century instructions is *c′* to *f‴*, fully chromatic except for *c*♯′. A *c* ′ key was an early addition on German oboes, but the note continued to be unavailable in France until about 1825. A key to close the vent holes on the bell to produce *b* was added to some German oboes in the first decade of the 19th century, but it did not appear on French oboes until Brod's model of 1835. Brod is also known to have made oboes descending to *a*, by which he intended to improve the overall tone of the instrument as much as to increase its range. The most widely accepted upper limit of the oboe's range in the 19th century was *g‴*. Sellner extended it to *a‴*, but this note was never called for in the music of the time.

The tuning compromises inherent to the hautboy were not always compatible with 19th-century intonation and could be eliminated with keys. The practice of distinguishing enharmonic equivalents with different fingerings was retained in France by contrasting cross- and keyed fingerings, with the higher of two fingerings for a particular pitch assigned to the sharpened note.

Evenness of tone became an important component of Romantic musical aesthetic. Keys could be used to reduce the variation in the tone of different notes, to correct intonation without requiring adjustments to embouchure or breath pressure, and to simplify certain passage-work.

It was discovered about 1800 that opening a small hole near the top of the bore as a high note was attacked improved the note's response. In Germany the key that covered this hole had two names: *Schleifklappe* ('slur key') referred to its use as an aid in playing upward slurs and *hohe F-Klappe* to its use in producing high notes, particularly *f‴*. The first French instruments with such a speaker key (*clef d'octavier*) were made by Brod in the late 1830s. Brod also devised a pierced plate to provide the correct venting, to overblow *d″* and *e♭″*.

On the hautboy, many trills require one of the pitches to be 'bent' in tune by the player. Trill keys such as the *c′* key on the Sellner oboe provided more acceptable intonation.

The duplicate E♭ and F keys on the Sellner oboe greatly facilitated playing in tonalities with more than three sharps or flats, such as the D♭ major cantabile theme in the second movement of Schubert's 'Unfinished' Symphony (1822). Austrian and German compositions for solo oboe, written for such instruments, tend to be in tonalities further removed from C major than works by French composers. Although keys helped to produce a more even tone, they had little effect on the overall volume of the instrument. In addition, in this phase of the oboe's development the keys were not always ideally placed for rapid execution.

(iii) Interactive mechanisms, 1840–60.

The second phase of the oboe's development was centred on France, stimulated by the flourishing school of virtuosity at the Paris Conservatoire during the tenure of the distinguished professors Vogt (tenure 1816–53), S.-X. Verroust (1853–63), C.-L. Triébert (1863–7), F.-C. Berthélemy (1867–8), Charles Colin (1868–81) and Georges Gillet (1881–1919). Makers aimed to improve the facility of execution by simplifying fingerings and to make the tone even more uniform over the compass of the instrument. Frédéric Triébert (1813–78) was responsible for a series of innovative designs, in which he addressed these problems by revising the layout of the keys and adopting interdependent mechanisms (*see* KEYWORK). The Triébert catalogue of 1862 advertised all *systèmes* created over the preceding 20-year period. The profile of the more modern oboes was streamlined to accommodate the increasingly complex system of keys. By 1840 axles and posts had supplanted metal saddle key supports, and rings (*brilles*) had been added to facilitate *f♯′*,*b♭′* and *c″*.

No national schools of playing developed outside France, and, apart from a few virtuosos such as Philipp Barth, Sellner and F.E. Thurner (1785–1827), the market for oboes in Germany and Austria was made up predominantly of orchestral musicians, for whom 10- to 13-key oboes were sufficient. Most mechanical developments introduced in France in the 1840s were not adopted in Germany until after the middle of the century. C.T. Golde of Dresden (1803–73) made impeccably tuned oboes which, typically for German oboes of his time, had independent key mechanisms supported by wooden blocks, and simple levers rather than the rods found on French oboes.

(iv) The Conservatoire-system oboe.

The central figures in the final stage of the development of the modern French oboe were Frédéric Triébert and A.-M.-R. Barret (*c*1803–79, from 1829 first oboe at Covent Garden). In the second edition of his *Complete Method for the Oboe* (1862) Barret announced a new design created in collaboration with Triébert. On the new instrument the range was extended downwards to *b ′*; like Brod, Barret argued that lengthening the bell improved the tone of the instrument. The fingerings of the first octave were now used for the second octave, with the addition of an octave key for *a″* to *c″*; this simplified the fingering for *b ″*, *b″* and *c‴*, notes formerly produced as modified 3rd harmonics of *e ′*,*e′* and *f′* respectively. The facility gained by the simplified fingerings was, however, achieved at the expense of stability of pitch, tone quality and projection. The addition of new keys and new links between keys made trills available on all pitches throughout the

compass of the instrument. Barret also devised a thumb-plate to activate the *b♭′* and *c″* keys. Many features of Barret's design were incorporated into Triébert's 'système 6' (1872); French players, however, preferred to maintain the freedom of the thumb, so the *b♭′* and *c″* keys were operated by the index finger of the right hand.

After the death of Frédéric in 1867, the firm of Triébert changed hands several times. It was declared bankrupt in 1881, at which time the foreman, François Lorée (1835–1902), established his own workshop to continue the Triébert tradition. In the same year Georges Gillet adopted Triébert's 'système 6' as the official instrument of the Paris Conservatoire. It was, however, some time before this 'Conservatoire system' oboe became established as an international standard. In Belgium it was not until the last decade of the century that it superseded previous models. In England Alfred Morton (1827–98) made hybrid oboes with the wider bores of German oboes and French keywork. By 1860 Central European makers had added rings on holes 5 and 6; few further changes are noticeable in German oboe designs until the end of the century. The Austrian oboe was the least affected by French developments and retained most features of the Sellner-Golde tradition, with modifications by Josef Hajek (1849–1926), whose instruments were championed by the Viennese oboist Richard Baumgärtel (1854–1941). Pasculli was one of the first Italian oboists to use a French oboe. He played a Triébert 'système 3' to the end of his career in 1884, 45 years after the model was created.

Concurrently with the development of the Conservatoire-system oboe, some makers developed a radically new oboe based on the theories of Theobald Boehm. Initially there was much optimism about the new design – it would improve the oboe's faulty tuning by doing away with the 'acoustic monstrosities of forked fingerings and half-holings' (Fétis, *Rapports du Jury international, Exposition universelle, 1868*) – but the success of these instruments was short-lived. In the 1840s and 50s the oboist A.J. Lavigne (1816–86), an ardent supporter of Boehm's principles, participated in the three projects to realize a Boehm oboe (seefig.7 [not available online]). The tonal results were incompatible with the oboe's established character, and each attempt only exacerbated the oboe's reedy tone. The Boehm-system oboe continued to be used only in military music, where its simplified fingering, increased power and improved intonation were appreciated. Although it failed to supplant traditional designs, the Boehm experiment served to affirm the desired characteristics of the French oboe.

