MÉTHODE DE COR-ALTO ET COR-BASSE

Louis François Dauprat
translated by Jeffrey L. Snedeker

Louis François Dauprat's *Méthode de Cor-alto et Cor-basse* (*Method for High-Horn and Low-Horn*), published in Paris in 1824, has long been hailed as *magnum opus* of horn pedagogy. Its sheer bulk, over 350 pages, is as overwhelming as its contents. Though in its time the precepts and structure upon which it is based were not new to horn players or teachers, this method is unique because of the range of issues and the depth of discussion Dauprat presents. Its value is twofold: it not only offers a historical perspective on performing practices, but many of the technical and performance issues it addresses are relevant to horn-playing today. Dauprat's goals were the same as any good horn teacher of any time: to approach the horn with appreciation and intelligence, to take what the instrument gives and to get the most out of it, using its limits in one's favor, in order to make coherent and affective music.

It seems unnecessary to restate biographical information about Dauprat in this article, particularly since so many other useful resources are available. Several authors have compiled information about Dauprat's life and work, most notably:

Morley-Pegge, Reginald. *The French Horn.* 2nd edition. New York: Norton, 1973. See especially pp. 97-104, 158-159.

Coar, Birchard. *A Critical Study of the Nineteenth-Century Horn Virtuosi in France.* DeKalb, IL: Coar, 1952. See pp. 66-89, 147-150.

Greene, Grady Joel. "Louis François Dauprat: His Life and Works." EdD diss., University of Northern Colorado, 1970.

Morley-Pegge's discussion, in the context of a broad survey of the history of the horn, shows Dauprat as a teacher first and a performer second. It was his performing ability, however, that obtained for him a variety of positions, culminating in the Opéra orchestra (1808) and the Paris Conservatoire, where he taught from 1802 (as an assistant professor; full professor in 1816) until 1842, when he retired. He was succeeded by a former student, Jacques François Gallay. Coar's discussion focuses primarily on the *Méthode*, and less on biography. His placement of Dauprat in the context of his contemporaries is quite helpful, and his long quotations from the first part of the *Méthode*

itself are very useful as a means of clarification. Greene, in addition to compiling a significant amount of biographical material, chose to focus on Dauprat's compositional style, including his approach to orchestration and his ideas on embellishment and ornamentation. Greene's study culminates in a survey of Dauprat's musical works, offering little information on the method itself.

Thus a translation of Dauprat's *Méthode* is timely. The purpose here is not to provide a complete, unabridged version of the entire method. Rather than fill these pages in this and ensuing volumes of the *HBS Journal* with more than 750 musical examples, my objective is to present here, in installments, the text of the method in a form that will encourage the interested reader to proceed further, to the examples themselves. A complete French version is available on microfilm from the University of California, or in paper form from Richard Seraphinoff and Viola Roth, Birdalone Books, 508 North College Avenue, Suite 333, Bloomington, Indiana 47404-3831. It is to Richard that I owe particular thanks for allowing me access to a copy of the method. It is also important and relevant to mention that Birdalone Books is currently planning to publish another translation of Dauprat's method, with a facsimile. It is hoped that passages found here to be difficult, due to changes in interpretation and understanding over time, will be clarified with additional perspectives. Dauprat's method is easily deserving of this level of investigation and consideration.

The method is organized in two large parts, consisting of a total of forty-seven "Articles" (27 in Part I, 20 in Part II), containing 30 "Lessons," 12 "Studies," and 700 "Exercises." All of the Articles offer commentary regarding subjects ranging from mechanics of playing technique and horn construction to practical suggestions for performing practices (e.g., ornamentation), as well as advice to students, teachers, and composers regarding style and taste, and performance considerations. The principles of organization are not new; the structural and practical similarities of the method with its predecessors, such as those by Duvernoy (Frédéric Duvernoy, *Méthode pour le Cor*. Paris: Conservatoire Imprimerie, 1802) and Domnich (Heinrich Domnich, *Méthode de Premier et de Second Cor*, Paris: Conservatoire Imprimerie, 1808), are obvious to the eye. As mentioned previously however, this method is unique because of is its scope. Issues are usually grouped into broad general articles, and then separated and explored individually. The depth of these discussions make this work one of the most comprehensive pedagogical works for any musical instrument. It remains one of the most important primary resources regarding the evolution of the natural horn. Through Dauprat and his successors, hand technique advanced to the point that the natural horn was considered a fully chromatic instrument, slowing the acceptance and use of the valved horn. The latter instrument certainly existed in 1824, but did not arrive in France until two years later.

I must credit Gaëtan Chénier for his invaluable input and advice in the prepartion of this translation. Inevitably, decisions must be made regarding style and tone of the text. The decision here was to try to preserve as much of Dauprat's style as possible, even at the risk of occasional confusion and awkwardness in sentence construction. Patience

in reading will generally be rewarded. Dauprat's capitalization and italicization have been preserved. Brackets [ ] represent words, ideas or explanations provided by the translator or editors for clarification. Some punctuation has been added for similar reasons. Dauprat's footnotes have been converted to endnotes and numbered consecutively to avoid logistical confusion in the body of each article.

[title page]

—J.L.S.

METHOD
for High-Horn and Low-Horn
(first and second Horn)

Composed and Dedicated

to Messrs. COMPOSERS, Members of the
Music Section of the Royal Academy of fine arts,
Institute of France

by

DAUPRAT

Professor at the Royal School of Music and Declamation

1st Part

Price:	1st Part	36 francs
	2nd Part	36 francs
	The two joined together	60 francs

Paris, Schonenberger [publishing] house, 10 Poissonniere Boulevard

[introductory page]

GENTLEMEN

In those unfortunate days, when political tempests had scattered the distraught Muses, those who handled the Cithara and the Lyre had fled like their sisters. Honor to the courageous Citizen who succeeded in opening a sanctuary for them! Honor to the founder of the [Paris] Conservatoire... to SARETTE! Honor to you, GENTLEMEN, who, [as] the dignified priests of this new Temple, have decorated it with the fruits of your vigils and with the products of your genius! Guided not only by your learned lessons and by those of the particular masters which you had chosen, but inspired still by your works, a host of students have [sic] graduated from the Conservatoire, and uphold today, by their distinguished talents, the reputation of this school, famous almost since its birth.

Without claiming to include myself in this brilliant elite, I glorify myself with no less than the title of one of the oldest students of the Conservatoire. Having become Professor in my turn, at this establishment, I have worked at making up through zeal for what I was lacking in other respects: I have worked; above all, to be deserving of the honor given to me, by passing on to my students such paternal solicitude as of which I had been the object. Finally, I have had the ambition, foolhardy perhaps, but excusable, to add something to the work of my predecessors, and to enlarge a little the sphere and domain of the instrument upon which I was called to teach.

Such is, GENTLEMEN, the spirit which has directed me in the carrying out of my functions, and which has suggested to me the idea of the Method of which I hope you will accept the dedication.

I do not close my eyes to its [the Method's] imperfections; but if you do not find it at all unworthy of a vote as enlightened and as honorable as yours, I will be [all] too compensated for the efforts which it has cost me; and even already, I am getting a sweet reward from it, since it gives me the opportunity to express to you publicly, both my admiration for your talents, and my sincere gratitude.

DAUPRAT.

Paris, 1824.
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PREFACE

The [Paris] Conservatoire de Musique, instituted in 1795, has given musical art and its different branches a stimulus, an impetus which has spread to all of France, and even abroad. The elite of composers, instrumentalists, and singers of this time, brought together to train students; a body of doctrine composed by them to serve the teaching of the art's different parts; the encouragements and the protection granted to this establishment by all successive governments; the awards given to the students who have most distinguished themselves,... have rendered the French happy rivals of two neighboring peoples from whom they primitively held their musical instruction.

The French singers upon which our Paris theaters pride themselves have no cause to be jealous of Italian singers; and the German masterpieces in instrumental music seem to have been brought to France, in order to show, in all its development and in its greatest sound, the genius of their authors.

In France, the Violins and Violoncellos for a long time had well-crafted music, making up a course of studies [which was] more than complete, of which the VIOTTIS, the KREUTZERS, the BAILLOTS, the BOCCHERINIS, the DUPORTS, the BOMBERGS have, in our century, identified the goal and set down the limits. But the compositions for wind instruments were weak, and the works intended for their training were still telling on the infancy of the art: the artists who practiced and taught these instruments, mostly foreigners, and coming from the regiments or private service of German Princes, had sacrificed to the mechanics of superior performance, the study of Harmony and Composition; knowledge rightfully expected today by any good professor.

