

CHAPTER 4THE COMMONER WIND INSTRUMENTS AND THE TIMPANIIntroduction

This chapter derives from a study of text-books, treatises and critical writings of the period that are concerned with instruments and instrumentation. The first aim has been to compile a detailed picture of the physical characteristics of the commoner wind instruments and the timpani as they existed in France between 1789 and 1810. Histories in English of these instruments are already in existence, and it is not intended to try and rewrite these here from a similar point of view. The failing of most writers has been to fight shy of drawing sufficient distinction between conditions in France, in Germany and in England.<sup>1)</sup> Owing to the considerable number of tutors and treatises produced in France during the period it is possible to obtain a picture of conditions in that country more accurate in detail than has hitherto been made.

The reasons for the increased production of text-books are as interesting as the facts that they contain. One important one was the establishment of the Conservatoire press, which, according to C. Pierre,<sup>2)</sup> issued some twelve music instruction books between 1800 and 1807. The Conservatoire was by no means responsible for all such books, however; the houses of Leduc, Boyer, Pleyel, Parthaux, Naderman and Cousineau all contributed towards satisfying an evidently increasing demand. The trumpet, trombone and timpani alone of orchestral instruments then in use were not considered to warrant an instruction book to themselves.

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1) Several important tutors, such as those by Blasius, Garnier and Lefèvre, are not in the B.M., but must be sought in Paris.

2) Pierre/MAGASIN pp.157-160

These three instruments, and the less common wind and percussion, were nevertheless all included in one or more of the general treatises on instruments which were also appearing at this time and which were listed at the beginning of chapter 2, section (3) above.

There may also have been general or specific instruction books that have disappeared. A Diapason général for wind instruments by J-F. Edelmann is mentioned in a periodical of 1785, but has been discovered nowhere else.<sup>1)</sup>

In order for a physical summary of instruments to be made this contemporary literature has been used in detail. To explain the evolution of their characteristics the work of two established authorities is referred to throughout the chapter.<sup>2)</sup> The works of these two authors and also Francoeur, DIAPASON, Vandebroeck/TRAITE and Choron/TRAITE are indicated in the text below simply by reference to their respective names.

The second aim of the chapter has been to form an estimate of the aural peculiarities of the instruments under discussion, likewise from historical sources.

That there is a general need to investigate the kind of sound that might have been made by an orchestra at the time of Beethoven's early maturity hardly requires justification. The means of achieving such an investigation are not easy. So far as individual instruments are concerned, the problems of restoration are always difficult. Even if we attain what we think is relative aural accuracy there still exists the question of a bygone musical performing style. In 1800, almost certainly more than today, individual differences in taste and technique were likely to have been considerable. The Paris Conservatoire, which admitted its first pupils in October 1796,<sup>3)</sup> evidently could not concern itself with uniformity of

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1) Benton/EDELMANN p.173

2) Carse/MWI; Baines/WOODWIND

3) Pierre/SARRETTE p.240

playing<sup>style</sup> until some uniformity of standard had been achieved. There was no lack of foreign musicians in Paris, whose national characteristics in playing must have added greatly to the variety of performing styles heard.

It has not been possible to make a basis for argument from surviving instruments since this would amount through the large quantity of material to a separate study in itself. The studies by Carse and Baines refer constantly to examples of instruments<sup>so</sup> it is probable that their conclusion<sup>s</sup> on construction pertaining to so narrow a period as twenty years may be regarded as sufficiently accurate.

There can never be a complete exegesis of the aural aspect of old instruments. The aural experience is essential, and all written evidence is important; the two approaches must co-exist. The present study seeks to assert the relative value of historical documents in the matter.

The only treatises difficult to date with accuracy are the following:

- (i) Vandebroek: Traité général. Chez Boyer, rue de la Loi à la Clef d'Or. This publication postdates both the same author's horn tutor and the copyright law of 19 June 1793, both of which find mention on the title page. Carse's dating of ca.1800 seems too late, since reference<sup>s</sup> to the music copyright law of 10 July 1793 (obviously related to the above law) are not found in music scores after about 1796. Moreover the style of engraving is that of 1799 or earlier. M.G.G. dates Vandebroek's work as 1793-5, and I have considered it as ca.1795.
- (ii) Vandebroek: Méthode nouvelle ... du cor. The first edition, by Boyer according to M.G.G., must obviously come before (i) above. I have followed M.G.G.'s dating of ca.1789.
- (iii) Devienne: Nouvelle méthode théorique et pratique pour la flûte. Naderman, rue de Richelieu. This edition in the BM has been dated ca.1795 by Gerber and others; although the first edition, published by

Imbault, has generally been ascribed to the same year, Warner/WOODWIND puts forward ample reason for its appearance in 1792.<sup>1)</sup> Warner lists the B.M. copy as an unaltered edition of the Imbault printing.

(iv) Punto: Seule et vraie méthode ... des premiers et seconds cors ... composée par Hampl et perfectionnée par Punto, son élève. Naderman, rue d'Argenteuil à Apollon. Although M.G.G. considers this publication as issued in 1798, Hopkinson<sup>2)</sup> reckons that the stated address of the publisher dates it as before September 1797. I have considered it as from ca.1797.

Under each heading below the physical description is given first, and the aural consideration second.

To avoid complicating the following accounts, the theoretical range of each instrument that is dealt with, as stated by all the contemporary writers referred to, will be found tabulated between pages 156 and 157.

#### (1) The Flute

At the end of the seventeenth century the flute had reached stable proportions based on a conical bore and a natural scale of D. A single closed key to provide for low d' sharp was standard; in this simple form flutes continued to be built and played well into the nineteenth century. The necessity for cross-fingering on the simple flute produced several imperfect notes, especially in the lowest octave. F naturals, G sharps and b' flat were particularly out of tune.

Such obvious imperfections on a very popular instrument were bound to lead to attempts to improve its intonation by means of adding new keys. It is straightforward to point to evidence that some flutes possessed additional

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1) Warner/WOODWIND no.177

2) Warner/WOODWIND no.177

keys, from the last two decades of the eighteenth century onwards; an estimate of how commonplace these instruments were may be attempted by examining the references to them in tutors.

The simple flute: To judge from written evidence as well as from surviving specimens this was the most popular form of the instrument throughout the period of the Revolution and Empire. The general treatises by Vandembroeck and Choron make no mention at all of any other type. Most amateur players would have used the one-keyed instrument, and it is probable that the older professional players did so too.

The flute with downward extension: Experimental extensions to the flute to make c' natural and c' sharp available had been made already before 1750, although with limited success.<sup>1)</sup> Similar attempts were made again from 1771 onwards (Carse p.90). That these flutes were known in France before the end of the century is proved by Devienne's published disapprobation of them - he calls them "les flûtes dites à l'Anglaise"<sup>2)</sup> - in the preface to his Nouvelle Méthode.<sup>3)</sup> No other writer appears to have mentioned them. The unsatisfactory nature of the flute's lowest octave and the general musical conception of the instrument as a medium or high voice must have restricted the use of any such downward extension; few players would have bothered with it. Low c' natural and c' sharp are not required in any orchestral music that I have seen.

The two-keyed flute: The two instruments mentioned in the inventory of the King's collection at Versailles in 1780<sup>4)</sup> already possessed two keys each:

"Deux flutes traversières en cinq corps en bois brun des Indes, avec deux clés d'argent, dans un étui ... "

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- 1) These are dealt with in detail in Quantz/VERSUCH.  
 2) Extended flutes were apparently pioneered by a Londoner, R. Potter; Carse/NWI p.90  
 3) Devienne/METHODE p.1  
 4) Marcuse/VERSAILLES

The four-keyed flute: Surviving instruments of this type were made as early as 1785 (Carse p.89). The keys, apart from the original d' sharp key, were for f' natural, a' flat and b' flat. The following evidence, from the Conservatoire Méthode, establishes not only that this date holds good for French acquaintance with this development, but also refers to opposition to the new keys:

"Trois autres clefs ont ensuite été ajoutées, plusieurs professeurs habiles en ont reconnu l'utilité qui a été confirmée par quinze années d'expérience, nous en adoptons l'usage ... L'usage des trois dernières clefs que nous adoptons, a été trop légèrement repoussé par quelques personnes qui ont objecté que ces additions compliquaient le mécanisme de l'instrument; nous insistons sur leur emploi, parce<sup>1)</sup> que nous les considérons comme un perfectionnement très utile ... "

Even the renowned Devienne made no use of additional keys; by the time that his tutor was written he assessed them favourably, but he may well have opposed them at an earlier date.