Like their 18th-century predecessors, early 19th-century makers favoured the superior acoustic properties of boxwood, which was, however, a soft wood with a tendency to warp. By the 1840s makers were experimenting with other woods in an attempt to find a more stable support for the delicate interactive key systems. The Triébert catalogue of 1862 recommended boxwood only for oboes with minimal keywork, preferring rosewood, grenadilla and ebony for all other models. In 1890 Gillet's revision of Brod's tutor suppressed all reference to boxwood, naming in its place pallisander, grenadilla and ebony. Of these, grenadilla has proved the most serviceable.

Oboe reeds from the late 18th century to the 20th:...

As much as the instrument itself, oboe reeds changed decisively over the course of the 19th century. The earliest detailed reed-making instructions are found in F.-J. Garnier's *Méthode* of 1802. Other early instructions appear in the method books of Sellner (1825), Brod (1825–35) Clemente Salviani (*Metodo completo per oboe*, Milan, 1848) and Giuseppe Cappelli (*Metodo teoretico-pratico*, Milan, 1853). During the 19th century reeds became narrower, made from cane of smaller-diameter tubes, gouged increasingly thinner (see **fig.2 above**). Like the instruments, reeds did not follow a simple chronological evolution but varied according to national preference, the French reeds being the smallest and lightest. A gouging machine invented by Brod revolutionized reed making by providing more uniform results than had been possible by scraping the interior of the cane by hand, and resulted in the abandonment of the tapered gouges seen in some hautboy reeds. Changes to the instrument also influenced reed design. With the addition of the speaker key, reeds no longer needed to respond to the changes of air pressure to overblow the high notes, and the dimensions of the staple were less critical because intonation in the upper octave could be adjusted with less risk of the notes dropping to the lower octave. As cross-fingerings require light and flexible reeds, only when these fingerings became virtually obsolete did harder reeds come into use.

As at the end of the 18th century, most orchestras in the 19th century had two oboes. The english horn was usually played by one of the oboists, more rarely by an additional player. This configuration was expanded to three oboes and english horn in some of Wagner's late works (e.g. *Parsifal*). The tradition of tuning to the oboe is documented from the beginning of the 19th century. According to Vogt and Fétis (*Manuel des compositeurs*, Paris, 1837, p.117), the narrow bore of the oboe made it less susceptible than other wind instruments to pitch variation caused by temperature fluctuations.

Geoffrey Burgess

4. The 20th century.

(i) Instruments and playing styles.

(a) Modern Viennese oboe by Hermann Zuleger (Bate Collection, Faculty...

At the end of the 20th century the Conservatoire-system oboe was used by soloists and orchestral musicians throughout the world. For over 120 years since its invention in 1872 this design has been forced (with only minor modifications) to adapt to performing music from the 17th century to the present day. Richard Strauss's enthusiasm for the French oboe's superior mechanism, evenness of tone, facility in extreme ranges and ability to blend with other instruments (1904, p.164) was probably responsible for its adoption in Germany. The first oboist to promote the use of the French instruments there was Fritz Flemming (1872–1947), professor at the Berlin Hochschule für Musik from 1907. By 1920 most German oboists had followed his example. His influence is evident in the playing of Karl Steins (*b* 1919) and Lothar Koch (*b* 1935), whose dark, voluminous sound, produced by playing a French oboe with German reeds, was an unmistakable part of the sound of the Berlin PO during the tenure of Herbert von Karajan. Vienna has remained the only place to resist French influence. The modern Viennese oboe, descended from the instruments of Sellner and Golde, was made in the 20th century by Hermann Zuleger and Yamaha (fig.8*a*). It is characterized by a wide, non-continuous bore, thick walls, a fingering system that incorporates cross- and harmonic fingerings, and short, wide reeds inserted into a tapered reed well. Shorter than the French oboe, the Viennese oboe does not usually have a key for *b*♭; Mahler's scores provide alternative versions for French and Viennese oboes. At the end of the 20th century some Viennese oboes were being made with Conservatoire-system keywork.

(a) Modern Viennese oboe by Hermann Zuleger (Bate Collection, Faculty...

Attitudes towards modifying the Conservatoire-system oboe have remained exceptionally conservative, with the result that defects in the French design have remained unsolved on the modern instrument. The intonation of the upper octave and the lowest notes is still problematic, and the tone of *b*♭″ to *c*‴ remains poor. A few small modifications have been made. Early in the century *plateaux*, or pierced keys, were installed above the six finger-holes. This innovation, called the 'Gillet' system after Georges Gillet, who proposed it to Lorée, assists the execution of certain trills and encourages a dark tone-colour. A third octave key, for playing in the extreme high register (*e*‴ and above), has been added to some oboes. Extra tuning vents have been added to correct the pitch of notes affected by the lengthening of the bell to accommodate *b* . In the late 1980s and early 90s the walls of the top joint were thickened, increasing sonority and projection. The only resistance fingering used on the modern oboe is the forked F, which is still required for certain successions of notes. With the exception of rare examples in rosewood, 20th-century oboes are made of grenadilla. There have been sporadic experiments with synthetic substances, but these have not been widely used outside the production of student models. Isolated attempts to redesign the oboe have included an oboe made about 1930, signed 'Prof Romeo Orsi Milano', with added

tuning holes, a network of automated octave keys and duplicate key systems for the low notes (**fig.8*b***). The extra weight of the encrustation of keywork alone limited the practicality of this design. In the 1920s and 30s attempts were made to make the oboe more accessible to doublers in dance bands. The English firms Louis (established 1923) and Boosey & Hawkes (established 1930) created oboes with saxophone fingerings, and the Berninger-Adler oboe (1928) employed a single-reed mouthpiece. Neither enjoyed more than limited success. Likewise a system devised by the English oboist Arthur Forman to improve intonation of E and F by repositioning holes 5 and 6 has not been pursued. Persistent attempts to find an adequate synthetic substitute for reed cane have failed. Many oboists use commercially gouged and shaped cane, which they tie and scrape themselves; others personalize the process from an earlier stage, shaping, or gouging and shaping, the cane to their own specifications. There are many descriptions of the process (see Bourns, 1998). Reed-scraping machines have further mechanized reed making.

At the end of the 20th century the market was dominated by three French manufacturers: Lorée, Marigaux (established 1934) and Rigoutat (established 1922). The monopoly of French makers did not result in the total suppression of national styles. Although virtually identical mechanically, each company's instruments possessed unique tonal qualities adapted to specific schools: Lorée oboes were being used in North America to the almost total exclusion of other makes; Marigaux was supplying the German market with oboes of darker tone; and Rigoutat was making instruments with the more delicate tone preferred in France. National differences also existed in technique and reeds, although during the 1990s even these were becoming less apparent. Slight variations in key mechanisms existed in some traditions. Of these, the most important is the thumb-plate open-hole system used extensively in Britain. Although directly affecting only *b*♭′ and *c*″, this system influences the tonal balance of the whole instrument. However, the Conservatoire-system oboe has always had a number of English adherents, Terence McDonagh (1908–86) being one of the most renowned. In the Netherlands the Stotijn system (named after a famous Dutch family of oboists) was developed; it has a special automatic octave-key mechanism. The Prestini system, developed by the Italian firm of the same name, assigned the keys for *b* and *b*♭ to the left thumb.