A few composers tried in vain to perfect the art of performance: routine, old habits, generally accepted style prevailed; they were constrained to yield. Therefrom, the uniformity in the phrasings, the conventional virtuosic passages, or furnished by the performers themselves, the obbligato Cadenza for several instruments,[1] the *Rondeau en Chasse*

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for Horns, or the Echo with mutes, and other consecrated outworn ideas. [Translator's note: The term, *Rondeau en Chasse,* is unclear; possibly a Rondo in a hunting style or involving some type of imitation-- "chasing".]

Thanks to the establishment of the Conservatoire, taste has been refined; wind instruments have patterned themselves after string instruments and singers for the phrasing of their music, as well as for the style of performance; and we have learned to recognize such things as MUSICAL SENTIMENT, WARMTH, ENTHUSIASM, GENIUS, in performing the compositions of GOSSEC, MÉHUL, CATEL, CHÉRUBINI, LESUEUR, BERTON, BOYELDIEU, with which are mingled, without weakening

them, the masterpieces of LEO, JOMELLI, HAYDN, GLUCK, MOZART, CIMAROSA, PAESIELLO, whose existence was pleasantly revealed to us, and [whose] divine beauties we were made to feel.

Having succeeded finally to teach in this very same School where we had been taught, and our masters having motivated us to finish our musical studies, we devoted ourselves, as much as it was within us, to perfecting the study of the Horn, or rather to give a new vitality to this instrument which appeared headed toward its decline, due to the disastrous introduction of the *Mixed Style*; a style which produced good artists for Solo playing, but ill-suited to orchestral work; an inconvenience which, for a long time, had been making itself felt.

However, the goal of the Conservatoire was to produce Artists [who were] as skillful in accompaniment at the Theater, at the Chapel and in the Concerts, as [they were] suited to shine in Solo [work]; one desired, in a word, that they combine business with pleasure, and the mixed style sacrificed one for the other. Young people, seduced by the facility of this style, were now familiar with only one single Key for the Horn [2] (that of F), and a sort of Music [that was] contained, more or less, within the limits of an octave and a half. Low and high keys [note: in this case, crooks] were no longer played [upon], even in the orchestra where the middle keys served to transpose the accompaniments of pieces written for the two other classes of Keys [i.e., high and low]. It is useless to say what monotony of effect, what poverty of sounds, what mistakes of harmony resulted from these continuous transpositions. To sum up, the Horn, in restricting thus the resources of composers and the faculties of performers, lost almost all of its advantages.

It was thought that a good Singing method was the best model to follow for those whose object is to imitate the voice on instruments which often compete with it [the voice]; but this assimilation has its limits: generally, the range of instruments

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is considerably more than that of voices; their means of execution are more varied, their mechanisms, more or less intricate, change with each scale, with each trill, with each Grupetto, etc. while that of voices stays the same, whatever the Range of the scales and of the music's various ornaments.

The natural sounds and the false or artificial sounds of the Horn,[3] are always in the same places, no doubt; but the latter and the former, more or less multiplied, modified in different ways, according to what the nature of the mode or that of the Keys calls for, impede the custom, the uniform movements to which the hand in the Bell had become accustomed, in the over-extended practice of a single scale, or of a single mode. It was thus a defect with Horn Methods to offer, more or less, only exercises in the single major scale of the Key or crook adapted to the beginner's instrument; since on the author's own admission, these exercises would soon tire the student's patience if one did not intersperse them with melodic pieces proportionate to their progress, appropriate to their acquired means. Now, any melody, as easy as one [can] imagine, modulates at least to

the Dominant: there is then an altered note, an F# which was unknown to the student, and which brings him to a stop. If the melody then goes on to the sub-dominant, there is a Bb, another stumbling block.[4] Finally, any melody, without departing from the strictest rules of modulation, can go into the three minor scales, relative to the preceding, and there are three more *Accidentals* (a G#, a C#, a D#), of which the student had no idea before beginning the execution of the first melodic piece. The master must then enter into late or displaced explanations. No doubt, it is advisable to have the student practice on the major scale

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most natural to the Horn; because, in this scale, the Tonic, the Mediant, the Dominant, as well as their octaves, are natural notes; because the false notes here are less multiplied than in most other scales; but as soon as the student has finished the study of elementary lessons on the formation of sounds and on Intervals, in the scale of C major, it is appropriate to accustom him to the other major and minor scales with one sharp, one flat, two sharps, two flats, etc.

The material we have just explained forms, in our Method, a work on its own, rather extensive. We have combined to it the application of all kinds of articulations on one or several given passages; the study of chromatic scales, and even of enharmonic scales which make the student sense the relationship between sounds so well, and accustom his ear to perfect intonation: then, the study of all kinds of chords, (broken chords) namely, whose different notes, heard successively, permit modulation, and all sorts of transitions.

There we have at least a general survey, which was missing from existing Methods, and such are the reasons which have made us undertake this one [method].

Divided into three parts, the first contains articles that instruct the student in all he must know before trying to form sounds. Next follow thirty Lessons, each of them presenting exercises all of the same nature, that is to say, which, similar in their object, had to be classified in the same series.[5]

Those for HIGH-HORN and those for LOW-HORN have been placed on facing [pages]. This arrangement, more convenient for the professor, and which prevents the repetition of explanations common to both genres, has sometimes offered rather great difficulties so as not to isolate the precepts from the examples; an inconvenience we wanted to avoid. Thus, the explanations immediately precede the lessons; or, when that

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could not be done, we have placed them in notes, and at the bottom of the pages, where the examples to which they are related are found.

The second part contains a great number of exercises or passages of progressive difficulty, and classified according to measures with 2 beats, with 3 beats, and in 6/8.[6]

The student who profits from the lessons in the first part will possess a sufficient

understanding of the instrument to be able to devote himself alone to these exercises which will make him familiar with all kinds of difficulties. Advice to students and to those who, after having finished their studies, destine themselves to Professorship, as well as instructions for the different styles of music, and for all that is related to musical performance, ends this second part.

Finally, in order to give this work a more general usefulness, we have added a third Part to it, addressed to young Composers, in which we acquaint them with all the resources of the Horn, as well as with the different ways of employing this instrument in Solo [work], in the accompaniment of voices or of instruments, in multiple-part Horn music, without accompaniment, and within the orchestral masses. Such are, in substance, the order and the composition of this work, in which each subject has been treated with the details and the pains for which its importance called.

[We are] happy if our work contributes to the perfecting of the art, and if we justify the confidence of the masters and students who will adopt our method.

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FIRST PART

FIRST ARTICLE

ON THE PRESENT FORM OF THE HORN.

The actual form [shape] of the Horn is, without question, the most elegant and the most convenient to be found; but its pattern is still not well-defined[7] and although at first sight, all the Horns of the different makers in Paris appear to have a common shape, by examining them carefully, one notices differences in them, more or less appropriate proportions, more or less well-calculated, even in instruments coming from the hands of the same Maker. Meanwhile, the Pattern of a Horn, like that of any other instrument, is not an indifferent thing: [if] too small, it can facilitate the execution of high notes; but it does not permit a great expansion of Sound, especially in the low notes. The narrowing of the upper part of the bell impedes vibrations; or its too-sudden flaring contrasts with the proportions given to the circumference of the *Keys*[8] or crooks, and to that of other branches or tubings of the instrument. [If] too big, it procures a more considerable volume and a more beautiful tone quality, while rendering the Horn easier to play, principally in its lower range; but it also demands a greater output of breath; the high tones become difficult to attain, and the quality of these tones is inferior to that which one gets out of the low Keys, in ordinary Horns or [those] of an average Pattern.

The latter appear to be the most suitable to the two types of Horn, inasmuch however as their proportions are modified according to what each type demands. These modifications are to be found primarily in the Bell, where the sounds are formed: [if] wider, it

suits the Low-horn better; [if] narrower, it suits the High-horn better.