"Quoique je ne m'en serve point je les approuve ... "2)

Devienne's tutor was therefore not committed to the new keys; it was, however, an extremely popular book which went through five editions in as many years, and which could be used by owners of either simple or four-keyed flutes. The Conservatoire tutor was committed, and was the guide for all students at that institution. It is probable that the four-keyed flute was established by 1804 in professional orchestras; the Conservatoire would not have otherwise been able to sanction the use of its own Méthode.

Germany and England: It is very possible, especially during an era of increasing personal mobility, that foreign flutes with more than four keys were bought and used in Paris. The Conservatoire tutor took the trouble to mention that:

"Les Anglais, outre les quatre clefs que nous avons adoptées, en ont ajouté trois autres ... " 3)

and added the corresponding details.

- 1) Hugot/METHODE p.4. The copy of this tutor that I have consulted is a parallel French and German edition of the original Paris edition of the previous year. The reprinting was in all probability exact; it is not separately listed in Warner/WOODWIND, no. 272.
- 2) Devienne/METHODE p.1
- 3) Hugot/METHODE p.4, footnote.

According to H. C. Koch in 1802, German flutes were also being supplied with extra keys:

"Sie ... entweder bloss mit einer einzigen Klappe verstehen ist, durch deren Eröffnung man sowohl das es als dis hervorbringt, oder es find an demselben für diese beyden Töne zwey besondere Klappen angebracht ...

Seit mehren Jahren ist dieses Instrument von Tromlitz, einem bekannten Flütenspieler in Leipzig ... mit mehren Klappen bereichert worden ... " 1)

Such English and German designs must not be regarded as exclusively employed in their country of origin, especially under the Empire when communications improved, the cost of transport went down, and trade deputations travelled to London, Leipzig and Frankfurt. 2)

The one-keyed flute, like all old wind instruments that relied on cross-fingering to obtain notes foreign to the basic scale, needed constant minute adjustment to the intonation. Devienne explains how the player could make these, and dwells on the difficulties of F and F sharp:

"De tous les Instruments la Flûte est celui qui parait le plus aisé, en ce que le Mécanisme en est très simple. Cependant il devient un des plus difficiles à jouer; soit par rapport à son emboûchure, soit par rapport à sa justesse; justesse qui ne peut se trouver à la rigueur dans cet Instrument tel parfait qu'il soit, puisque l'on est obligé de prendre des temperaments entre plusieurs Notes ... Je suppose par Exemple le Fa naturel et la Fa dièze; si le premier est juste, l'autre doit être de nécessité trop bas ... " 3)

Traditionally it was the F natural that was made to be in tune, and the F sharp left to be under pitch, since not only was F sharp rarely the tonic of a piece, but the note F was "très usité ... un des plus beaux pour la flûte d'ailleurs. Il est facile de hausser un peu le Fa dièze par le moyen de l'embouchure." This latter quotation Devienne took over from Diderot's Encyclopédie.

- 1) Koch/LEXIKON, article "Flûte". "(the flute) might either have a single key whereby one can produce both E flat and D sharp, or one might find two special keys to produce these two notes. For several years now this instrument has been manufactured by a well-known flautist, Tromlitz of Leipzig, (and) ... enriched with several more keys."
- 2) Ponteil/ORGANISATION p.177
- 3) Devienne/METHODE p.1

More specifically, the difficult notes

"could be made into effective notes, in tune yet audible, by expert wangling of the embouchure, especially by turning the flute inwards to flatten the sharp cross-fingerings ... " (Baines p.21)

It was surely an awareness of these opportunities that led Francoeur to write in his introductory remarks:

"La Grande Flûte est de tous les instrumens à vent, le moins borné tant pour son étendue dont tous les Sons sont très justes, que pour la facilité des traits qu'on y peut exécuter ... "

Writing up to three sharps or flats for the one-keyed flute was regarded as safe practice by both Vandebroek and Choron, although even E flat

"devient difficile à cause du la bémol." (Vandebroek p.59)

It would be better to demand two sharps or flats, in whichever mode. The instrument sounded more satisfactory the closer to D it was required to play.

There seems to be slight confusion among modern writers as to the way the additional keys were used on the flute. In discussing old woodwind instruments J. A. Macgillivray puts forward the theory that the mechanical imperfections of keys up to 1810 or even 1820 may have resulted in the deliberate adoption of a chiefly cross-fingered technique on the flute and oboe:

"Closure was far from hermetic: the leather was porous, the fall of the key imprecise, and the flat brass spring usually sluggish in action."

More keys,

"especially in the upper part of the instrument, must therefore necessarily involve a certain sacrifice of tone and efficiency."<sup>1)</sup>

Carse (p.89) was of the opinion that after the initial appearance of the four-keyed flute, players "used the new keys for shakes rather than for improving the quality of the forked sounds." Stated in this way, at least as applied to the situation around 1792, Carse's view is the opposite of performance practice as described by Devienne.

<sup>1)</sup> J. A. Macgillivray: The Woodwind, in Baines/INSTRUMENTS



"Il ne s'en suit cependant de là que je veuille blâmer les petites clefs que des recherches justes ont fait ajouter à la Flûte ordinaire pour remédier aux sons bouchés qui se trouvent dans le bas, tels que le Sol dièze ou La bémol et le Si bémol ou La dièze. Elles sont d'un grand nécessité dans les morceaux lents et surtout quand les notes ci dessus désignées sont soutenues. Quoique je ne m'en serve point je les approuve, mais dans ces cas là seulement; car pour les traits, elles deviennent inutiles et ne servent qu'à ajouter à la difficulté." 1)

In discussing the new keys added by Tromlitz, Koch says that they

"nicht sowohl die Reinheit der Töne befördern, sondern hauptsächlich dazu dienen, verschiedenen stumpfen Tönen der tiefern Oktave mehr Schärfe zu geben, und sie den übrigen Tönen gleich zu machen." 2)

As applied even prior to the appearance in 1804 of the Conservatoire tutor, the implications of which are discussed below, it would appear from written evidence that the conclusions of Carse and Macgillivray must be modified. The new keys were regarded as enabling improvements chiefly in the production of formerly forked notes, although only in slow music. In fast music they were regarded as an encumbrance, for the reasons that Macgillivray puts forward; and players dealt with trills according to the capabilities of their own instrument and technique. Because the new keys were used for improving notes in the lowest octave of the instrument does not necessarily mean that they were also used in the upper registers where the note production might have suffered unduly from imprecise mechanisms.

The contents of the Conservatoire tutor (which was not examined by Carse), however, evince a completely modern outlook on the question of additional keys. According to a set of seven principles, reproduced in full below, the F, A flat and B flat keys were to be regarded by every Conservatoire student as equally advantageous for correcting out-of-tune notes and trills. These principles were followed by a series of graded exercises in which the different uses of each new key, alone and in

1) Devienne/METHODE p.1

2) Koch/LEXIKON, article "Flûte". The new keys "not only add to the clarity of the sound, but are chiefly useful in adding definition to several dull notes in the lowest octave and to make these even with the remaining notes."

combination with each other, were fully expounded.

"De l'avantage de se servir d'une flûte à trois petites clefs."