Vibrato, which began to be used in France in the last decade of the 19th century, may have been introduced partly to compensate for the loss of resonance resulting from the narrow bore of the Conservatoire-system oboe. Strauss (*Instrumentationslehre von Hector Berlioz*, 183) may have been referring to vibrato when he observed: ‘The French tone, though thinner and frequently tremulant [*oft vibrierend*], is much more flexible and adaptable’. Fernand Gillet (1882–1980), following the example of his uncle Georges, used throat vibrato discreetly in his *premier prix* examination in 1897 (Post, 1982, p.36). Leon Goossens (1897–1988), inspired by the violinist Fritz Kreisler, is considered the first oboist to have used diaphragm vibrato as a regular adjunct to tone production. It was well into the 20th century before vibrato was accepted by all schools; by the end of the century constant vibrato had transformed the tonal character of the oboe.

(ii) Repertory and performers.

In the 20th century the oboe re-emerged as a solo instrument, stimulating composers to write concertos, solos and ensemble chamber music for it. This development was largely inspired by the playing of a number of fine oboists. French composers continued to write for the professors of the Conservatoire and their pupils; Saint-Saëns's Oboe Sonata (1921), written for Louis Bas (1863–1944), is an important work from the early 20th century. Goossens, who studied with Charles Reynolds (1843–1916) and the Belgian Henri de Busscher (1880–1975), forged a model career as orchestral musician, soloist and teacher. Known for the silken tone of his playing, his supple phrasing and control of vibrato, Goossens inspired more works than any other oboist of the 20th century. Arnold Bax's Quintet for oboe and strings (1922) was the first of the works dedicated to him; later came an incomplete suite by Elgar and concertos by Leon's brother Eugène (1927), Gordon Jacob (1933) and Vaughan Williams (1944).

The most important compositions of the middle of the century include concertos by Strauss (1945), Martinů (1955) and Zimmermann (1952), and sonatas by Wolpe (1932), Hindemith (1938), Dutilleux (1947), Schuller (1951) and Poulenc (1962). Britten's *Six Metamorphoses after Ovid* op.49 for solo oboe was written in 1951 for Goossens's pupil Joy Boughton (1913–63). This work, in particular the two-part writing exploiting the oboe's different registral and dynamic

capabilities in no.5, 'Narcissus', influenced many later compositions for solo oboe: Krenek's *Sonatine*(1956), John Exton's *Three Pieces* (1972), Stoker's *Three Pieces* (1973) and Dorati's 'Fugue à 3 voix' from *Cinq pièces* for solo oboe (1981).

From 1960 the enormous versatility and phenomenal technique of the Swiss virtuoso Heinz Holliger (*b* 1939) brought prominence to the oboe in a wide range of musical styles. Without ignoring the Baroque and Classical repertory, Holliger has revived unknown works of the 19th century and maintained an important position in contemporary music as both a performer and a composer for his instrument. Works written for him include Jürg Wyttenbach's Sonata (1961), Castiglione's *Alef* (1965), Penderecki's Capriccio for oboe and strings (1965), Berio's *Chemins IV* (1975, based on *Sequenza VII*) and Carter's Quintet for piano and wind (1992). Works for oboe and harp for performance with his wife Ursula include Carter's *Trilogy*(1944) and double concertos by Henze (1966) and Lutosławski (1990). Of his own oboe compositions, *Mobile* (1962) and *Siebengesang* (1967) are important.

Other noteworthy European oboists of the 20th century are Pierre Pierlot (*b* 1921), Maurice Bourgue, appointed professor at the Paris Conservatoire in 1979, and the Swiss-born Thomas Indemühle (*b* 1951), who earned a reputation as a teacher in the Netherlands and Germany. A number of women became prominent players: in England, Janet Craxton (1929–81) and Evelyn Rothwell (*b* 1911), and in the USA, Lois Wann and Nora Post, the latter noted as a performer of contemporary music.

The Frenchman Marcel Tabuteau (1887–1966), principal oboist of the Philadelphia Orchestra under Stokowski and Ormandy, exerted immense influence, establishing an 'American' style of oboe playing which has developed apart from European influence. The characteristic tone of the American school is generated by reeds with more bark scraped from the cane and a posture with the oboe held closer to the body than in other traditions. Tabuteau's many distinguished pupils have held principal chairs in orchestras across the USA, notably John Mack in the Cleveland Orchestra, Harold Gomberg (1916–85) in the New York PO, Robert Bloom (1908–84) in the NBC SO and, from 1934, the Bach Aria Group, and John de Lancie (*b* 1921) in Philadelphia. Other well-known American oboists include Joseph Marx (1913–78), Ray Still (*b* 1920), principal in the Chicago SO 1954–96, Robert Sprenkle and Humbert Lucarelli. At the end of the century prominent players included Richard Woodhams of the Philadelphia Orchestra, Joseph Robinson of the New York PO and Alex Klein of the Chicago SO.

(iii) Technique.

19th-century études – divorced from their obsolete accompanying technical remarks – remained the mainstay of the oboist's practice routine, supplemented by études of ever-increasing technical difficulty by such French oboist-composers as Louis Bleuzet (1874–?1940), Albert Debondue (1895–1984) and Roland Lamorlette (1894–1960). Lawrence Singer's *Metodo* and Holliger's *Pro musica nova: Studien zur neuen Musik* equipped the oboist with avant-garde techniques. From the 1960s the exploration of non-conventional sounds expanded the technical requirements of the oboist. Many of these new techniques are described in Holliger's performance notes printed with the score of Berio's *Sequenza VII* (1969).

The range of the oboe has been extended to *a‴* and beyond. Extremely high notes, devoid of the oboe's reedy sound, can be produced by placing the teeth on the reed. Although Sellner provided a fingering for *a‴* in 1825, it was over a century before the pitch became usable; the presence of this note caused the first performance of Wolpe's *Suite im Hexachord*(1936) to be delayed until the 1950s. Notes below *b* have been demanded occasionally, for example in Wilfred Josephs's *Solo Oboe Piece*(1974).

In the 20th century alternative fingerings were used for their colouristic possibilities. Harmonics have been in use since at least 1909, when Georges Gillet provided fingerings in *L'enseignement supérieur du hautbois*. A *bisbigliando*, or timbral trill, can be achieved on the oboe by oscillating between alternative fingerings producing the same pitch. Alternative fingerings are used to create a *Klangfarbenmelodie* at the beginning of Berio's *Sequenza VII*, where the oboist colours an electronically generated pedal with six different fingerings of *b'*. Glissandos, quarter-tones and other microtonal effects can be produced by partly closing the tone holes; because this technique is hampered by the *plateaux*system, some contemporary music specialists have preferred oboes

with open holes. Double trills exploit duplicate keys.