It is only to be desired that one could do away with the two bends which the slides form in their lower part, so that their tubing could always be as rounded as possible. These bends can only hamper, stop the free circulation of the air and impede its vibrations. This is an attempt that Mr. Bellonci (member of the band of H.M. the Emperor of Germany) has made and in which he appears to us to have

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succeeded completely; but since his idea, as ingenious, as simple as it is, naturally remains his property (which, by the way, he shall soon make known), we cannot permit ourselves to betray his confidence. We will say only that Mr. Bellonci's Horn, such as he has built almost entirely by himself, combines all the qualities a performer can ask for: that is to say, which permits him to give the sound all the volume or all the softness possible, without altering it; moreover, this instrument is easy to play, and of perfect intonation in the whole range of each key.

SECOND ARTICLE

On the different *Keys* or *Crooks* of the instrument, and on those which could be added to it.

Limited, so to speak, to function as a resonant body, the Horn has as natural sounds only the *Tonic, Mediant, Dominant, minor Seventh,* and *major Ninth*, some doubled, others tripled and quadrupled. These are also, more or less, the only notes which one uses in the orchestra, because they can be modified at will and heard within the masses of the harmony. But it was necessary to find the means of producing these very sounds at the pitch of each of the major scales being used, and as many Horns as scales were built, which must have cluttered the orchestras.

The idea of adapting to the Horn a part of the Trombone slide obviated this inconvenience, and one devised to make the Horn in two parts, one of which comprises the bell and the tubing which attaches to it, and which by widening it receives the slide and finally terminates with the sleeve, a long species of ferrule into which the [terminal] *Keys* or *Crooks* are fitted.[9] Each of these keys [crooks] fits, in its turn, into the second part of the instrument. The first part is, more or less, in *high C*, since a simple extension is sufficient which can, at one end, fit into the sleeve, [and] at the other, receive the mouthpiece, in order to let the perfect *C* chord resound in unison with the trumpet.

Setting out from this point, it was easy to lower the pitch by a *Tone*, a *Tone and a half*, by two *Tones*, etc. One needed only to lengthen the tube little by little, while coiling it up, as one had already coiled up the tubing of the horn.

The inserted tubings which were used for tuning before the invention of slides may even have given the idea for these keys [crooks]. Whatever the case may be, whatever

their origin

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and their improvements were, these Keys have come to number Ten, which are: high *C* and *Bb, A, G, F, E, Eb, D, low C,* and *Bb* . The first of these keys is no longer used, and composers who could, on occasion, get much out of it, are deprived of it. We also do not know why this series of keys does not contain *Ab* and *B*; many a composer has called for the former; the other would also be useful, although of a perhaps less frequent use.[10]

The first slides adapted to Horns were used only, and are still used only for tuning them, and for replacing the tuning bits which were fitted to one another.[11]

Since then, [makers have] devised to extend the last tube of the first part of the Horn [the leadpipe], to fix it to the instrument in such a manner that it can receive the mouthpiece, and to fit all the keys on the slide, varying their shapes in consideration of the length of the tubes.

That way, more grace has been given to the instrument, and it has been rendered more convenient to hold. This shape is particularly assigned to *Solo-horns.* Consequently scarcely any but the five keys of *D, Eb, E, F,* and *G* are built for these instruments. In the orchestra, one would risk straining the slides in changing the crooks often and hurriedly. Furthermore, the keys of *A,* high *Bb* and *C,* on instruments of this shape, need, so to speak, to divide the instrument in half, and render one of the two slides useless, as well as the tubes attached to it; these keys present a second leadpipe which hampers the performer in the holding of his instrument.

Just a last note to this article: but as it is good to call a thing by its rightful name, one may advised here not to add the word *Sharp* to that of *E* when we speak of this *Key.* It is better to say simply *E* when not speaking of *Eb,* since in this case the particular qualification is combined with the word. Olden French musicians said *E great sharp,* which was a bit more ridiculous, and that is that.

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ARTICLE 3.

ON CHANGES AND PERFECTIONS THAT ONE WOULD WANT [TO BE] BROUGHT TO THE HORN.

Some people wanted to try, by means of holes and keys, to make the very considerable series of false sounds disappear from the Horn, [and] at the same time perhaps, by the same processes, place in it those [notes] that are missing completely from the low [range]. But this attempt, already made on the Trumpet, has changed the timbre of the instrument to a point [so as] to give it a completely peculiar character, to make it an instrument which is neither Trumpet, nor any other known instrument. This species

of Trumpet, as well as the Ophicleide (*Keyed serpent*), borrowed from the English and perfected in France, can today enrich instrumental music and increase composers' resources, but they cannot replace those from which they originated.

It would probably be the same with the Horn, if it were submitted to similar changes: it would lose its character and the true quality of its natural and false sounds. The majority of these latter [sounds] have a charm that is peculiar to them, and which use, so to speak, shadows, nuances, opposites of natural sounds. It is then to be presumed that, far from gaining by their total suppression, the Horn would lose a lot. And what is meant here is that all the notes in the general range of the instrument must, so much the more, be understood in its different keys: Each of them, taken individually, has its own color, timbre, character; but as soon as all [sounds] would be found together in a single cluster [bundle], forming only a single and even instrument, it would be fine, if one wanted the same range of low, high, and middle sounds; but the more new inventions equalize all these sounds, the more the character, the color and the timbre of the *Keys* are found to be unnatural and confused.

ARTICLE 4.

ON THE GENERAL RANGE OF THE HORN AND ON THOSE OF EACH OF THE KEYS.

Of all the wind instruments, the Horn has the greatest range; and if from one extremity to the other, this range were filled, this instrument would be the most beautiful, the most surprising; because where else [is one] to find a quality of sound more beautiful, more voluminous, and more pure? But alas! it is not thus: the low part of this range, which is four octaves, presents gaps, or sounds so muted and dull that their use must be described as [having] no effect. The same sounds, with the same gaps, are repeated on each key or crook of the instrument, and some can be filled and others replaced, in music for several Horns, only by an

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amalgamation of keys, examples of which are given in our Trios, Quartets, and Sextets (*Opere 8 and 10*). In the orchestra, where one barely uses more than natural sounds, the indicated inconvenience ceases and does not impede the role of Horns at all, limited most often to filling in and accompanying.

The *open G* of the Contrabass, a fourth below the low *C* of the Violoncello, gives a unison to the first note of the range of the Horn, and the last [note of the range] is the 1st *C* of the Violin, on the *chanterelle* [E string]; this makes four octaves. Each crook furnishes, almost, both the same range, and the same series of notes, each of them regaining from the low [range] what it loses in the high [range], and reciprocally.

The large Table, placed at the end of this work, presents, on twelve Keys,[12] the series

of all the notes they contain, compared in range to the same sounds rendered by the Contrabass, the Violoncello, and the Viola. Further, each of these notes is presented according to the five facets it can have, related to the scale or the mode where it is found. [Translator's note: To clarify, Dauprat compares how each note may be played in five different ways, according to each hand position.] Conventional signs, placed on the false sounds, the significance of which is explained on page 21 and in the Table, indicate for the composer the various degrees of strength or weakness, the brilliance or the *Dullness* of these sounds.

The same signs, [mentioned] above for use by the student as an indication of the means he must employ in order to produce these notes, will also be placed in the preliminary lessons, so that he will not need to resort to the large Table without stopping [his practice], [since this Table is] intended most particularly for young composers.

ARTICLE 5.

ON THE TWO TYPES OF HORN.

The range of the Horn being, as we say, of four octaves, it is not possible to traverse such a large range without using at least two mouthpieces of different diameters. Now since it is apparently impossible for the same person to get accustomed to both, in order to use them alternately, if not two instruments, at least two persons are needed: one, traversing the high and middle ranges of the Horn, plays the high part and is called *First Horn* , and the other, combining middle and low notes, plays the low part and is called *Second Horn.*

These denominations, a bit vague, have always presented a prejudicial misunderstanding of the *Second Horn*, in causing [one] to believe that this latter title, instead of designating a particular type, assumed

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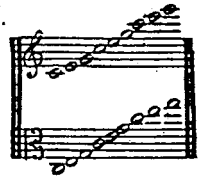
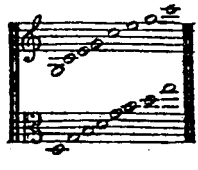
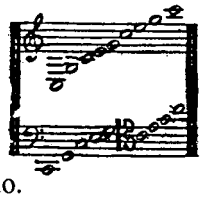
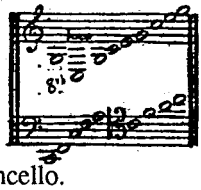
a degree of inferiority in the artist's talent. This idea gained more credence when some *First Horns*, by self-interest, by vanity, or even by both of these motives, often availed themselves of [this idea] to the detriment of their comrades. Meanwhile, it is good to know, even in orchestras where there are only two Horns, that each performer is first in his part, and that one cannot replace the other, because they are equally useful in the musical performance; the Horns are not like Violins, Flutes, Oboes, Bassoons, etc., who can indifferently execute one or the other of the two parts written for their instrument; the horns, on the contrary, cannot in most cases exchange parts without being thwarted by the insufficiency of their means.