*[i.e. a four-keyed flute; the old d' sharp key was taken as understood]*

- "1. Pour tous les morceaux quand il se trouve un ou plusieurs bémols, ou dièzes à la clef.
2. Pour la justesse de tous les demi-tons en général et principalement pour ceux de l'octave en bas, tel que si bémol ou le la dièze qui naturellement sont sourds et faux.
3. Pour donner plus de force et de justesse au fa dièze ainsi qu'au fa bécare.
4. Pour égaliser les sons faibles et leur donner plus de force dans le grave.
5. Pour toutes les octaves et surtout par demi-ton.
6. Pour la facilité de beaucoup de traits qui seroient souvent très difficiles et sans aucun effet.
7. Pour la justesse des trilles majeurs et mineurs, et enfin pour rendre parfaite et brillante l'exécution sur cet instrument." 1)

It is therefore difficult to defend the hypothesis that in France it was, around 1803, any longer true that flute players necessarily experienced excessive difficulty when playing in three or more sharps or flats, even in faster music. If the four-keyed flute was, at the time, as reliable as the Hugot and Wunderlich tutor implies, (and their opinion was supported by that of the teaching assembly of the Conservatoire) than an improved lower octave, greater facility in trills and faster movement and a greater equality of tone overall could have been taken for granted by composers for the instrument, and heard in orchestras of the time. Grétry gives us one eighteenth-century view of the flute:

"La flûte traversière est tendre et amoureuse. La douceur de ses sons aigrit la plus belle voix de femme qui ne peut guère se soutenir à côté de la flûte." 2)

1) Hugot/METHODE p.26

2) Grétry/MEMOIRES, Vol.I p.238

This description is particularly apt for music (like Grétry's own) of simple and clear-cut design, and with soft accompaniment.<sup>1)</sup> Composers of tragédie lyrique after Gluck tended to confine flute solos to 'antique' or 'religious' hymn-like movements, and often preferred to use the oboe, the clarinet or even the piccolo for solos. Neither amoureuse nor tendre, some of the music being written in France by 1789 demanded a more forthright voice, and one which could more successfully compete against an increased volume of sound. At the same time, however, a new sensibility in opera style opened up possibilities for flute solos in a newly chaste idiom.<sup>2)</sup>

As if to emphasise these trends, theatre orchestras generally possessed fewer flautists than other woodwind players (see Appendix 2); only one flautist is noted at the Théâtre Italien, Salle Favart, in 1794 when a trombonist was already a regular participant. The continuation of the classical manner of writing single flute parts passed well on into the nineteenth century. It was even mentioned in Castil-Blaze's dictionary in 1825:

"Dans la symphonie, on n'écrit souvent que pour une seule flûte."

## (2) The Piccolo

The history of this instrument is not well charted before 1800. Baines (p.294) says that the "true piccolo" - i.e. a half-sized flute with conical bore and one d' sharp key, sounding an octave above written - was indicated by the words flauto piccolo "from Gluck onwards". Certainly,

1) Compare Crotch/ELEMENTS p.14: "The most proper passages for the flute are sweet and soft melodies." Also Marsh/HINTS p.63: "Its tone is however unequal in quality, the lower notes being very weak, and the extreme upper ones very shrill and piercing. Composers therefore generally avail themselves of this inequality by using the very high notes only in the full parts of symphonies and concertos, at other times confining the compass between about G or A in alt ... As this instrument is much less powerful than any other kind of wind instrument, it is often in the distribution of the parts in score associated as much with the string, as with the other wind instruments ... "

2) See Ex.265 from Dalayrac's Camille, 1791.

Vandenbroeck (p.60) makes a clear distinction between this instrument and the fife, which was the more common of the two in the eighteenth century. Francoeur in 1772 lists only grande flûte and petite flûte, which might be regarded as equivocal. In Choron the petite flûte and the fifre are discussed separately; moreover Choron and Vandenbroeck both state that the piccolo possessed only one key; the fife certainly had none. This information is confirmed by Carse and Baines.<sup>1)</sup>

#### The piccolo in B flat and others

The instrument in B flat was the only variant in the piccolo family current during the present period. Vandenbroeck, who alone mentions it, (p.60) says:

"On s'en sert dans les Musiques des regimens. Quand l'harmonie joue en fa la petite Flûte joue en sol, et quand on joue en ut elle joue en ré, ainsi de suite des autres tons."

One example of its use is found in Kreutzer's wind band overture known popularly as "La Journée de Marathon", 1794. (This piece is not mentioned in Pierre/HYMNES.) It was not frequently called for in surviving examples of military music before 1800. The B flat piccolo is not mentioned by Carse, but is included in Baines's book (p.294).<sup>2)</sup>

The next instruments to appear were the piccolo in E flat, transposing a minor ninth above written, and the piccolo in F, transposing a minor tenth above written. Reicha (1816) included them as "instruments en usage dans la musique militaire"<sup>3)</sup>, and it may be assumed that they had been employed in the Imperial bands for some time before this.

#### Replacement of the fife

Vandenbroeck (p.60) notes that in addition to the military use of the piccolo the fife was employed "dans les troupes pour jouer avec la caisse".

- 1) Marcuse/VERSAILLES states moreover: "Quatre petites flutes traversieres de 3 corps chacune garnis de leurs clés d'argent".
- 2) Two further examples of the B flat piccolo not noted in Pierre/HYMNES are Catel's Marche (P.2273) and Lefèvre's Pas de Manoeuvre (P.2290)
- 3) Reicha/COURS p.261

By 1813 the position seems to have changed:

"Dans les Régiments l'on a établi une Musique, comme dans celui des Gardes Françaises, Suisses etc. On a substitué La Petite Flûte au Fifre, parceque ces deux Instruments étant au même Unisson, ce dernier étoit très borné et très faux par la raison qu'il n'a point de petite Clef." (Choron p.7)

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Modern writers have not indicated anything of the sound of the late eighteenth-century piccolo, but contemporary writers were decided on several points. Vandebroek and Choron agree that its best keys were C, G, D and A major, and A, D, E, and G minor, the later writer admitting E flat major and C minor in addition. They also agree that above written e''' its shrillness became intolerable. This opinion is some guide to the written practice of Parisian musicians.

Its tone was such that

"les morceaux lents ne sont pas faits pour cet instrument". (Vandebroek p.60)

Up to the end of the ancien régime the piccolo may seem, according to the evidence of those who commented on its use, to have been restricted in its musical application to the operatic storm or village dance. In fact, its use in the opera orchestra became far more varied than this before 1789. Although in the tutti and in open-air music it was clearly the volume of the piccolo tone which was exploited, it was not solely a noise-augmenting instrument and neither did it remain one from the period of Grétry's comedies for the Académie onwards. During the Empire it was frequently used as a characteristic solo instrument, mainly in comic and exotic contexts.<sup>1)</sup>

### (3) The Oboe

The lack of direct contact between the player's lips and the air

<sup>1)</sup> In the conventional orchestra a single instrument is normally written for rather than a pair. J. B. de Laborde noted that two piccolos in unison never sounded in tune.

stream generated in the body of the instrument made the flute the hardest instrument on which a player could adjust the intonation minutely. This was a cardinal reason why it was the first woodwind instrument to receive additional keys to assist in its primary scale. The oboe, by comparison, was more in tune, even on cross-fingered notes, and those difficult to tune precisely could be adjusted by lip pressure on the reed.

The standard eighteenth-century instrument, which continued to be manufactured and played "early in the nineteenth century" (Carse p.133), had two keys: one open for c' natural and one closed for d' sharp. Garnier's tutor<sup>1)</sup> gives details of these keys only. Carse (p.136) claims that Sallentin and Vogt, the leading French professionals of the period, were content to use the two- or four-keyed instrument "for a time". Certainly Vandebroeck, around 1795, implies the two-keyed instrument when warning of the difficulties in playing g' sharp and c' sharp (p.14); low c' sharp had to be faked when it was encountered in written music. These two notes were rectified by new keys eventually, but two-keyed oboes are still the only ones dealt with in Choron, judging from his description of difficult notes and keys.

Vogt's unpublished oboe tutor<sup>2)</sup> is extremely difficult to assign a date to. Warner/WOODWIND gives ca.1813; Vogt deals solely with the four-keyed oboe and attributes the third and fourth keys to "les soins de M<sup>r</sup> Sallantin". These appear to be the f' sharp key and the octave key, not the c' sharp and g' sharp keys. As with the flute, more sophisticated oboes were perhaps in the hands of Parisian professionals than some tutors suggest.