Other new playing techniques have also been developed. The protrusion of the reed in the player's mouth makes double-, triple- and flutter-tonguing more difficult on the oboe than on other wind instruments; consequently these became an essential part of the oboist's technique only late in the century. Flutter-tonguing can be produced either with the tongue or in the throat. Stravinsky's marking 'Flatterzunge' in *The Rite of Spring*was probably envisaged as a means for the oboist to articulate rapid scales rather than as the timbral effect intended by later composers. Vibrato is sometimes specified at different speeds. Breath noises, key clicks and other percussive effects are featured in Holliger's *Cardiophonie* (1971), and other composers have called for the reed or instrument to be played on its own. Takemitsu's *Distance* for oboe and *shō* (1972) develops a polyphonic interplay between the performer's singing and playing.

Circular breathing became a regular part of the oboist's technique in the 1970s. The oboe reed provides the necessary resistance to allow the player to inhale while playing, the cheeks acting as a reservoir. Uninterrupted passage-work such as in Pasculli's *Le api*, for example, suggests that the technique had been developed much earlier by isolated players, but since the appearance of works like Globokar's *Atemstudie* (1972) circular breathing has become essential.

MULTIPHONICS have been used in many compositions. Bruno Bartolozzi's *New Sounds for Woodwinds* (1967) has been a seminal source-book. In collaboration with the oboist Lawrence Singer, Bartolozzi determined the audible pitches in each multiphonic and developed a number notation for the fingerings. Other forms of notation have included a simplified version of Bartolozzi's system (see Post, 1982) and a tablature specifying fingerings, and breath and lip pressure (Holliger, *Studie über Mehrklänge*, 1971). Double harmonics, the most consonant of multiphonic possibilities, are produced by isolating two partials generated from a single fundamental. 'Rolling tones' (*rollender Töne*), introduced in Klaus Huber's*Noctes intelligibilis lucis* (1961), are produced by the disruption pattern between slightly out-of-tune harmonics.

A variety of electronic devices and techniques have been applied to the oboe, manipulating its sound by amplification, artificial reverberation, tape delay and ring modulation. All of these techniques are required in Włodzimierz Kontonski's Concerto for oboe and orchestra (1972).

With the rise of the english horn as a permanent member of the orchestra, a third oboist has become essential in the 20th-century orchestra. However, it is common for 20th-century scores to call for a larger oboe section. Both Schoenberg's*Gurrelieder* (1901) and Stravinsky's *Symphony of Psalms*(1930) require four oboes and one english horn.

(iv) Alternative playing styles.

The last 30 years of the 20th century saw the revival of performance on historical oboes – primarily the hautboy, but also 19th-century models. Pioneers were Michel Piguet (*b* 1948), Bruce Haynes (*b* 1942), Paul Goodwin and Han de Vries (*b* 1941). As these players were trained in a variety of schools, a number of different reconceptualizations of the oboe in the 18th and 19th centuries have emerged. Some players, such as de Vries, have also had important careers as modern oboists, but many have restricted their interests to pre-20th-century oboes and music. Among makers of hautboys are Paul Hailperin (Germany), Toshi Hasegawa (Netherlands), Olivier Cottet (France) and Sand Dalton (USA).

The oboe has not been absent from jazz or popular music: the best-known representatives have been Bob Cooper (*b* 1925) in jazz and Paul McCandless of the New Age group Oregon. At the end of the 20th century Rigoutat was developing a new system of amplification for the oboe, hoping to encourage its use in popular music.

Geoffrey Burgess

III. Larger and smaller European oboes

1. Introduction.

Lower oboes began to appear at the court of Louis XIV in the mid-17th century, at the same time as the treble instrument. They were needed to play the middle parts between treble oboe and bassoon in the five-part, later four-part, double-reed consort. But while the treble oboe spread rapidly throughout Europe and soon developed into a solo instrument and an integral member of the orchestra, the lower oboes followed a more erratic course, in some places disappearing completely for a time from the musical scene. The mezzo-soprano oboes were favoured during the late 17th and early 18th centuries but then faded from view, not to re-emerge until the 20th century. The tenor oboe, which had more variants than the other sizes, was continuously in use from the 17th century. Bass oboes, always less widespread than the others, have appeared occasionally as ensemble instruments. By the late 20th century each member of the family had become a soloist in its own right.

One feature common to all modern lower oboes is the bulb-shaped bell (Fr.*pavillon d'amour*; Ger. *Liebesfuss*). It was first applied to the tenor instrument about 1700 and to the mezzo-soprano about 1720. Such bells were used on shawms and bagpipes from the Middle Ages onwards; small bulb-belled shawms are depicted in the *Cantigas de Santa María*, from the court of Alfonso X of Spain (late 13th century), and bulb bells appear on both the drones and chanters of bagpipes from Iberia to eastern Europe. The bulb bell has long been considered the source of the distinctive tone of the modern english horn and other lower oboes. While this is still open to debate, it is clear that the voicing of the bell affects the tonal quality and response of the instrument as a whole.

Michael Finkelman

2. Early lower oboes.

(i) Haute-contre de hautbois.

A mezzo-soprano oboe in A. It was used to play the second line (which sometimes descended to *a*, too low for the treble instrument) in the five-part ensemble music of the Lullian era. There are no extant examples. Personnel lists for Louis XIV's Douze Grands Hautbois reveal that there were usually two players of the haute-contre in the ensemble (*see* PARIS, §V, 1(B)), and Sébastien de Brossard (*Dictionaire de musique*, 1703) mentioned the instrument, although he did not provide a separate entry for it. Lully used the haute-contre de hautbois in stage works, including *Les plaisirs de l'île enchantée* (1664), *Atys* (1676) and *Persée*(1682), and in instrumental music (*Airs de Carrousel*, 1686). It fell out of use in the late 17th century as interest shifted to the four-part ensemble of two oboes, tenor oboe (taille de hautbois) and bassoon and the trio of two oboes and bassoon. Although the second line in these ensembles was usually taken by a treble oboe, the part itself continued to be referred to as ‘haute-contre’, a practice that has led to doubt about the existence of the haute-contre de hautbois. However, by the late 17th century the instrument had been carried to other parts of Europe, where it would take on new forms during the early 18th century.

(ii) Taille de hautbois.