The Tenor voice and the Bass voice offer another comparison, so much more appropriate to the instrument, concerning how one [performer] does not know how to execute the other [part], their usefulness being the same in the Theater as that of the Horns

in the orchestra. We believe we have experienced enough; the error [has been] indicated.

This [statement] is [intended] to destroy this error, but above all to better define the two types of Horn, [for] which we have substituted for the old titles of *First* and *Second Horn* the comparable denominations of High-horn and of Low-horn. These are based on the intimate relationships of range and gamut that exist between the first Horn and the Viola, as well as between the second Horn and the Violoncello, relationships we have demonstrated, as much by reasoning as by obvious examples, in our Opus 13 (*Six Duos for High-horn and Low-horn in Eb*).[13]

We will thus no longer employ any other denominations than these in the course of this work. The following Table presents the relationships of the range and the gamut about which we speak.

Low key.	Middle key.	High key.
High-horn in low *C*.  Viola.	High-horn in *G*.  Viola	High-horn high *C*.  Viola.
The same.	The same.	The same.
Low-horn in in low *C*.  Violoncello.	Low-horn in *F*.  Violoncello.	Low-horn in high *C*.  Violoncello.

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The general range of the Horn being, as previously mentioned, the same on each key [or crook] of the instrument, it follows that its division is also the same for the performers of one or the other type, since each of the keys presents for them the inconvenience of not being able to attain the two extremes of its range at once.

This range is two *Octaves* and a *Fifth* for the *High-horn* , and three *Octaves* and a *Third*, or a *Fourth* according to the Key, for the *Low-horn*. According to this relationship, the advantage would seem to be on the side of the *Low-horn*, but if one envisions the gaps its range offers, and considers that none exists in that of the *High-horn*, one will see that the advantages are at least divided [evenly].

The *High-horn*, whose principal duty is to play the melody, has enough in two octaves and a bit more, for all species of Melodies and passages of its type. Human voices are rarely so evenly divided, and several of them nonetheless have their *Airs of bravura*, as we have our *Concertos*.

The *Low-horn*, in obbligato music, knowing [how] to profit from effects offered by low notes, concealing the gaps which are the only imperfection of the instrument, can combine melodies executed in middle [range] chord patterns, [with] all species of *Ideas* or *Passages* which belong to it, and the capability that it has to play, alternately, the melody and the bass, is preferred by modern composers in music for several wind instruments. One knows [this from] any part that Mr. Reicha has brought out of this doubled role, in his *Quintets* for *Flute, Oboe, Clarinet, Horn* and *Bassoon*.

Meanwhile, solos in the orchestra can be alternately for one or the other type of Horn, according to the Key upon which they are composed, and the range they traverse. This is also a good point to call to composers' attention, who [then] will find more variety, at the same time they encourage and propagate the two types equally. It is because all *Solos*, in the past, were written in the *First* part, that many *Seconds* wanted to change their type, and, though they were good artists, became mediocre, if they did not lose their ability entirely. It is still because Solos were the exclusive division of *First Horn*, that their salaries are always disproportionate to those of *Second Horn*, despite its indispensable usefulness; and the self-interest [that was] produced, at least as much as the desire to make it so, falls to the abuse about which we speak. Finally, it is our understanding, that among those [people] who are obstinate to collect high notes and low notes, in a range where human faculties

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do not cooperate, one [person] found death there,[14] [and] to another occurred an infirmity which has forced the stoppage of the practice of this instrument.[15] But these misfortunes will not reach those who limit themselves to a single type. No doubt one sees *High-horns* and *Low-horns* exceed their respective ranges, as one sees singers acquire, through work, notes outside of the common scope of their voice, and which nature seemed to have refused them. This work can thus succeed for those who cultivate the Horn, for which the range in each type is not rigorously determined. But it is necessary to observe that if this result of work serves them for the *Solo*, it can harm them in orchestral accompaniment.[16]

Thus, he who can extend his range by some notes in the low [range] and the high [range], according to the type, must do it, if it is not a detriment to the same type; because

if he gains on one hand, and in proportion loses on the other, he digresses equally from the goal that he first proposed to himself. He must thus think instead about mastering the whole range affected by his type, according to the *Keys* of the Horn, to polish all sounds, controlling all details, in order to be ready for anything, and to look no further, as an effort of talent, as a signalled victory, than not to have missed such-and-such a note, [or] such-and-such a passage, to which is often attributed more difficulties than there are in fact.

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The Horn is perhaps the least fatiguing of all wind instruments: the lips are weakened only by mouthpiece pressure; this is why the Horn can hold a note only as long as reed instruments, and especially the Flute. This pressure is weaker with *Low-horns*, and one can see the reason for it; but this type demands a larger dispensation of air; consequently, it is necessary to replenish [the breath] more often.

Inhalation and exhalation are thus more multiplied, and the alternating movements of the lungs, to draw in and push out the air, [are] more frequent in *Low-horn* than *High-horn*, which can retain the inhaled air much longer. There is compensation for the inconvenience, and the lungs get accustomed to these different types of fatigue. Finally the health of all those who play wind instruments bears witness that their practice [of the instrument] is not known to be harmful, when the work is moderated, and further that the individual who devotes himself to it [the work] is not affected inside by any physical vice, or any element of illness.

One does not see the same with those who neglect to pay attention to their instrument, or who, having contracted the bad habit of removing water by inhaling, receive some illness from it. Meanwhile, it is better to polish the Horn from time to time, especially when one's hands perspire,[17] and to wash its interior from end to end with plain water and a small cork in which the grains can be counted, in order to assure oneself later that it does not remain in the instrument.

For this operation the Horn is inverted and the water and the stopper are introduced into the bell, after which the instrument is moved by turning it in the direction of the largest to the smallest branch, that of the mouthpiece, until the water and the stopper leave this branch.

As for the action of drawing from the Horn the saliva that tonguing introduces into it, it is necessary to observe the following: 1st. The mouthpiece is struck with the tongue, and this movement produces the effect of a syphon or an air pump. 2nd. The mouthpiece is removed, and the instrument is inverted so that the saliva leaves through the mouthpiece branch. 3rd. Since this way is not always sufficient, one replaces the mouthpiece, removes

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the slide and blows into the Horn, while holding it upside down.

Those who remove saliva by inhalation tire themselves needlessly. Moreover, this action is disagreeable to the spectator, both by the noise that results and by the air of uncleanliness it gives.

One will want to pardon these details in favor of the usefulness they have for the performer.

ARTICLE 6.

ON THE MOUTHPIECE AND ITS PROPORTIONS IN THE TWO TYPES OF HORN.

One distinguishes three parts of the mouthpiece: 1st. The rim, which rests on the lips; 2nd. The Cup, which receives the larger or smaller volume of air introduced into the instrument; 3rd. The Stem [i.e., shank], or the extension of the *Cup* which, by constricting it, compresses the air and gives it more motion at the time it is introduced into the instrument.

The differences of proportion in the two mouthpieces are explained [thus]: one must facilitate the execution of very high notes; the other, very low notes.

In the meantime, the *High-horn* mouthpiece must be large enough to permit the projection, full and sonorous, of the low notes of its range; at the same time, the mouthpiece of the *Low-horn* must be narrow enough to facilitate the production of high notes belonging to it.

A mouthpiece that is too small gives a weak sound and a mediocre quality.

It is precisely the opposite with a mouthpiece that is too large, whose inconvenience has been noted. We believe then that the model and the proportions given below, which are in general use, can suit all who would like to practice one or the other type of Horn.

A person aspiring to study the Horn hardly knows what is wanted of him, [especially] in asking him if he prefers one type or the other, or which he desires to adopt; his hesitation or his indifference toward this subject is very natural. Thus it is necessary to choose for him, and one can believe that the choice, arbitrarily made, is that which with the help of time and work, will succeed.

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It is necessary above all to retain the mouthpiece with which one has begun the study of the Horn.