By 1816 the c' sharp key was known and made, but was still as yet insufficiently adopted.

1) Garnier/METHODE. This is the only printed oboe tutor in France of the period except for van der Hagen's of ca.1790. This also is for the two-keyed oboe.

2) B.N. Ci.50

"L'ut dièze suivant [i.e. c' sharp] n'a pas été employé jusqu'à présent parce que la plupart des artistes qui jouent de cet instrument ont négligé de se le procurer au moyen d'une clef qu'il est facile d'adopter. Mais comme plusieurs d'entre eux l'ont déjà fait, il faut espérer que l'usage en deviendra général." 1)

The absence of a revised French tutor for the oboe after Garnier - especially considering the abundance of other instrumental méthodes - the evidence of H. C. Koch, who indicated that many oboes in Germany had five keys and some six,<sup>2)</sup> and the fact that it was a Bavarian, Joseph Sellner, who was next noted for his advanced oboe designs, all indicate that Paris was less interested in possible developments than was Germany. However, as with the flute, it is certain that French oboe players would have been at least aware of improvements abroad.

A summary of the reed shape of the early oboe is given in Baines, p.281.

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The worst notes on the two-keyed oboe (Carse pp.130-131) were low c' sharp (obtainable only by half-closing the c' natural key); f' sharp, often a flat note but one which could be rectified given twin finger-holes instead of one large one; and g' sharp (a better note), which invariably had twin holes. The inherent flatness of c'' sharp was counteracted by special fingering.

According to Choron f' sharp was too low "lors même en forçant le vent", but f'' sharp was in tune. Vogt wrote that the former was good, using the new key. All contemporary writers state or imply the very bad quality of middle c' and c' sharp. Blasius<sup>3)</sup> and Vogt go so far as to omit c' sharp from the scale, and Blasius omits middle c'. The c' natural that could be obtained was

"trop haut pour être considérée comme naturel, et trop bas pour être dièze, même en forçant." (Choron p.13)

1) Reicha/COURS p.254

2) Koch/LEXIKON. Vogt's tutor mentions German oboes with up to 9 keys. (f.16

3) Blasius/METHODE, comparing woodwind compasses.

But for Vogt, c', d', d' sharp and e' were all "belle et sonore" if not forced, which accords with Macgillivray's modern view, below. Existence of low notes in the musical literature supports Vogt's view rather than that of Blasius. Francoeur's assertion that both b' natural and b' flat were out of tune was taken over in Choron's revision of 1813; no other writer mentions these notes especially. B' flat was allegedly too sharp, and b' natural too flat.

Nevertheless, b' flat and f' sharp cannot have been universally intolerable since the oboe's best major keys, according to Blasius and Vandebroek were C, D, F, G and B flat. Vandebroek and Choron name A, C, D, E and G as the best minor keys. C minor was better than E flat major when there were fewer A flats. Indeed, it seems to have been the awkwardness encountered in covering one of the small A flat twin holes cleanly rather than excessive out-of-tuneness that made this note a problematic one. Crotch gives a good summary of the situation in his Elements of Musical Composition (1812):

"Keys which have many flats or sharps should ... be avoided in solos, but in full music this instrument is used in almost all keys." (p. 114)

Vogt's conclusion (f.17) was that orchestral parts were never difficult enough to warrant more than four keys. Both Baines (pp.280, 281) and Macgillivray<sup>1)</sup> speak enthusiastically of the tone of the two-keyed oboe as revealed by recent experiment. It was not a loud instrument:

"The maximum volume is considerably less than on the modern instrument." 2)

"Its mean level of loudness is if anything less than that of the modern oboe."

(Baines p.280)

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- 1) J. A. Macgillivray: The Woodwind, pp.240, 241 in Baines/INSTRUMENTS  
 2) J. A. Macgillivray: op. cit. p.241



Despite a slightly louder minimum volume,

"the penetrating low notes which are a lifelong trial to the modern second oboist in pianissimo are easier". 1)

The tone possesses a "sweet, sympathetic quality" (Baines), and in comparison with the modern oboe "is less brilliant, less incisive and dramatic but fuller and warmer."<sup>1)</sup> The practice of vibrato playing, described in Garnier's tutor as a lip action, "was quite usual in the earlier (i.e. pre-Romantic) period",<sup>1)</sup> although it almost certainly was still regarded as most appropriate to the embellishment of a sustained note.<sup>2)</sup>

To Garnier, "le haut-bois est pastoral et exprime les plaintes amoureuses ...";<sup>3)</sup> to Grétry it was "champêtre et gai, sert aussi à indiquer un rayon d'espoir au milieu des tourments".<sup>4)</sup> The whole eighteenth-century tradition of expressive melody lay behind the instrument, but, as the second quotation makes clear, it was also associated (in France at least) with the image of the stage, as an instrument of dramatic potential.

It was only in the expanded military ensembles that the oboe was partially replaced during the present period. With the introduction to French bands of more clarinets, piccolos and extra brass instruments, the oboe suffered a decline, its volume of tone too small to participate successfully.

#### (4) The Clarinet

##### General comments

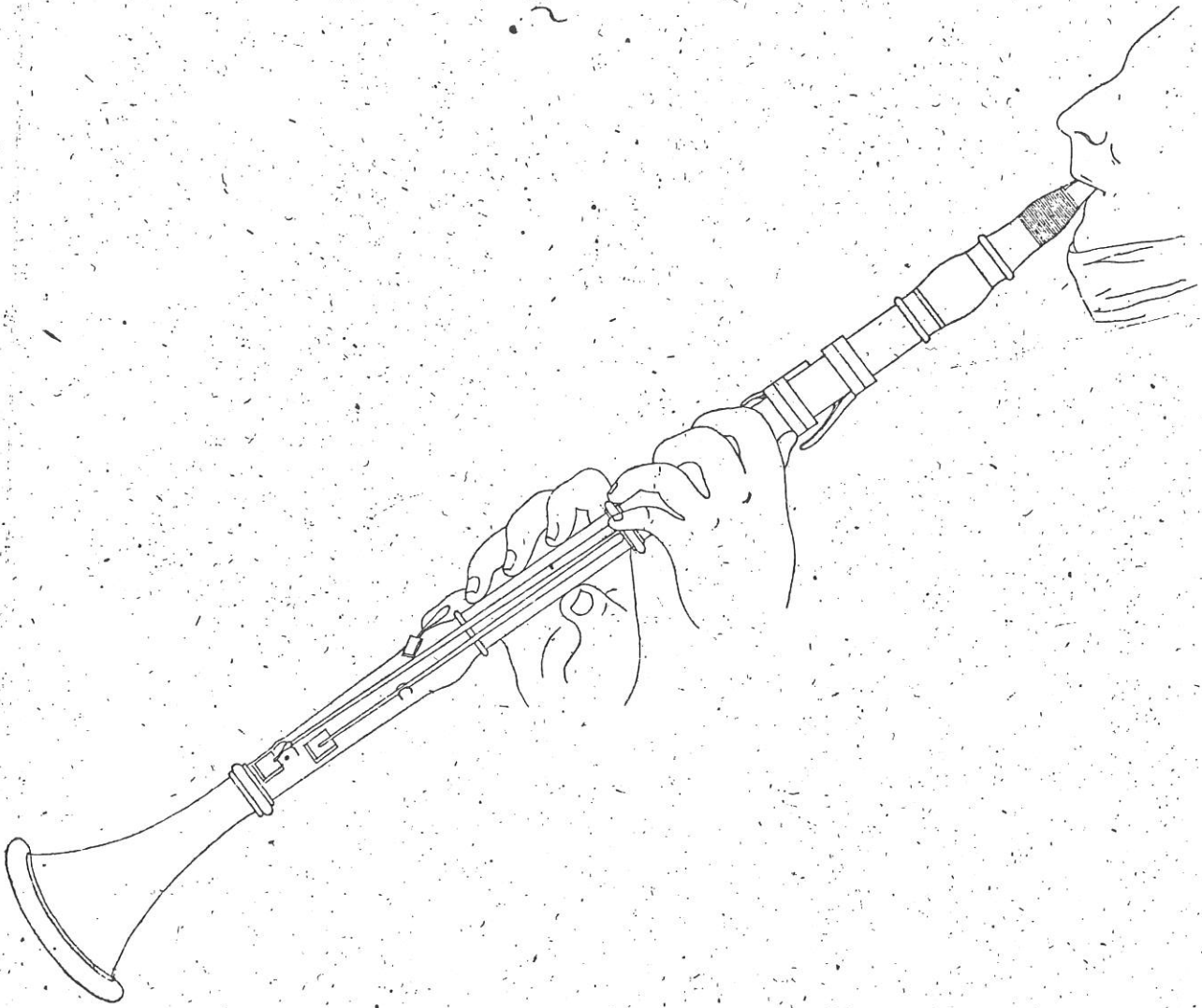
It seems certain that the majority of clarinets in 1789 were fitted with five keys. The two closed keys at the top of the instrument, relics