A tenor oboe in F, a 5th below the treble, employed to play the third line in the wind ensembles and orchestras of Lully's time and later. Like the haute-contre, the taille de hautbois had a straight body with two keys and an open bell. It may have made its first appearance in Lully's *Alcidiane*(1658); he also used it in *L'impatience* (1661), *Les noces de village* (1663) and *La princesse d'Elide* (1664). A true solo part appears in Pascal Collasse's *Enée et Lavinie* (1690). Along with other members of the oboe family, the taille de hautbois was carried to England, Germany and the Netherlands, where it was employed in orchestras and wind ensembles. The term TAILLE survived into the 18th century as a designation for a middle part in an ensemble work or for an instrument that played such a part.

(iii) Quinte de hautbois.


Frontispiece from Pierre Borjon de Scellery's 'Traité de la musette'…

A basset oboe in D, a 3rd below the taille de hautbois and a 5th below the haute-contre, apparently the fourth voice in the five-part double-reed ensemble during the early experimental years of the Lullian era. No examples are extant. Its existence is inferred by analogy with the recorder family of the time, which included haute-contres, tailles and quintes, and on a single piece of iconographical evidence: the frontispiece of Pierre Borjon de Scellery's *Traité de la musette* (1672), which depicts an *hautboïste* of the period with his 'full kit', including what might be a quinte de hautbois (fig.9). This instrument is equipped with keys, probably modelled on those of the musette and designed to assure reasonable intonation. The instrument did not survive the experimental years.

Michael Finkelman

3. Mezzo-soprano oboes.

(i) Oboe grande

(It., also *oboe luongo*, *oboe basso*; Fr. *grand hautbois*; Ger. *grosse [H]oboe*). The 18th-century designation for the haute-contre de hautbois, a mezzo-soprano oboe with an open bell, made in A and B♭ versions. It was used in central Europe in *Hautboisten* bands and other ensembles: Johann Fischer, J.C. Pez and Telemann, for example, scored for it in wind music; J.G. Hoffman, G.A. Homilius and Telemann, among others, used it in church cantatas. The instrument in A was favoured for music in keys with several sharps, and the instrument in B♭ for keys with several flats; the treble in C did not play well in tune in these keys. The oboe grande was used in a number of works by Italian composers, beginning in the 1720s. Porpora's *Angelica* (1720) and Vinci's *La caduta de' Decemviri* (1727) have parts for a pair of 'oboi lunghi', and Conforto's *Livia Claudia vestale* (1755) includes a solo for the instrument. By the late 18th century it was not much in evidence, although the Viennese oboist-composers Johann Went and Josef Triebensee wrote for it. In the 19th century a few oboes in B♭ were made for use in bands. In 1874 Victor-Charles Mahillon produced a pair of open-belled 'hautbois d'amour' in A, with 19th-century keywork, for the first London revivals of J.S. Bach's works; similar instruments were also made in Germany around the same time.

(ii) Oboe d'amore

(It.: 'oboe of love'; Fr. *hautbois d'amour*; Ger. *Liebes[h]oboe*). A mezzo-soprano oboe in A with a bulb bell, developed in south-central Germany during the second decade of the 18th century. The tone of the oboe d'amore, described as 'more sombre than the treble, but less weighty than the tenor', was exploited by J.S. Bach, Telemann and their contemporaries. Unlike the oboe grande, which was primarily an ensemble instrument, the oboe d'amore was used as a solo and obbligato instrument. The earliest extant specimen, dated 1719 (Musikmuseum, Stockholm), is by J.G. Bauer (1666–1721) of Leipzig. That city appears to have been a centre for oboe d'amore making; there are a number of extant instruments by J.H. Eichentopf and J.C. Sattler, both of whom were also active there about 1720.

The rich harvest of solo, concertante, obbligato and chamber music produced for the oboe d'amore in Germany during the late Baroque testifies to a strong interest in this new tone-colour. Soloists such as J.C. Gleditsch of Leipzig, who worked with Kuhnau, then Bach, and J.M. Böhm (*fl c*1685–1753) of Darmstadt, who worked with Graupner and Telemann, developed the new

instrument as a distinctive solo voice. Bach used it with special effectiveness. His earliest surviving score to include it (*Die Elenden sollen essen* BWV75) dates from 1723, after his arrival in Leipzig. He achieved a particularly striking effect in the opening chorale of *Meinen Jesum lass ich nicht* BWV124 (1725); there a solo oboe d'amore weaves an obbligato around the choral lines. One of his best-known solos for the instrument is that in the alto aria 'Qui sedes' in the B minor Mass. Telemann's output includes solo concertos for the instrument and a triple concerto for flauto d'amore, oboe d'amore and viola d'amore as well as obbligato parts in vocal works for church and stage. Interest in the oboe d'amore began to flag in the 1740s, and by the 1760s few works were being written for it. The instrument was heard occasionally during the second half of the 18th century: a concerto by Dittersdorf (c1778) and several other works from this period with orchestral parts for it are preserved (***D-Rtt***), and instruments are known to have been made by Grundmann of Dresden (1774) and Otto of Neukirchen (1799).

Renewed interest in the music of J.S. Bach led to the development in the late 19th century of a new version of the oboe d'amore with 'modern' keywork and bore proportions. After first producing mezzo-soprano oboes with open bells, Mahillon began to make instruments with bulb bells; both types earned him medals at the Paris Exposition of 1878. Shortly thereafter, the Berlin firm of C.W. Moritz began to make *Liebesoboen* for performances at the Berlin Hochschule für Musik and the Bach summer festivals then becoming popular in Germany. Other makers followed, including François Lorée, who produced the first French oboes d'amore in the 1880s. The first modern composer to use the new instrument was Richard Strauss, who scored for it in his *Symphonia domestica* op.53 (1903). During the 20th century the instrument was used in the orchestra by many composers, including Mahler ('Um Mitternacht', orchestrated 1904–5), Debussy ('Gigues', *Images*, 1913), Holst (*A Somerset Rhapsody* op.21 no.2, 1906–7), Ravel (*Boléro*, 1928), Havergal Brian and Ligeti. Holbrooke, Koechlin and Ligeti have written solo and chamber works for it.

Michael Finkelman

4. Tenor oboes.

(i) The taille (de hautbois) in the 18th century.

At the end of the 17th century the taille de hautbois had the same profile as the treble oboe, but about 1700 the instrument began to be fitted with a bulb bell, probably by German makers. The taille served as the middle voice of the double-reed consort in France, northern and central Europe, England and Italy. In France it was used in theatre and concert works until the middle of the 18th century, and after that its use waned. In Germany it was called for in numerous church cantatas (for example, J.S. Bach's *Falsche Welt, dir trau ich nicht* BWV52). The taille de hautbois probably arrived in England in 1673, along with the first treble oboes; there it became known as the 'tenner hautboy'. Henry Purcell was the first English composer to take an interest in the instrument, scoring for it in *The Prophetess, or The History of Dioclesian* (1690) and other theatre music. By the 1720s horns had replaced tenor oboes in wind bands. However, a preference for the older consort instrumentation was retained in some locations, and tailles continued to be made for several more decades. The instrument had disappeared by about 1780. The bulb-belled version was revived half a century later when Henri Brod developed the *cor anglais moderne*, the prototype of the modern english horn. The open-belled version enjoyed a brief reincarnation as Wagner's 'Althoboe' (see (v) below).