One can easily become accustomed to several instruments, when furthermore they are good, and made in suitable proportions; but the loss of the mouthpiece to which one is accustomed is almost irreparable, by the hindrance experienced with any other, however similar it can be to the first.

PROPORTIONS OF THE MOUTHPIECE

RELATIVE TO EACH TYPE.

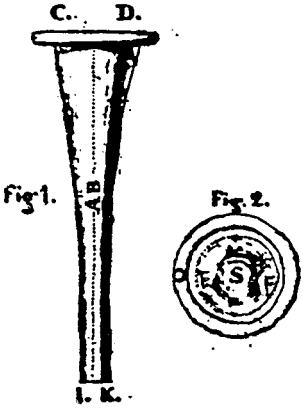

Fig 1.

Fig. 2.

	HIGH-HORN	LOW-HORN
General length A.B. Figure 1	2 1/2 inches	2 1/2 in.
Width from one rim to other, taken on the exterior C.D. Figure 1	10/16 in.	10/16 in.
Opening or width interior, starting with the solder on the rim E.F., Figure 2	15/32 in.	17/32 in.
Thickness of the rim from the interior to the exterior. O	5/64 in.	3/32 in.
Exterior width at the bottom of the stem. I.K., Figure 1	5/32 in.	3/16 in.
Interior width of the opening. S. Figure 2	1/8 in.	5/32 in.

N.B. For both mouthpieces, it is appropriate for the rim to be slightly rounded: flat rims offer, from the interior to the exterior, a cutting edge that can injure the lips.

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ARTICLE 7.

ON THE KEY OR CROOK USED IN THE FIRST STUDIES OF THE HORN.

The choice we make, the Key of *Eb*, for beginners, conforms to the principles of our master [teacher] KENN. These principles were also those of DOMNICH, of PUNTO and of all of the masters of our time. This Key was also used, almost exclusively, in the first music composed for the instrument, but since the introduction of the Mixed style, only the key of *F* is currently used.

These exclusions demonstrate on one hand the infancy of the art, the timidity of attempts; and on the other, that at the same time the Horn had succeeded almost to the final degree of perfection, some artists made it go backwards, in pretending to give it a fixed style.

In obbligato performance, [since] the five keys of *D, Eb, E, F* and *G* are in frequent use, these keys in particular must be practiced. Nine of them are used in the orchestra, and sometimes this number can be carried to Twelve; it is also necessary to know how to bring out all the possible parts [i.e. in all possible keys].

The choice of the key of *Eb* is thus strict only for the first studies: it was necessary to choose it, because it suits both types. This key fills the desired conditions, which are: the facility procured by its mellowness, ascending to high notes; and descending, with the same ease, to low notes to which the same nature of this key lends itself. It presents further, in its entire range, the most beautiful sounds of the Horn, and offers the true color and character of the instrument.

The *High-horn* can likewise be [crooked] in *E* : the timbre of this key will bring together more of those [conditions] than *F* or *G*, which are more its type than that of the *Low-horn*. Meanwhile, since the capability to ascend to high notes is belated with some students, it is better to begin their studies on the key of *Eb*, and then to familiarize them with the key of *E* later, if one finds them particularly disposed to *High-horn*.

ARTICLE 8.

ON THE POSITION OF THE BODY AND HOLDING THE INSTRUMENT.

The beginner must hold himself upright, body straight, immobile and without any hindrance or constraint whatsoever. As the head must always be fixed, it is necessary to place the music

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at the height of the eyes. Generally, the instrument is held in the left hand, which grasps it where the mouthpipe meets the other branches, the thumb passing under the former and touching the others. The Bell rests lightly above the right hip.[18]

When the hand is introduced into the bell, the arm must be neither too close nor too far away from the body.

Finally, for this instrument, as for others, one must seek the most graceful, the most natural position. One will observe that if good body position depends largely on attention and will, the pattern of the instrument, and the separation existing between the bottom of the mouthpipe and the bell, can either contribute to, or hinder the position.

The pattern and the separation [being] too compressed, obliges [the player] to bring the arms together and lower the head; [if] too big, they offer precisely the opposite inconveniences.

It is thus essential to prepare one or another in a manner [such] that youth does not contract bad habits.

ARTICLE 9.

ON THE SHAPE OF THE HAND IN THE BELL.

The shape the hand takes in the bell, and its position in this part of the instrument, has not been described with all the care that its importance demands, [so] we will include some details on this subject.

The hand, as one knows, is divided into two principal parts, the palm and the fingers. The first part, which plays the most important role here, is divided in turn into two other parts called, anatomically, the *Thenar* and the *Hypothenar*. The thenar is the muscle that serves to separate the thumb from the index finger; and the hypothenar comprises the space between the index finger and the little finger. Now in the shape given to the hand, before the introducing it into the bell, the four fingers are brought together and rest lightly on one another, the top of the hand rounds itself, the palm hollows, the thenar and the hypothenar come together, and the thumb, making a backwards movement, folds itself on its first joint and rests against the base of the index finger.

It is after giving this shape to the hand, that it is introduced into the bell, in a

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manner [such] that the middle joints of the *Index, Medius,* and *Fourth fingers* touch the right interior of the bell, whether [the bell is] closed or open. That is to say, the hand, once in this position, makes only those movements that are necessary to close the bell more or less, while squeezing to the left with the thenar and the inside part of the hypothenar. This movement pushes out the ends of the fingers toward the right interior of the bell, but does not move their middle joints. These are not displaced more on very open notes, and for execution of which the hand is deployed, expanded a bit, in order to enlarge the opening. Finally, the hand, in relation to the arm, stays in its natural position.

ARTICLE 10.

ON THE PLACEMENT OF THE MOUTHPIECE ON THE LIPS.

The mouthpiece, whatever the beginner's type may be, is placed on the middle of the mouth, two-thirds on the upper lip, and one third on the lower lip, where it naturally finds a point of rest which hinders the changing of position. So it is said, and must always be said, that the mouthpiece, set on one place on the lips, must stay there.

If one does not go beyond ordinary limits in the low [range], there is the possibility of following this rule strictly; so it is more or less to the pressure of the mouthpiece on

the lips, [and] their calculated compressing or expanding, that execution and accuracy of all low, high and middle notes depend.

But without powerful and extraordinary physical means, it is very rare to find *Low-horns* who perform the following succession [of notes]:

without bringing about a certain disruption of the lips. The large volume of air necessary to produce these notes separates the lips and pushes them back in some way: the mouthpiece, barely touching, loses its point of contact, air escapes out of both sides of the mouth, and the noise of the breath is heard at the same time as the note; the tongue, too far away from the mouthpiece, cannot move other than weakly. Furthermore, [the tongue's] action is less necessary to the execution of the preceding example [such] that one produces [the notes by] initiating them in the manner of singers, rather than attacking them. Finally, it is by air alone, and by *Exhaling* that these notes are produced. But the mouthpiece must always have a certain contact on the lips: the great majority of *Low-horns* open the lower jaw a bit more, and the lips, still connecting the two sides of the mouthpiece, though leaving a sufficient opening in the middle of the mouth, permit this large abundance of air to be introduced wholly into the mouthpiece, without loss to the outside, and these notes [thus] have only more volume and roundness.

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In truth, this action of the lips has the slight inconvenience of making the mouth grimace a little; but as one observes wind instrument players, one will see that they all grimace more or less, not only on [these] five notes alone, but continuously, for the same employment of their means of execution. On the Horn, contrarily, excepting the five notes in question, [and] regarding those who can produce them only in the way indicated, the mouthpiece placement is the most graceful to see, and [is] that which, of all wind instruments, leaves the shape and all the muscles of the face perfectly immobile.

One knows the disposition of the lips is not the same for all individuals: with some, they are hardly visible; with others, on the contrary, they are very protruding.

The mouthpiece proportions we have given can nonetheless suit either one; but we think the first, whose lips are naturally clenched, will have more aptitude for executing the high notes of the *High-horn*, and the others for the low notes of the *Low-horn*.

As for those who have teeth so poorly placed that the mouthpiece cannot be placed where it should, one will do well to tell them, as well as those who have them [teeth] missing, [and] those who have a *Hare-lip* [note: literally "gap of the Hare"], or any other infirmity, that they are incapable of playing the Horn.

ARTICLE 11.

ON BREATHING.

The act of breathing being, for wind instrument players, the same as for singers, we can say no better than to cite a fragment of a singing Method related to this goal.