1) J. A. Macgillivray: op. cit. p.241. If true for some instruments, Marsh thought otherwise as a general rule: "... the notes at either extremity of its scale are less pleasing than the others; the two or three lowest notes being rather harsh, and the E and F in alt shrill and squally and only proper to be used in very full music"; Marsh/HINTS pp.63, 64.

2) Quantz/VERSUCH pp.165,166. Also Mozart/VIOLIN pp.203,204; and the letter from W. A. Mozart to his father of 4 April 1787 concerning the oboist Ramm: "... sein Ton ist ganz aus der Nase - und seine tenuta ein tremulant<sup>auf</sup> der orgel ..."; Mozart/BRIEFE, Vol.II p.276

3) Garnier/METHODE p.1

4) Grétry/MEMOIRES, Vol.I p.238



Clarinet, p.12 of F.J. Froelich, Vollständige theoretisch-practische Musikschule, 1810-11

from the old two-keyed clarinet, added a' natural and b' flat to the basic fingered scale of f natural to g' natural. The lower end of the instrument carried keys for low e natural, f sharp and g sharp, and their harmonics a twelfth above. It should be noted that cross-fingering was nevertheless still essential in its basic scale, resulting in several dull or out of tune notes.

The reed was positioned uppermost in the mouth, and was tied on with string.<sup>1)</sup> The French did not begin to change this way of playing until the 1830's. (Baines p.331)

From 1789 to 1810, however, seemingly more work was done in France on clarinet construction than on the oboe. At Lyons, J. F. Simi<sup>o</sup>et had provided new keys by 1808, and claimed to have a 12-keyed instrument in 1803.<sup>2)</sup> Ivan Müller's reformed instrument with thirteen keys was ready in Paris by 1812, or possibly even the year before.<sup>3)</sup> (Carse pp.159-160) The Parisian musician X. Lefèvre developed a cross-key for c' sharp which Carse (p.158, footnote) dates at about 1790. It is mentioned and accredited to Lefèvre by Vandebroek in about 1795 (p.45), several years before Lefèvre's own clarinet tutor confirmed the advance. Professional players, therefore, may well have used either the five or the six-keyed version.

Contemporary treatises bear out the general pattern. In 1772 a three-keyed instrument is implied by Francoeur's table of the clarinet's range. A tutor written about a decade later by van der Hagen<sup>4)</sup> similarly implies four or five keys, either with or without the one for f sharp; Carse (p.152) suggests that this note could have been produced by covering one of the two small holes provided for f natural. It is worth noting that Vandebroek mentions the sixth (c' sharp) key only after warning the reader of the disadvantages of using this device in the context of accepted

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- 1) Confirmed in Lefèvre/METHODE and in the engraving from Frölich, opposite.  
 2) Rendall/CLARINET p.89  
 3) Rendall/CLARINET p.93  
 4) van der Hagen/METHODE p.17

practice, i.e. on a five-keyed instrument. The latter was clearly the more prevalent at the time of writing.

In Choron's Traité Général of 1813 there appears the first mention of a possible seventh key:

"Comme les clefs dont on est obligé de se servir pour faire sur chaque espèce de Clarinettes le Si naturel et l'Ut dièze rendent l'exécution difficile, il faut en éviter l'emploi dans les morceaux de vivacité ... "

(page 35)

Carse (p.158) confirms that the b natural key was one of the first to follow the adoption of that for c' sharp, although the order in which new keys were added at this stage of the clarinet's history would be difficult or impossible to chart precisely. The presence of Choron's remarks in a published treatise does however suggest that the new key was more than an isolated phenomenon, and helps to emphasize the steady development and dissemination of construction techniques.

Baines (p.302) points out that while the upper register of the old clarinet is most satisfactory, the lower register is defective:

"some of the cross-fingerings are worse than on the one-keyed flute".

Lefèvre<sup>1)</sup> gives the following detailed specification, which is corroborated by Vandebroek in the cases of b flat, c' sharp, e' flat and especially g' sharp.

The image shows a single staff of music with a treble clef. Below the staff, there are eight notes with their respective accidentals: b-flat, b-natural, c-sharp, b-flat, b-natural, b-natural, c-sharp, and c-sharp. Below each note, there is a handwritten number indicating the finger used: 1, 2, 3, 2, 1, 2, 2, 2. Below these numbers, there are handwritten words: 'Too', 'high', 'low', 'high', 'high', 'low', 'high', 'high', 'high'.

Berlioz says also that b' flat was "mauvais sur l'ancienne Clarinette".<sup>2)</sup>

Crotch omits all consideration of the compass up to c' natural in his Elements of Musical Composition, and Marsh, speaking of the same region, says:

1) Lefevre/METHODE p.6

2) Berlioz/TRAITE p.150

"these notes, being very weak, are only proper to being used in mere accompaniment ". 1)

Lefèvre states:

"La clarinette a des sons sourds, d'autres qui manquent de justesse ... on parvient à modifier ces défauts, ou par le jeu des lèvres ... ou par le doigté".

The number of keys on the clarinet was regarded as something of a hazard, or a necessary evil, and this undoubtedly contributed to the retention of variously pitched instruments. Vandebroek's comment on notes necessitating the use of keys is:

"Voilà ce qui rend tous ces passages à dessus difficiles". (p.46)

Correspondingly, writers from Francoeur on were consistent about which were the most suitable keys in which any kind of clarinet might perform:

1772 Francoeur : C, F, G, B flat, E flat major

ca. 1795 Vandebroek: C, F, G major  
A, G, E minor (C minor "devient plus difficile)

1802-3

Blasius : C, F, G, B flat, D, E flat major

1813 Choron : as above

The continued avoidance of keys containing C sharp is noteworthy. Both Francoeur and Choron name c''' sharp and d''' sharp as difficult notes, to be quickly passed over.

The gradual upward extension of the clarinet's range is clearly demonstrated by reference to the table of ranges taken from contemporary writers. While most were agreed that notes above g''' were better avoided owing to shrillness (van der Hagen<sup>2)</sup> and Choron omit f''' sharp and g''' sharp altogether), the lower register was praised by Francoeur as "très douce et très agréable". p.18 et seq.) It would be wrong, therefore, to dismiss the chalumeau register merely on grounds of poor intonation. That its qualities were recognised in practice is seen from some exploratory

1) Marsh/HINTS p.64

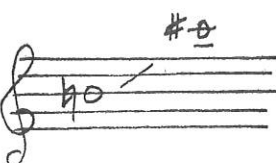
2) van der Hagen/METHODE

examples in the music. There was even an instruction current<sup>1)</sup> whereby the word "Chalumeau" meant that the succeeding passage should be played an octave lower than written; the instruction was cancelled by the word "Clarinette".