(ii) Vox humana

(Lat.: 'human voice'; It. *voce umana*). A tenor oboe in F, pitched a 5th below the treble, in use in the mid- to late 18th century. It is characterized by a narrow and largely unadorned profile, two-part construction (with the bell integral with the lower joint), minimal flare at the bell aperture and an angular crook to support the reed. It has two keys and six single finger-holes. The name of the instrument was apparently derived from the eponymous organ stop. Long associated exclusively

with England, the vox humana is now known also to have been used in southern Italy.

The vox humana appeared in England just as the 'tenner hautboy' was giving way to the horn. It may have been invented by Thomas Stanesby (ii), the earliest active of the known makers of the instrument, who was also the author of a fingering chart for it. The first known appearance of the vox humana was in a concert at the Drury Lane Theatre, London, in May 1733; according to an advertisement, duets were to be performed on a pair of these new instruments. Though heard occasionally in the theatre, the vox humana was used primarily in the double-reed bands often employed in lieu of organs in poor provincial churches. One such band at Swalcliffe, north Oxfordshire, purchased a vox humana, reeds, a reed case and a fingering chart from Thomas Collier in 1783. This church supported a double-reed ensemble until 1815. A similar type of ensemble was used in Swiss churches around the same time (*see* HAUTBOIS D'ÉGLISE).

During the 1770s and 80s Gregorio Patria, an Italian living in Dublin, performed with success there on the vox humana, 'a new Italian instrument'. The vox humana was a favoured instrument in southern Italy, especially Naples, in the era before the english horn became common there. Paisiello included it in church and theatre music performed in Naples and Rome, primarily in the 1760s and early 1770s, and Sacchini and G.F. de Majo also wrote for it. The only known Italian maker of the vox humana was Giovanni Panormo of Naples, whose instruments have more flaring bells than the English models, a doubled third hole for C♯ and carved ivory rosettes at the bell aperture. By the 1780s the vox humana had been supplanted by the english horn. The term 'vox humana' was sometimes used for the english horn in Italy and England in the late 18th and early 19th centuries; it is often unclear which instrument was being referred to.

The vox humana was also made in a larger size, pitched in C, a 4th below the tenor instrument. Such instruments were probably used in lieu of bassoons to play the bass parts in church bands.

An unmarked example with an octave key and keys for C, C♯ and E♭, three-part construction and vent holes in the bell is preserved in the Museum of Fine Arts, Boston.

(iii) Oboe da caccia

(It., also *oboe di silva*; Fr. *hautbois de chasse*, *hautbois de forêt*; Ger. *Jagd[h]oboe*, *Jagdhautbois*, *Wald[h]oboe*,*Waldhautbois*). A curved, leather-covered tenor oboe in F with a broadly flaring bell, in use between 1720 and about 1760. It was produced by only a few makers and used in a small number of places in central Europe. The one-piece body of the oboe da caccia is strongly curved, sometimes in a complete semicircle. It was constructed by cutting a row of small wedges along the back of a straight instrument, then bending the body into an arc. The joins were usually pinned and the body sealed and covered with a leather binding, often decoratively tooled. The curved shape and flaring bell give the instrument a horn-like appearance, hence its name. The most distinguished maker of the oboe da caccia was J.H. Eichentopf of Leipzig, who made instruments with brass rather than wooden bells.

Bach began to use the oboe da caccia shortly after his arrival in Leipzig, where he found a fine soloist in J.C. Gleditsch. The instrument has a gentle and expressive nature, which Bach understood perfectly; one of the most striking moments in the *St Matthew Passion* is the soprano aria 'Aus Liebe will mein Heiland sterben', accompanied only by a solo transverse flute and two oboes da caccia. Other composers who wrote for the instrument include J.F. Fasch in Zerbst and Graupner in Darmstadt; in Munich G.B. Ferrandini wrote three symphonies for a pair of oboes da caccia with strings and continuo. Although the instrument had a distinctive sound, it was still considered a tenor oboe and as such was also used to play parts marked 'taille'.

(iv) English horn

(Fr. *cor anglais*; Ger. *englisches Horn*,*Englisch-Horn*, *Englischhorn*; It. *corno inglese*; in the 18th century the instrument was also known as: Fr. *hautbois anglois*,*corne d'anglois*, *cor de chasse anglais*; Ger. *englische Wald[h]oboe*, *englisches Waldhorn*). The tenor oboe in F, a 5th below the oboe, in use from the early 18th century to the present. Its keywork corresponds to that of the oboe of its day and the reed is mounted on a short crook. It was created when a bulb bell was added to an oboe da caccia body shortly after 1720, possibly by J.T. Weigel of Breslau. Late 18th-century

english horns were more gently curved than Baroque models, and by about 1790 some were being made in angular form, resembling contemporary basset-horns. Both curved and angular forms were made into the 19th century.

The open-belled straight tenor oboe and particularly the flare-belled oboe da caccia reminded people of the angels' horns depicted in medieval and later religious imagery, especially in German-speaking central Europe. In Middle (High) German, the word *engellisch* meant 'angelic' (as *engelgleich*in modern Hochdeutsch). With the Middle German word for 'England' being *Engellant*, the word *engellisch* also meant 'English'. These dual meanings naturally became conflated, and 'angel's horn' thus became 'English horn'. This unlikely epithet remained with the curved, bulb-belled tenor oboe even after the oboe da caccia had faded (*c*1760) and in the absence of any better denominations.

Music for the english horn has been notated in a variety of ways. In Italy, during the late 18th century and the first half of the 19th, the parts were notated in the bass clef an octave below sounding pitch, because the instrument was often played by bassoonists. Elsewhere parts were notated at pitch in the alto clef (the method also preferred by Bach for the oboe da caccia parts). In France they were notated in the mezzo-soprano clef, to be read as if in the treble clef in order to effect the correct transposition. In modern notation the player reads from the treble clef, fingering the notes as on the oboe; the instrument sounds a perfect 5th below. In modern scores, however, the part is often notated at sounding pitch.

During its early years the english horn was used interchangeably with other tenor oboes, and few works were written specifically for it; most of those known came from Poland or Saxony, near the birthplace of the instrument. It began to be specified more frequently by the late 1740s; the Viennese version of Jommelli's*Ezio* (1749) called for a pair. One of the first composers to exploit the instrument was Gluck, who began to use it in 1755, scoring for a pair in*La danza*. In *Orfeo ed Euridice* (1762) a pair of english horns appears in Orfeo's aria 'Piange, il mio ben così', an operatic lament; this foreshadows the use of the instrument in the works of many of Gluck's followers, particularly Berlioz. Joseph Haydn had a pair of english horns available to him at the Esterházy court and he used the instrument in a number of works, including Symphony no.22 ('The Philosopher', 1764), in which two english horns replace the usual oboes. Others who scored for the instrument in the mid- to late 18th century included Bonno, Hasse and Starzer in Vienna, Michael Haydn in Salzburg, who treated the instrument as a soloist in several works, and the player-composers Joseph Fiala, Joseph Lacher, Ignaz Malzat, Josef Triebensee and Johann Went.