"Respiration is the act which uses the lungs for drawing in and pushing out air. This act is divided into two alternating movements: the *Inhalation* and the *Exhalation*.[19]

"In the *Inhalation*, the lungs dilate to take air from the outside into the chest; in the *Exhalation*, they depress to make it go out.

"It must be observed that the act of breathing for singing differs in some thing [i.e., way] from breathing for speaking.

"When one breathes for speaking, or simply to renew the air in the lungs, the first motion is that of inhaling; then the abdomen swells, and the upper part moves forward a bit; then it flattens: this is the second motion, that of exhaling.

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"These two movements operate slowly, when the body is in its natural state.

"On the contrary, in the act of breathing for singing, in inhaling it is necessary to flatten the abdomen and to raise it again promptly, while swelling and moving the chest forward.

"In exhalation the abdomen must return very slowly to its natural state, and the chest lowers in time, in order to preserve and spare, [for] the longest possible time, the air introduced into the lungs.["]

In a note attached to this article, students are recommended to occupy themselves specifically with breathing intended only for singing; they are invited to practice each day taking [in] and holding the breath for as long as they can, while conforming to the indicated principles.

"Without a great volume of air," it says there, "which one must know how to compress and to save skillfully for a long time, there is never strength nor timbre in the voice; further, without this capability it is hardly possible to phrase the song well."

This advice applies likewise to the playing of wind instruments, and the differences originating from the placing of mouthpieces do not matter at all to the manner of breathing.

We will indicate these differences.

1st. In the first motion, that of inhaling, the lips separate, the tongue moves backwards and air is introduced into the lungs. 2nd. The volume of air, more or less considerable, being introduced, the lips are brought together, the tongue moves forward to close the opening remaining in the middle of the mouth and retain the inhaled air; this is the second motion. 3rd. The tongue is then pulled back quickly, the inhaled air escapes, striking that which the instrument contains, and this collision or shock of air produces the sound.[20]

ARTICLE 12.

ON THE MODIFICATIONS OF THE SOUND.

One knows that there are four goals or qualities to consider in sound: 1st. The *Tone*, that is to say, the degree of elevation or depth of the *Sound*, which depends, on Horn, on the stronger or weaker pressure that the mouthpiece exerts on the lips; the stronger this pressure is, the more the lips separate, [and] the more the air passage shrinks so that the air leaves with more velocity as it is compressed more, and this velocity increases the number of vibrations, producing high notes. The low notes are obtained by contrary means. Finally, the production of notes, in the whole range of the instrument, depends on various modifications of [these] means.

2nd. The *Intensity*, or the strength: more or less strength or weakness [i.e. softness] given to sounds depends on more or less energetic motion of the tongue; and the continuity of sound, at the same degree of strength or weakness of the same volume of air furnished at the time of the *Emission* of this sound.

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The *intensity*, or the strength of the sound, is thus borne only by the capabilities of the individual or otherwise, by a reason indicated to him, according to the settings and the style of music, how he must use his capabilities; thus the artist must so master all the sounds of his instrument in order to modify them at will, in order to give them all the brilliance and energy possible, or the degree of desirable weakness. In fact, it is an unceasing obligation to pass from one to another of these details, as well as through all the modifications that separate the two terms, as much in a *Solo*, as in accompaniment.

3rd. The *Timbre* is that particular sound quality which in a unison executed by many voices or many instruments is distinguished by its own nature and character.

It is necessary to note again that the natural timbre of the instrument or the voice varies according to the individual. Thus in the same [way] that each [person] has his own organ for speaking, he also has his own sound quality, when playing a wind instrument.

4th. The *Fullness*, or roundness. This juicy [soft], pleasing quality is the opposite of hardness, of roughness, of dryness of sounds. Fullness can pertain to strong sounds as well as to weak [i.e. soft] sounds. Strong sounds are less easily endowed with it than weak sounds. The talent of the performer consists of spreading it out over all notes. When it is successfully done, one says about him, as one says also about an instrument, that he has a good *quality* of sound. This meaning of the word "quality," in musical language, is no longer exactly the same as in metaphysical language. [translator's note: for example, the concept of only one ideal sound might be thought of as quality in a metaphysical sense, as opposed to quality being spread over a variety of sounds, as Dauprat describes.]

Note: The state of health of the individual influences the quality of sound considerably, as we have always noticed, and in this regard there are still many relationships between wind instruments and the voice: that is to say, colds, illnesses of the throat, affectations of the chest, deter sound quality. All individuals of weak or delicate constitution, even with the best principles, rarely have a beautiful sound quality; so much the worse it is when, to this defect, one adds a badly-placed mouthpiece, or a violent manner of emitting the sound.

Cultivating the use of two instruments at once can also become damaging, if they are of the same build: that is to say, both strings or winds: the separation of fingers is not the same for the Violin as for the Violoncello; the mouthpiece for the Trumpet or the Trombone differs essentially from that of the Horn; the Flute player, who plays his instrument below the lower lip, would damage his embouchure [note: in this instance, meaning lip formation instead of mouthpiece] by using reed instruments, etc. But two dissimilar instruments can be combined; it is even, with regard to Horns, a much more useful [piece of] advice, that their music is [rendered] too simple, too easy, for a professional, if one is not already, by the study of solfege. Furthermore, one is saved, by that option, in the case where an accident of some kind would force one to abandon the principal instrument.

Finally, the custom of military music, [with] the obligation to perform in open air and to be heard over great distances, often accustoms [a person] to force the sound outside of time [its limits], which gives it a roughness and renders the playing hard.

He who thus devotes himself to beautiful performance must, as much as possible, abstain from this painful work.

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People have tried to paint, with various monosyllables, the action of the tongue in the formation of the sound, and the effects of different articulations.

Punto wanted the player to attack the note by pronouncing strongly the word *Daon,* in order to make the instrument vibrate like a bell after it is struck with its beater. We allow this comparison; we even recommend it to those who begin to form notes, which must in some way, resound after the tongue has ceased to move; but what we do not allow is the pronunciation of a word or a typical monosyllable, [that is] an impossible pronunciation when the mouthpiece is pressed sufficiently on the lips to play a typical note. One can easily be convinced [of this] through experience.

The Monosyllables *Ta* and *Da* from the same master [i.e., Punto]--as much as one would want to use them in order to designate *Tonguing* as dry or soft, loud or soft —will be [the same] in the case of *Daon.*

No comparison can be made between a word without significance and the effect called *Sound* emitted, struck, attacked.

One will object no doubt, that this is an effect, a nature, a particular color of sound, that one would like to render sensible to the eyes and to the ear, by whatever imitation.

We reply that it is also evident that one word or one monosyllable has a nature, a color of sound, which does not resemble the result of the air leaving an instrument at all; or what is introduced is something other than breath, and we will leave the comparisons to children who want to amuse themselves by imitating the timbre of various instruments.

As for different ways of expressing articulations, it is good to employ them in the lessons given, in order to be spared from long dissertations; but we find it useless to describe them by monosyllables where each is used in its way and which [articulations] often would be impossible to play in such an arrangement of letters as this can make.

ARTICLE 13.

ON NATURAL NOTES AND FALSE NOTES.

It is physically proven that a wind instrument which renders naturally--that is to say, by air alone--two extreme notes, possesses all the middle notes that separate the other two, and it is only the ability to lengthen or shorten the air column to one's taste which the artist depends upon for the possibility of rendering the notes over the whole range of this instrument, so that there would be no gaps between them at all. Thus, in order to produce seven different sounds the lover of SYRINX knew only [how] to bring together and unite seven reeds of unequal length. Man, more adroit than the god in the fable, uses only a single tube over which cleverly calculated distances are conceived, and the flute was born of this ingenious invention.

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The keys came next, and multiplied, in proportion to how one felt about the possibility of giving more accuracy [of intonation] to different notes, or to improve relationships between them. The Oboe, the Clarinet, and the Bassoon, which are only, in some fashion, modifications or varieties of the flute, have experienced, with time, similar improvements.