Reicha characterised the tonal areas of the clarinet in 1816 as follows:

1) 

"... très douces; on les emploie souvent pour briser les accords"

2) 

"... plus sonores et plus brillantes"

3) Above c'' sharp the tone was "difficile à adoucir".<sup>2)</sup>

Two further points applicable to different sizes of clarinet may be noted. First, the difficulty in obtaining a truly sharp staccato, owing to the uppermost placing of the reed in the mouth, and second, the following drawback in the use of the corps de rechange, pointed out by a later authority. This was the part of the lower half of the clarinet that contained the right-hand finger holes. (Baines p.299)

"Le système des corps de rechange en Si et en La, adaptés aux Clarinettes en Ut et en Si bémol, ne rendant pas les sons dans leur véritable justesse, a été abandonné ... " 3)

No earlier writer mentions this point; logically, however, it seems likely to have been a just criticism, and by its concern with the conflict between just intonation and the convenience of the player leads us to a discussion of the omnitonic clarinet.

1) Blasius/METHODE p.51 and elsewhere

2) Reicha/COURS p.254

3) Catrufo/INSTRUMENTS p.10. See chapter 6 for discussion of the corps in variously-keyed clarinets.

### Müller's clarinet

As early as 1802-3 Blasius had written of the difficulties of changing from one kind of clarinet to another, especially in cold weather, and of the desirability of an omnitonic instrument.<sup>1)</sup> The specification of a particular kind of clarinet had never been rigorously practised in France (see chapter 6) and the convenience of the player was what an omnitonic instrument aimed to satisfy. In 1812 a Parisian commission of composers and players reported on Ivan Müller's invention, and recommended the continued use of the variously-keyed clarinets.

"Nos clarinettes par leurs différentes proportions produisent différentes caractères de sons ... Il est incontestable que la nouvelle clarinette, si elle était exclusivement adoptée, priverait les compositeurs de la ressource que leur donne l'emploi de ces caractères très-distincts." 2)

It will be noted that the report was not opposed to technical advance; it stated, "exclusivement adoptée," and was merely advocating the highest musical standards available. The favourable report by the Conservatoire on the four-keyed flute in 1804 has already been quoted. To say that the commission on Müller's clarinet demonstrated the conservatism of the Conservatoire staff who formed the committee of enquiry is misleading;<sup>3)</sup> given the imperfect state of key construction at the time not even Müller's acoustical improvements could make his instrument a convincing replacement for all types of existing clarinet, as he claimed it was.

Indeed, when Baillot mentioned Müller's instrument in his address to the Conservatoire prizewinners on 11 December, 1812, it was the mechanical deficiencies of the attempt that he singled out, not the tonal ones; moreover, he went on to say that the examining commission welcomed Müller's new alto clarinet. According to Carse (p.167) this used the same thirteen-

1) Blasius/METHODE p.46

2) Quoted in Rendall/CLARINET p.93

3) Rendall/CLARINET, ibid.

keyed system as the proposed "omnitonic" clarinet:

"Une nouvelle clarinette, et une clarinette alto perfectionnée, toutes deux proposées par M. Müller, et faites par lui, ont été aussi l'objet d'un examen. La première a été imaginée pour suppléer à l'usage des corps de rechange et jouer dans tous les tons; les moyens employés à cet effet ont paru avoir des inconvénients; mais la commission n'a pu s'empêcher de donner des éloges,<sup>1)</sup> à la manière dont M. Müller a perfectionné la clarinette alto ... "

Popular judgement is always likely to be the arbiter of practical alternatives; and so the most convincing evidence of the unpracticability of the "omnitonic" clarinet of Müller is the fact that Carse (p.160) found no evidence of its popular adoption "till towards the middle of the nineteenth century". Although the need to remedy the inbuilt inaccuracies of the 5 or 6 keyed clarinet was realised, these instruments were certainly those in current use in France up to and beyond 1810.

#### Tone-quality

The tone-quality of the variously-keyed clarinets will be discussed in the context of their usage, chapter 6. Overall, the tone underwent considerable change in the early part of its French career. Originally the instrument has been characterised as,

"embouchée d'une manière acerbe et criarde, n'était jamais employée pour accompagner la voix." 2)

Considering that it was often thought of as a sort of oboe and sometimes played by oboists, it is quite likely that the sound was at first unrefined. By 1802 a new generation of players had learned the clarinet, and Lefèvre writes of it as follows:

"Elle rend également bien l'hymne du guerrier et le chant des bergers ... " 3)

Grétry gives a particularly sensitive account of his impression of clarinet

1) Pierre/CONSERVATOIRE p.910

2) Castil-Blaze/ACADEMIE, Vol.II p.348

3) Lefèvre/METHODE p.17. John Marsh, writing of English conditions, made the important point that, compared to the oboe, the clarinet was "a much easier as well as a more powerful instrument". (My italics) Moreover, "Owing to the more simple construction of the clarinet, great accuracy of tune is not to be depended on, or neatness of execution when more than two sharps or flats are required"; Marsh/HINTS p.64. Crotch said that the clarinet "is naturally a very powerful instrument": Crotch/ELEMENTS p.115.



sound; there is no suggestion of ineptness at all, but rather of those qualities that we might today describe:

"La clarinette convient à la douleur, moins pathétique cependant que le basson: lorsqu'elle exécute des airs gais, elle y mêle encore une teinte de tristesse. Si l'on dansoit dans une prison, je voudrais que ce fût au son de la clarinette". 1)

Baines (p.302) says that the tone of the upper register

"is smaller and more piping than on modern instruments, but the cross-fingerings are first-rate and every note offers a resistance that encourages the most expressive cantabile that it is possible to imagine from a wind instrument."

#### (5) The Bassoon

The eighteenth-century bassoon was one of the most individual voices of the orchestra, and attempts to devise new keys or designs in order to even out the tone throughout the compass or to facilitate chromatic passages fall after the period with which we are concerned. The standard instrument in 1789 had eight finger and thumb holes giving a diatonic scale from G to g and either five or six keys providing for A flat, F, E flat, D and BB flat and possibly F sharp. The low notes BB natural and C sharp were unobtainable <sup>except</sup> by half-closing note holes. (Baines p.286, Carse pp.189-190)

The upper limit of the bassoon is variously given by different contemporary writers, and doubtless depended considerably on the skill and taste of the player. The notes a' flat and a' natural, overblown from the second octave, are more usually quoted; Francoeur's b' natural is exceptional

L. Langwill<sup>2)</sup> points out that the 1803 edition of E. Ozi's bassoon tutor illustrates a seventh key for a' natural; it is uncertain whether French players before 1810 knew of the other "high" key introduced at about this time, that for c'' natural described in Carse (p.191). Carse merely says that Simiot (Lyons) and Porthaux (Paris) made "new keys and other

1) Grétry/MEMOIRES, Vol.I p.237

2) Langwill/BASSOON p.49

modifications" at some date soon after 1800. Details of the reeds used on old bassoons are given by Baines. (p.287)

The individuality of structure of the old bassoon led to well-known eccentricities of intonation:

"(the bassoon) laisse beaucoup à désirer sous le rapport de la justesse ... " 1)

To Vandebroek it was "naturellement un peu sourd" (p.61). Choron distinguishes the tone-quality between the low and high portions of its register:

"Les sons de la première octave et même une partie de la seconde se distinguent foiblement de ceux de la Basse ... mais à partir du Fa  $\sqrt{i.e. f}$  jusques à la fin de la troisième, tous les Tons sont très distincts". (p.52)

The lowest notes were naturally problematic<sup>2)</sup> and therefore Vandebroek says:

"il ne faut jamais donner de la difficulté passé ce sol en bas (G)".  
(p.61)

Indeed, in wind sextet writing, "les Sons bas du Basson forment un bourdonnement qui embouille et nuit à l'harmonie." (Choron p.56) A natural was an especially bad note. Reference to the range tables shows an absence of suggested prohibitions in the upper range which suggests the importance allotted to the tenor region of the bassoon by French composers.

Blasius<sup>3)</sup> and Vandebroek agree on C, E flat, F, G and B flat major as the most suitable bassoon keys. Blasius puts forward D, and Choron adds A major. Minor keys might be C, D, E or G (Vandebroek) with A and B (Choron). Choron adds that F major is "très agréable" on the bassoon, but F minor even more so, given slow music.