In the German-speaking parts of Europe, the most significant english horn player of the late 18th century was Philipp Teimer (Filip Matyas Tajmar, 1761–*c*1817), the youngest of three oboe-playing brothers. He served, with his brothers and father, in the musical establishment of Prince Johann Joseph Schwarzenburg (who maintained a *Harmonie* with pairs of oboes, english horns, horns and bassoons), and also appeared frequently as a soloist. A number of trios for oboes and english horn, including possibly Beethoven's op.87, were written for the three brothers. Other works written with Teimer in mind include the Singspiel *Babylons Pyramiden* (1797) by Johann Mederitsch and Peter Winter, in which the english horn plays a role analogous to that of the flute in*Die Zauberflöte*, Salieri's Requiem of 1804 and Hummel's cantata *Lob der Freundschaft* (1807), which includes an extraordinarily difficult obbligato part rising to written *g'''*. Another well-known english horn player of the late 18th century was the oboist-composer Giuseppe Ferlendis (1755–1810), who was so closely associated with the instrument that he was credited in several sources with its invention. His success as a performer was probably due at least in part to the excellent curved instruments made for him by the Venetian maker Andrea Fornari (1753–1841).

The english horn was usually associated with Italian opera in the late 18th century, and the majority of instruments were made in cities that supported Italian opera houses, among them Vienna, Dresden, Milan, Venice and Lisbon. Towards the end of the century Venice became an important centre for english horn writing; perhaps not coincidentally, Ferlendis was employed there between 1778 and 1801. Among the composers who wrote operatic scores with english horn for performance there were Bianchi, Cimarosa, Simon Mayr, Traetta, Sarti and Zingarelli. While in some of these works the english horn rivals the voice in virtuosity, the obbligato parts by Bianchi and Sarti, although occasionally florid, are essentially lyrical. The singing style would soon become accepted as the most effective for the instrument.

The english horn did not become established in France until the early 19th century. The first important player of the instrument there was Gustave Vogt (1781–1870), soloist at the Opéra and the leading French oboist of his day. Vogt's english horn playing was highly praised by critics such as Castil-Blaze and F.-J. Fétis, and many solos were written for him, including that by Rossini in the Overture to *Guillaume Tell* (1829). From 1810 Vogt worked with the firm of Guillaume Triébert to improve the instrument. Triébert's english horns were initially patterned after the curved, two-keyed models made in Italy at the end of the 18th century. The firm soon began to add its own keywork and other refinements, and its instruments gained a high reputation. Later instruments have a straight lower joint and a curved upper joint, and those made by Frédéric Triébert from about 1860 are entirely straight.

Vogt's playing was greatly admired by Berlioz, who exploited the special character of the instrument from his earliest works; in his *Huit scènes de Faust* op.1 (1828–9) the english horn was associated with absence and melancholy, an idea continued in the *Symphonie fantastique* (1830), which also linked the instrument with pastoral scenes. More than any other composer, Berlioz helped to form the character of the english horn as an instrument creating 'feelings of absence, of forgetfulness, of sorrowful loneliness' (*Grand traité d'instrumentation*).

Henri Brod (1799–1839), Vogt's successor at the Opéra, became dissatisfied with the muffled sound and unwieldy shape of the contemporary english horn and by 1823 had begun to collaborate with the Triéberts in an attempt to modernize it. By 1830 he was making instruments himself, developing a straight tenor oboe, the 'hautbois-alto', which was easier to hold and more resonant than the old instrument. He later renamed this instrument the 'cor anglais moderne'. François Lorée, who had been Triébert's chief of staff, opened his own workshop in 1881 and began to make english horns based on Brod's straight-form model. In the hands of this maker, the instrument reached its modern form.

The english horn was little known in Germany and Austria in the early to mid-19th century. German orchestration texts of the first half of the century scarcely mention the instrument, composers did not use it, and Mendelssohn was unable to find a pair for his Berlin revival of the *St Matthew Passion* in 1829. Wagner, who had heard the english horn in Paris, was the first German composer of the era to make extensive use of it. As Kapellmeister at Dresden he had in his orchestra Rudolf Hiebendahl (*c*1818–90), one of the first German oboists of the period to develop an interest in the instrument. Wagner's first score to include it was *Der fliegende Holländer* (1843), in which it was employed in the overture. In both *Tannhäuser* (1845) and *Tristan und Isolde* (1865) it imitates a shepherd's pipe. *Lohengrin* (1850) had the first 'symphonic' part for the english horn; the instrument was used as a full member of the orchestra, not only for special effects. Other composers who wrote for the instrument included Schumann (*Manfred*, 1848–9) and Liszt, especially *Der nächtliche Zug* from the two episodes from Lenau's *Faust* (1856–61) and *Christus* (1866–72).

The english horn continued to be heard regularly in Italian opera all over Europe, including in areas where it otherwise had no exposure. Rossini made much use of the instrument, particularly in the operas he wrote for Venice, including *La scala di seta* (1812), *Tancredi* (1813), *Il signor Bruschino* (1813) and *Sigismondo* (1814). Significant obbligatos also appear in two of his scores for Naples, the *Messa da gloria* (1821) and *Zelmira* (1822). Rossini's younger colleague Bellini requested the instrument in *Il pirata* (1827) and *Bianca e Fernando* (revised version, 1828). The former uses the corno inglese to enhance the tragic mood in the heroine's mad scene and prayer. Later composers used the instrument to advantage in similar settings. In Donizetti, for example, the unique voice of the english horn is heard to excellent effect in *Gabriella di Vergy* (composed 1826, rev. *c*1838), *L'esule di Roma* (1828), *Anna Bolena* (1830), *La fille du régiment* (1840), *Maria Padilla* (1841) and *Maria di Rohan* (1843). Verdi was certainly familiar with most of these works, and he began scoring for the instrument early in his career, notably in *Nabucco* (1842). Other outstanding uses of the corno inglese in his output occur in *Giovanna d'Arco* (1845), *Attila* (1846), *Un ballo in maschera* (1859), *Don Carlos* (1867) and particularly in *Otello* (1887). Mercadante's *Il giuramento* (1837) is another work in which, as in most of the Italian Romantic repertory, the instrument is used to underscore a tragic situation. The instrument was used similarly in French opera (Halévy, *La Juive*, 1835). In Russia Glinka laid the groundwork for use of the instrument there in his *A Life for the Tsar* (1836).