The Buisine, or *Tromba Curva* of the ancients, the Trumpet, the Horn, the Trombone, are improvements on the *Wooden horn* [and] on the materials which give them more sonority, such as Silver, Copper, and yellow Brass or sheet brass.[21] But devoid of holes and keys, having only slides to tune the instrument to a given scale, the Horn and the Trumpet have as natural sounds only those of the resonant body, and the way that has been found to produce middle notes of the preceding [range] (stopping the bell more or less with the hand), can appear to be insufficient since it not only alters the quality of its notes, but also is not able to fill the gaps existing between all the natural notes. One will think then that these instruments are susceptible to new improvements, the means of which are yet to be found. Because among known means, those of holes and keys, it will be remembered that we noted their inconveniences, regarding the Horn and

the Trumpet. (*See Article 3 page 5*)

Whatever it is, the Horn, even with its imperfections, is not less than the most beautiful of all wind instruments, by timbre, by quality of sounds; and the emotion it bears has a charm which all agree no one can resist. Finally, the music and the performance of our masters have sufficiently proved that a skillful artist can easily conceal the imperfections of an instrument, as well as extract great resources from it.

Since the only way found to shape the notes called false is precisely what has given a strange color to its sounds, in relation to the natural sounds, one also conceived of giving a larger volume of air to its sounds, mixing it with the opposite for natural sounds, so that they could be combined to render the latter and the former equal in strength and in quality; but as in the very strong words of Mr. DOMNICH, this estimation, good for pieces in a slow tempo, paralyzed performance in fast tempos. The help of the hand in the bell was thus more effective, more natural than a calculated measure of breath. Thus, as Mr. DOMNICH has made it understood again, the hand

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must not open the bell on the natural notes in [such] a manner that they are too bright, but enough that they are accurate. This does not hinder the search for the habit of filling up, with breath, the false notes, without ever forcing them, which would give them a bad quality. It is lastly necessary, in order to acquire equality between the notes, as well as to put accurate relationships between them, leaving nothing unsatisfactory, to compare them to each other without stopping, listening attentively to oneself and judging oneself with severity. Furthermore, in equality between notes the difficulty is not always the same, so the false notes are more or less dull, and in the middle of the instrument their quality already blends with many of the natural notes. Accuracy [of intonation] of the former or the latter depends as much on the lips as on the hand: if a typical sound is found to be too low, a larger opening of the bell, as well as a stronger pressure of the lips will make it go up; if it is too high, the contrary means will be employed, together or separately.

Conventional signs will indicate the movements of the hand for the formation of the notes and their modifications.

These signs will be marked in the first lessons; then on notes which are not in the preliminary exercises, and in relation to how they present themselves. They will be placed only a single time. The Student will thus remember their meaning and the notes that must receive them.

Numbering five, these signs speak for themselves; they are the *Zero*, the *Unity* [1], and its principal Fractions.

The Zero (0) indicates a natural note, but too flat, and for accuracy of which it is necessary to enlarge the opening of the Bell. The Unity (1), considered as a whole in relation to its fractions, indicates that the note over which it is placed requires the bell to be completely closed. Finally, the fractions 1/4, 1/2, 3/4, indicate that the bell must be

closed a quarter, a half, and three-fourths, according to each case.[22]

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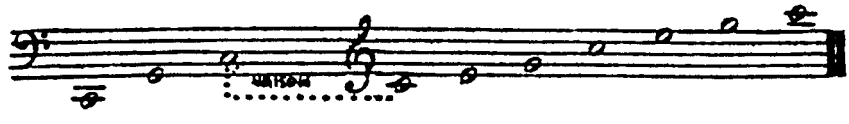
ARTICLE 14

ON THE MANNER OF WRITING, TYPICALLY FOR THE HORN.

Music that uses the Horn is now written only on the *G* and *F* clefs, and this latter is used only by the *Low-horn* , for the lowest notes.

Whatever the Key or Crook adapted to the instrument, the clefs are the same: only their gamut varies, that is to say the true gamut of these clefs is connected or brought together according to the lower or higher keys of the Horn. This will be explained at more length in the instructions addressed to young composers, at the end of this method. It is sufficient, presently, for the student to understand the relationship between these two clefs, for the way of notating the Horn parts in the whole range of the instrument.

Here it is: 23(See the note)



The easiest, most natural scale for the Horn, which is used most often, is presented here as the *C major* mode, according to the way expressed by performers, and regardless of the crook adapted to the instrument: this is also the mode that will make up the the first exercises of this method.

When we have occasion to speak about other major and minor scales, practicable on a single and same *Key*, we will choose our terms carefully so there will be neither ambiguity nor misunderstanding. So, for example, the preceding mode is, as we have said, the most natural for the Horn, and gives as its basic scale what we will call *Major mode*, or *Major scale of the first degree* ; its relative minor which presents visually the mode of A minor, *Minor mode*, or *Minor scale of the sixth degree*, and others similarly; the numbering of these modes, of these scales, is in exact relation to the mode and to the basic scale, and it is suitable to express them in the same ways equally on any *Key* of the Horn.

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ARTICLE 15.

ON ACCURACY [OF INTONATION] OF NOTES ON THE HORN.

In the best new Horns made, one sometimes finds notes too sharp or too flat; others whose sound is not assured, or whose quality is not pure.

The same defects can, so much more, be encountered on instruments played at a certain time by people whose ear is not very sensitive or practiced. But [as] it is possible to damage a good instrument with a bad performance, it is also possible to correct their vices by the following means: 1st. If the note is too low, the lip tension must be stronger, the opening of the bell larger and the attack of the note firm and energetic. 2nd. If the note is too high, it is necessary to employ the opposite means. 3rd. For a poorly placed sound, hardly assured, at worst unsure, the note is attacked in its true scale [position] with vigor; that is to say, without stronger lip tension, or opening the bell wider than usual. 4th. Finally, in order to correct the bad quality of natural and false notes, one uses *sound Placement;* that is to say one attacks, or rather produces the note with softness, then swelling, up to a certain degree of strength and brilliance. These different proofs, often reiterated on notes that need to submit to them, soon replace [bad notes] with their accurate scale, or give them the qualities they lack.[24]

In a Horn where these defects do not exist, all [natural] notes (primarily on the *Keys* most common for a *Solo*) are found to be accurate in relation to scales in which they serve as principal notes, as essential chords of the scale and the mode. This assertion appears to us to be proven by the following discussion.[25]

The Horn's natural sounds are precisely the same as those obtained from the resonant body. One knows that a resonant body put in vibration, besides the principal note, produces, also by reasons of concomitance, other notes called harmonics, because they are contained a certain number of times in the first note. These harmonics are, with regard to the principal note, in relationships of the 8th or the *Octave* ; of the 12th or *Fifth*; the 15th or *Double octave* of the first sound; the 17th or *Third* ; the 19th or *Octave* of the 12th; the 21st or *Minor seventh* ; and the 23rd or *Major ninth* .
(See the method of harmony of Mr. CATEL.)

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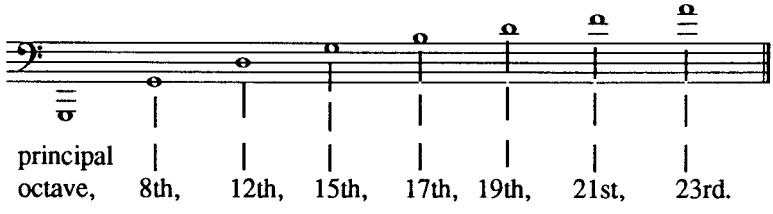
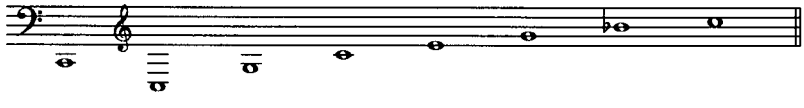
The following example presents, on the bass and on the Horn, these sounds as they [have] come to be described.

Bass and Contrabass. 1st Ex.



Horn in *G*. 2nd Ex.



One will notice the harmonics are considered only successively, and are weaker proportionally as they extend further.

Meanwhile, the low Horn, which has enough power of physical means to give strength and sufficient length to the principal note of this example, can very easily distinguish the 12th, the 15th, the 17th and even the 21st.

In listening attentively to the notes given by the primary *Chord*, not on the Horn, but on the large strings of the Piano and of the Violoncello, or on the large pipes of the organ, one notices the intervals of these notes are not perfectly equal in their respective proportions, if they are not octaves: the fifths *C-G* and *G-D* (2nd example) as well as the 7th *E-D* and the 9th *C-D* , are strong; that is to say the higher note of these intervals is itself an extension, (although it is not always given as such in performance), connected to the lower note of each interval. On the contrary, the 3rd *G-Bb*, and the diminished 5th *E-Bb*, and the minor 7th *C-Bb* are weak, approximated, separated in their proportions. But one can observe that these extensions and these reconciliations desired by nature are precisely those that render these intervals more satisfying to the ear, because they give them more softness.