1) Berlioz/TRAITE p.128

2) Although C sharp had no key, no writer says that it was unobtainable. Some writers mention AA natural, only obtainable by relaxing the lips fully. (Carse p.189)

3) Blasius/METHODE

In view of Berlioz's remark quoted earlier, it may have been true that players were uncritical of tuning, since in Macgillivray's view

"Cross-fingerings respond even better than on the old oboe, largely because the holes of the extension, especially the right thumb hole, can be used to alter or steady various notes." 1)

Baines (p.287) characterises its tone as "irresistably sweet and beautiful; something like a well-played modern French bassoon, but a little softer, more firm and compact, and rather cello-like".

It was primarily melancholic to the eighteenth century:

"Le basson est lugubre, et doit être employé dans le pathétique, lors même qu'on veut n'en faire qu'une nuance délicate; il me paroît un contre-sens dans tout ce qui est de pure gaîté". 2)

#### (6) The Horn

There were two kinds of hand-horn in use in France at the end of the eighteenth century, one for normal orchestral playing and the other for solo work.

The former incorporated a set of terminal crooks, one for each key required. The mouthpiece was fitted directly in to the crook, which in turn was slid on to the main body of the instrument (Carse p.217, also Plate XVII). The French treatises and tutors of the time are inexplicit as to the physical details of crooks, but give information as to which keys they provided for. The basic coil of tubing was roughly eight feet long, giving the harmonic series in C alto; the crooks increased the length of the whole tubing as far as eighteen feet, which gave the series in low B flat.

Francoeur (p.37) lists the following keys available on the horn: C (basso), D, E flat, E natural, F, G, A, B flat and B natural. Choron reproduced this list in 1813. Francoeur's assertion that the C alto horn

1) J. A. Macgillivray: The Woodwind p.242 in Baines/INSTRUMENTS

2) Grétry/MEMOIRES, Vol.I p.237

was not used owing to its shrillness is repeated by other writers (Domnich, Choron) and is also borne out by experience of the written music. Vandebroec treatise mentions precisely the above keys, but in his horn tutor<sup>1)</sup> he mentions in addition the low B flat horn as suitable for quieter pieces. This instrument is not uncommonly asked for in French scores of the period, but the introduction to Domnich's tutor<sup>2)</sup> claims that

"On se servait aussi avec succès, il y a quelques années, de deux tons que les Cors mixtes ont fait entièrement tomber dans l'oubli; ce sont ceux de si bas et d'ut à l'octave."

Nevertheless, Domnich gives the B flat horn an entry in the descriptive section on variously-keyed horns. That it had not fallen completely into disuse may be inferred both from the music and from the fact that while a foot-note to the C alto horn (also given an entry in the descriptive section) states that

"... depuis longtemps on n'en fasse plus usage en France", the low B flat horn is given no such qualification. R. Morley-Pegge has claimed<sup>3)</sup> that a coupler was used to convert a C into a low B flat horn, and that separate B flat crooks were, or are, rare. This is, if true, clearly one reason why the type is omitted from Vandebroeck's Traité, but it does not fully explain the contradictions in Domnich's remarks, which will come under consideration below.

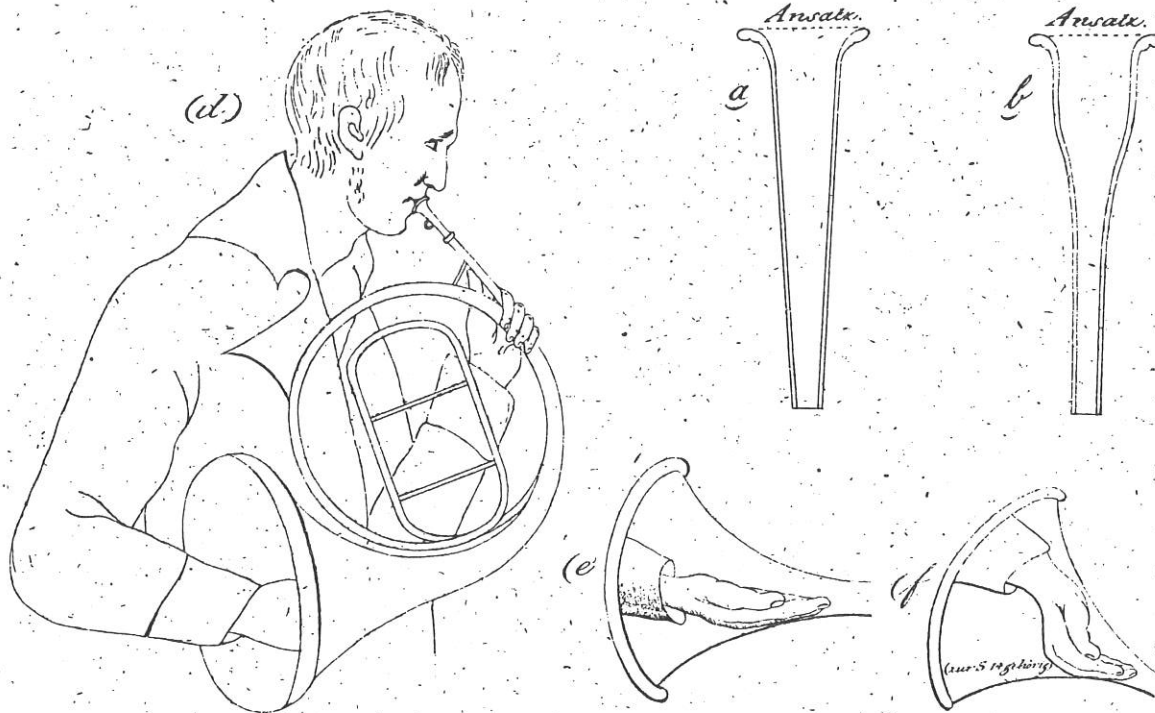
The second type of hand-horn, used for solo playing, had a fixed mouth-piece. Its crooks were inserted in to the central part of the instrument instead of at the playing end. The "cor-solo" as it was known, was originally designed in Germany (as the Inventionshorn) but reached a new level of technical perfection at the hands of the Parisian maker Raoux.<sup>4)</sup> Since horn solos were uncharacteristic in the extreme keys, these instruments could

1) Vandebroeck/METHODE p.27

2) Domnich/METHODE

3) Morley-Pegge/HORN p.20 et seq.

4) Morley-Pegge/HORN p.20



aus 2 Stücken zusammengesetzte Rohr z. B. dem Nagollisten ist, das sind die Lippen dem Hornisten. So wie dort die verschiedene Modification der auf dem beyden Schienen des Rohres erzeugten Erzitterungen die Verschiedenheit des Tones gibt, so verhält es sich hier mit den Lippen. So wie dort der Stoß mit der Zunge das Mittel ist, um gleichsam die verschiedenen Schwingungen zur Einheit zu verbinden, gleichsam einen Ton zu fixiren, so ist es auch hier. Diejenigen also, welche glauben, daß die Zunge den Ton bilden könne, irren sehr, und der Schüler muß daher die oben gegebene Erklärung um so genauer fassen, und sich in der Methode seinen Ansatz zu gewöhnen oder die Art Töne auf diesem Instrumente herauszubringen, um so pünktlicher da nach richten, als sonst kein guter singender Ton auf diesem Instrumente zu erhalten ist, welche als die Hauptzierde eines braven Künstlers auf diesem Instrumente, das besondere Augenmerk des Schülers seyn muß. Während dem die Zunge die Töne ausstößt, muß man die Sylbe ta oder da aussprechen, aber nur blasend, ohne dazu zu singen. Obgleich eigentlich der Consonant den meisten Einfluß auf den Ton hat, so ist es doch gut, wenn sich an demselben ein Vocal befindet, welcher dem Munde die natürlichste freieste Richtung läßt, die gehörige Luftmasse halten, und selbe so nach Erfoderniß zu dem hervorzubringenden Tone verwenden zu können. Der Vocal a wird als der hier zu tauglichste allgemein angenommen.