Concert works of this era to include the instrument used it, as in opera, as a pastoral or sentimental instrument. Mercadante included it in at least four symphonies from the 1850s and

60s, and Saint-Saëns also scored for it in two of his early symmphonies. Franck's Symphony in D minor (1886–8) has a continuous symphonic part as well as an elegiac solo in the second movement. Dvořák wrote frequent solos for the english horn; that in his Symphony no.9 ('From the New World', 1893) well exploits the nostalgic and elegiac character of the instrument. In Richard Strauss's colourful scoring the english horn was treated as an essential member of the orchestra. The Scandinavian nationalists were also attracted to it. In *The Swan of Tuonela* (1893) Sibelius used the english horn as the voice of the swan, singing over a sombrely coloured orchestra. The english horn was also used to create an exotic mood, imitating the reed pipes of the Middle East and Asia (Saint-Saëns, *Samson et Dalila*, 1877, and Borodin, *In Central Asia*, 1880).

By the beginning of the 20th century the english horn was established as a solo voice within the orchestra. Most of the orchestral works of the first half of the century continued to exploit the Romantic sentiments associated with the instrument. A mysterious mood is created in C.M. Loeffler's *A Pagan Poem* (1906), scored for large orchestra with english horn, piano and offstage solo trumpets; Janáček's *Taras Bulba* (1915–18) and Rodrigo's *Concierto de Aranjuez* (1939) exemplify the nostalgic, Vaughan Williams's *Pastoral Symphony* (1921) the pastoral, and Rachmaninoff's *The Bells* (1913) the tragic. The most substantial solo works of the period are Carter's *Pastoral* (1940) and Hindemith's Sonata (1941), both with piano.

During the second half of the century the english horn was often included in chamber and orchestral music, and many concertos were written for it. While the traditional character of the instrument was often set aside in concert music, it was retained in many film scores; those of Virgil Thomson, Hugo Friedhofer, David Raksin, Miklós Rózsa and Victor Young contain some outstanding parts. The Concertino op.4 (1982) for english horn and strings by Arne Running is particularly well written for the instrument, and the Australian oboist-composer Graham Powning has written an effective and interesting quartet for four english horns, among his many ensemble works for double reeds.

Important players of the 20th century included Hans Hadamowsky (1906–96) of the Vienna PO, Leo van der Lek (1908–99) in Amsterdam, James McDonagh (*d*1933) and his son Terence (1908–86) in London, Paul Brun and Paul Taillefer (*b* 1912) in Paris, Peter Henkelman (1882–1949), John Minsker (*b* 1912) and Louis Rosenblatt (*b* 1928) in Philadelphia, Louis Speyer (1890–1980), to whom many works were dedicated, in Boston, and Thomas Stacy (*b* 1938), who has commissioned and given first performances of many works for the instrument in New York.

(v) Alt[h]oboe.

A tenor oboe in F, with an english horn body and a clarinet-like bell. Some time between 1872 and mid-1875 Wagner had the Bayreuth woodwind instrument maker J.S. Stengel (1803–85) build this new oboe to his specifications. It was meant to provide a more penetrating sound than the english horn, in effect extending the oboe section into the tenor register. In the first edition of *Siegfried*(1875), Wagner specified that the new *Altoboe* was to replace the english horn in all future performances of his scores. However, the instrument is specifically called for only in *Parsifal* (1882). It was used at Bayreuth with some regularity, especially between 1882 and 1894, but it seems to have fallen out of use by 1896. A single specimen from Stengel's workshop survives (Kunsthistorisches Museum, Vienna) and there are several by other makers, including two by Joseph Pöschl (1866–1947) with both *Altoboe*and english horn bells (Musikinstrumentenmuseum im Münchner Stadtmuseum; private collection). During the last quarter of the 19th century and the first quarter of the 20th 'Altoboe' was sometimes used in Germany as an alternative term for the english horn.

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5. Bass oboes and larger forms.

(i) Bass oboe.

A large oboe pitched an octave below the treble. The instrument has also been known as the baritone oboe, after Triébert's bass oboe of 1825, which he called 'hautbois baryton' by analogy with the baritone voice. The modern bass oboe is an enlarged english horn equipped with a bulb bell and a bassoon-like crook, on which the reed is placed. Music for the instrument is notated in the treble clef, sounding an octave below written pitch. A few instruments in this range survive from the 18th century, including a specimen from about 1700 by J.C. Denner of Nuremberg in the form of an enlarged treble oboe (Germanisches Nationalmuseum, Nuremberg). Two instruments made by Charles Bizey in Paris about 1749 have a bassoon-like boot and wings with obliquely drilled tone holes, and an open oboe-like bell. About 1825 Triébert began to make bass oboes patterned, apparently, after Bizey's instruments, but with added keys and bulb bells. Brod received a medal for a straight bass oboe at the Paris Exposition of 1839. No period music for this instrument survives. It is not known how it was used; it may, perhaps, have been played in wind ensembles.

The first modern bass oboe was built by François Lorée about 1889. Lorée's instrument was straight-formed, like the model designed by Brod 50 years before, and equipped with the latest keywork. The first composer to interest himself in the new instrument was Delius, who became familiar with the instrument during his years in Paris (1888–96). Through him the instrument became known in England, where it was used by a number of composers, including Holst, Brian and Tippett. It has been used in chamber music and film scores in Europe and America. The first solo concerto for the instrument, *East Coast* by Gavin Bryars, was written in 1994.

(ii) Sub-bass and contrabass oboes.

Only a few experimental oboes have been made to play in this register, for which there was already a successful instrument, the bassoon. Several 18th-century sources, including Majer and Walther, mention an oboe in this register, and according to Garsault (1761) it was known in its day as the *basse de cromorne* (*see* CROMORNE (I)). An enormous contrabass 203 cm in height, with a sounding length of 267 cm, a huge brass crook and nine keys, was made by Christophe Delusse before 1781 (Musée Instrumental du Conservatoire, Paris). According to the *Almanach musical* of 1781, the instrument was used in place of the bassoon at the Opéra for six months. Pierre wrote that Lorée had proposed to complete the oboe family with an instrument two octaves below the treble, but that plan was never realized.

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6. Smaller oboes.

In the mid-19th century S.-X. Verroust, who had taught at the Gymnase Musical Militaire, advocated the use of a range of hautbois pastoraux, small oboes with a penetrating tone, in military music.

These instruments, pitched in A♭, G, E♭ or D♭, were suited to tonalities preferred by the clarinets and the brass instruments. They are often used to play the difficult high oboe part in the third of Canteloube's *Chants d'Auvergne*. Similar instruments were made in Germany and the USA (where they were called Oboettes). At Heinz Holliger's behest, Marigaux created a full Conservatoire-system 'musette' in F for use in contemporary music. The instrument is required in Maderna's *Grande aulodia* for the flute and oboe (1970), in which the oboist is also required to play the oboe, oboe d'amore and english horn.

Geoffrey Burgess

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