Der berühmte Hornist Piccini gibt sogar die Regel, bey den fest und lebhaft mit der Zunge anzustößenden Tönen davon in das Instrument zu sprechen, von welchem er sagt, daß es die nämliche Wirkung habe, wie ein Hammer, der an eine Glocke schlägt, und in dem Trichter des Instrumentes den tiefen Ton hervortringe. Wir werden späterhin mehrere seiner Beispiele zur Übung mit dieser Bezeichnungsort noch angeben.

Da, wie es oben schon angedeutet wurde, die Töne durch die Reibung der Lippen erzeugt werden, so folgt, daß hierzu weder die Gurgel, noch auch die Brust darf gebraucht werden. Anfänger haben häufig den letztern Fehler, indem sie dadurch einen starken Ton aus dem Instrumente zu bringen hoffen. Es ist daher sehr gut, wenn man dem Schüler auf dem bloßen Mundstücke sich üben läßt, durch die gehörige Reibung der Lippen eine Art Ton hervorzubringen, indem derselbe so leichter auf die

only take five crooks: D, E flat, E natural, F and G. Both types of horn possessed a tuning-slide.

There was a difference in the size of mouthpiece used by the first and the second player in the orchestra. That for the second hornist had a greater diameter and a broader conical neck; Duvernoy has engravings of both types in his Méthode.

Two positions were used for holding the instrument. The normal one, identical to present-day practice, had been in use ever since the advent of hand-stopping (see the illustration from Froelich on opposite page). The other, with the horn held with the bell uppermost in the old hunting manner, was quite frequently asked for in orchestral music in France during the period 1789-1810; the instruction was usually "les pavillons levés", or even simply "pavillon". (See illustration overleaf)

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#### Musical evidence

The distinction between horns in low and high B flat only appears to have been made in full scores from 1795. Dalayrac's Adèle et Dorsan of that year is the first of 15 French and 2 Italian works that I have seen that were issued up to 1810 and which specified one or the other or both. It therefore remains uncertain which kind of B flat horn was required in earlier works, unless the high crook was only brought into general use during 1795. That special requests were usually for the alto instrument suggests that this one was the newcomer. The style of music containing the alto B flat horn after 1795 was often fast and brilliant, and this fact might serve as evidence in cases of doubt after ca.1795.

Changes of crook became commoner within single movements and sometimes were demanded to be carried out with great speed after 1789. Already in 1788 (see reproduction of MS part-book opposite page 186) Cherubini asked

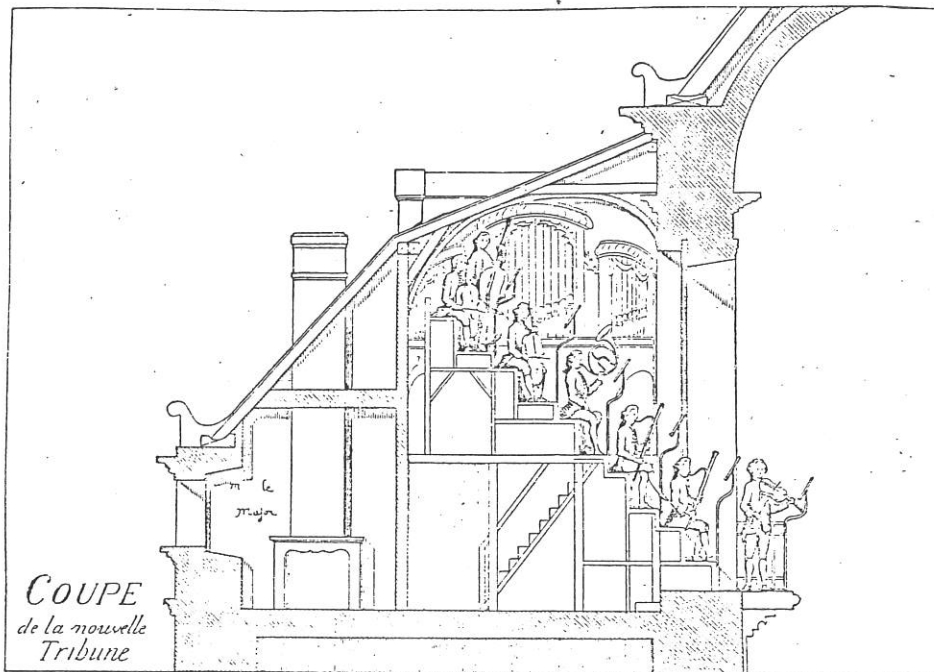


Fig. 129.—Section of the new orchestra of the King's chapel at the chateau of Fontainebleau (from a manuscript in the library at Versailles, 1773).

Reproduced from p.293 of J.E. Matthew, A popular history of Music, London, 1888

for changes within a few bars of recitative. Dalayrac's Adèle et Dorsan contains a change from D to F crook in five allegro bars, Boieldieu's Beniowsky (1800) from G to D in three allegro bars, and Spontini's Julie (1805) from D to G in a single common-time bar.

#### Tonal character

There was a certain mystique attached to the horn in France at the period under consideration. Either because of the rise to prominence of travelling virtuosos like Punte or because of the consolidation of hand-stopping technique (but certainly not because of the possibilities of orchestral horn writing) interest in the instrument increased steadily. This interest is strikingly revealed in the demand for instruction books.<sup>1)</sup> Not only were more méthodes published for the horn than for any other instrument during the period, but sections dealing with horn playing in general treatises (Vandenbroeck, Choron) are far more extended than any other

In spite of this, it is even harder to be precise about the sound and style of hand-horn playing than it is about any other of the commoner wind instruments. This is due both to the virtually complete disappearance of the hand-stopping technique and to the changes in form of the instrument in the intervening time. Part of the dilemma resides in the fact that although there were distinct and well-known qualitative differences between open, half stopped and fully stopped notes, the aim of the player was to disguise these differences as much as possible. At the same time it is obvious that more sensitive composers utilised the tone of stopped notes for special purposes.

In addition there was excitement in the discovery that the horn could be a relatively chromatic instrument and dismay at the seeming abuse which could occur through unstylistic (in the traditional sense) writing and

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<sup>1)</sup> See for instance the famous poster for the first performance of Spontini's La Vestale, 15 December 1807, where Duvernoy's name is in the boldest type-face of all.



(Horns in F)

*Soli*  
*mp*  
*pp*  
*changez les Cors  
En Re*

*Amide*  
*arrête impie arrête et change de sic*

*Sygdame*  
*f*  
*time*  
*pretres cest votre*

*Dieu quel'on ose outrager*  
*tra*

*els = Dans votre sang cet autel s'anna*

Horn part-book of Cherubini's *Démophon* (1788) [reduced in size]

playing. No doubt these divergencies of opinion were manifest in the playing styles then current, rendering the task of reconstruction even more difficult.

The size and shape of the mouthpiece of the horn, as well as differing between those for the first and second player, differed from twentieth-century designs in their thickness and degree of tapering. This would help to create a tone fundamentally contrasted to that of present instruments; the narrower bore of the whole instrument, especially, must have produced a thinner, purer sound.

As did the variously-keyed clarinets, horns produced very contrasting kinds of tone-quality when crooked in different keys. The descriptive remarks that follow are the most vivid written guide that we possess to the tone of the orchestral and solo instruments at the period. The remarks all reflect one property intrinsic to an instrument that could vary between eight and eighteen feet long: that the greater time taken to create an air movement in a longer tube restricted articulation.

"Les successions rapides sont d'autant plus difficiles sur le cor que son ton est plus grave." 1)

The horns in the highest keys sounded something like trumpets not least because they had exactly the same length of tubing as a trumpet of the time. However, the shape of the horn's mouthpiece and the short air-column made complicated music impossible to execute.

The middle-keyed instruments, especially E, E flat and F, gave the cleanest sound and were the easiest to make speak. Soloists used these keys constantly, and the discovery of their easy manageability by average orchestral players was at the root of the controversy over cor-mixte playing (see below p.195).

"Les Cors dont il faut se servir pour les Concerto ... sont ceux de D-la-ré, d'E-si-mi bémol et naturel, et d'F-ut-fa. Tous les

1) Berlioz/MEMOIRES p.173