These differences, in the relationships of the preceding intervals, distinguish themselves no less in major than in minor scales. In observing the composition of these scales, in comparing semitones between the keys, the 3rd, 4th, etc. of which they are composed, the ear senses the very sensitive differences between these intervals, no

matter how simple in judgement some seem to be. In other words, there are stronger tones [i.e. whole-steps], some semitones weaker than others, and it suffices that other intervals, contained in the notes of whatever the scale, will not be perfectly equal between them. Take the scale of C major, for example: One knows that the leading tone of this scale, the *B*, must be a weak semitone in relation to its tonic C. But, this semitone is weakened then only by the extension given

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to *B*, an extension strongly connected to *A*, which necessarily makes it a strong whole-tone.

The 3rd degree of the same scale, the *E*, also makes a weak semitone with the 4th. degree *F* ; but it is the *F* that lowers itself toward the *E* and not the E that raises itself to implement the reconciliation; that which makes a strong whole-tone is *F* to *G*.

These details give the reasons for reconciliation or connection to other intervals for which accurate relationships are sensed more keenly only by an extremely delicate ear, and by a very practiced sense of the relationships between notes; but this delicacy of the aural organ, this facility of the sense to grasp the relationships of notes, comes to all who want to reflect, observe, compare. What is easier to notice is that in relation to the scales with more sharps, each *Sharp* is, so to speak, a leading tone, stretching the above-mentioned extension on occasion of the leading tone. On the contrary, the more scales take Flats, then the more they have these notes which, similar to *F* in the scale of *C*, stretch downward, and connect themselves with the lower [scale] degree.

It happens then on the Horn that the hand is changed by following the sensitivity of the ear which rules its movements, closing the bell more often as the number of flats increases, and contrarily, opening it more in proportion to a greater number of sharps; and this [is true] on all natural and false notes, [with] specific relationships.

The difference of mode raises yet one more [issue] in the relationship of notes to their scales. The minor mode has as its specific character a certain softness that the major [mode] does not have: this character comes principally from its third and from its sixth, which not only are minor, but weak in their [interval] relationships. Thus, for example, the Third *A-C* will be strong in the scale of *F* major, and weak in that of *A* minor. It [the character] will be in the same sixth, *A-F*, in relation to the same two modes, etc.

Moreover, the dissonant chords used most frequently in the minor mode are also composed of weak or reconciled intervals, such are the diminished 5th, *B, D, F* ; the diminished 7th *G#, B, D, F* ; and the minor 7th or dominant, which is the same in both modes.

While this discussion on the relationships of notes is not exact, it is no less true that all natural notes, sharped and flatted in the general range of the Horn, are accurate in relation to scales which pertain to the essential chords of the mode; and when the movements of the hand change on these same notes, it is again the mode that directs it. So, these same notes can be modified--that is to say, altered in their scale--almost at will,

[and] it follows that the performer can put them in true relation to where they must be in order to be accurate in relation to the other notes, according to the position they occupy in whatever scale and mode.

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By the signs placed above the false notes in the scales of the 11th, 12th and 13th lessons, one will observe attentively the case in which the movements of the hand differ on the same sound.

One will notice, for example--and this becomes obvious in orchestral accompaniment--that the *Bb* of the Horn, placed on the 3rd line of the staff, is accurate when it is employed as the 4th note of the key, as the diminished 5th, the minor 7th, the diminished 7th and the minor 9th; but a larger opening of the bell is necessary, [as is] a stronger mouthpiece pressure on the same note, when it is positioned as the Tonic, the major Mediant, or the Dominant. It is the same for the other natural and false sounds according to the mode and the scale in which they are used.

(To be continued)

NOTES

1. The Cadenza being considered an improvisation, one conceives that in Music it is not to be presumed that many instrumentalists agree on the nature of ideas, on their progression and on the harmony that suits them.

2. The word *Key*, which already has several meanings in music, here designates the different crooks of the Horn. This meaning is bad, no doubt; but it is in use and we wanted to be understood by all. [It will become apparent through the first part of the *Méthode* that Dauprat uses "key" (*ton*) interchangeably with "crook" (*corps de rechange*).]

3. One calls NATURAL SOUNDS, on the Horn, those which are made with the bell open; and FALSE or ARTIFICIAL SOUNDS, those which can be formed only by stopping more or less, with the hand, the bell of the instrument. The word *False,* being shorter than the other, will be used preferably here.

4. I must assume here the C major scale, as performers express themselves, since it is also the one which always seems to be presented to them, by the absence of any key signature, and by the perfect chord of the mode; whatever be, besides, the *Key* on which they are playing. (See the note on the preceding page.)

5. We do not intend that all which is contained under the name of "Lesson" must be studied in the same Sitting, which would almost always be impossible, as one will be able to see by examining the range of the majority of these lessons.

6. These exercises are preceded by a short treatise on articulation.

7. By the *Pattern* of an Instrument, one understands the dimensions of its total shape.

8. See the note [on] page 2 of the Preface.

9. We have nonetheless preserved the custom of saying Horns in *C*, in *D*, in *E*, etc., according to one of the meanings given to the word *Key*, which is implied here, and which signifies the degree of raising or lowering of the pitch to which each crook takes the instrument.

10. In a work on wind instruments written by FRANCOEUR, former director and conductor of the Opéra orchestra, it is told of a Horn in high *B*. This Horn, or rather this Key, has disappeared, as well as that of *C*. In taking up the former [again] (*B*), it would be necessary to put it in the low range, so that it could be used more frequently, and [with] less fatigue for the performers.

11. One sees that we speak here of orchestral Horns, otherwise called English-style Horns, for some unknown reason.

12. High *C* and *Bb, A, Ab, G, F, E, Eb, D, C, B,* and low *Bb*.

13. Found in Paris, at Zetter and Co., as well as all the other works of the same author.

14. The Elder BANEUX, who in order to be admitted to the Opéra, as good a *Low-horn* as he was, wanted to become a *High-horn*, without losing the advantages that the other type could procure for him in *Solos*. The work forced upon him occasioned a heart attack, to which he succumbed.

15. RODOLPHE. He composed few things for horn. He is little-known to us, [and] of the music he [is known to have] played, [there remains] only a Concerto in *E* and an obbligato accompaniment to an air in *F* that the famous JOMELLI composed for him at STUTTGART, and placed in his Opera OLYMPIADA. From this air and the Concerto, one sees that Rodolphe had the pretense to combine the general range of the instrument, thus making a unique type. Those who heard him [play] generally extol the beauty and the volume of his sounds. Now these qualities [are] obtained only with a mouthpiece whose diameter offers a certain breadth; and if, with a similar mouthpiece (one which could be for a *Low-horn*) one wants to reach high notes that surpass the range of the type, effects are necessarily produced which can give rise to serious accidents: for example, the incurable Hernia that RODOLPHE received from these excercises.

16. That is to say, that the *High-horn,* which would gain low notes outside the ordinary scope, will hinder the practice of high notes; conversely, [the same would happen to] one who became a *Low-horn,* regarding low notes, if he gained some high notes outside the range of his type.

17. Persons afflicted by this discomfort may be right to want varnished bells; but we believe the thickness of all species of Varnish hinders the sonority of the Horn a bit. Gilding by fire did not have this inconvenience, and combined, with its natural brilliance, cleanliness and solidity, but the risks for the Horn maker (to see his instrument become unsoldered) has unhappily caused the renouncing of this method.

18. Some persons hold the Horn in the right hand, and the majority of German Virtuosos seen and heard in PARIS hold it thus. It is not then a defect at all. The manner of holding the Horn is definitively, completely arbitrary: It is determined, in the first lesson, by the natural disposition of the beginner, who feels more adroit with one hand or the other, whether it be for holding the instrument, or for the movements in the bell, regarding false notes.

19. One sees that the word *Exhale* ["expirer"] is taken here in the particular sense that is the opposite of *Inhale*. [Note: the verb *Expirer* in French can also mean to die]

20. One sees, by these explanations, that the action of the tongue is nothing to the production of the sound at the moment of its emission, and in talking about the *Tonguing* [note: literally "cut of the tongue"], the term is used improperly, but its use has [been] consecrated, and as there is no other [term] to use, [so] it will be preserved similarly; it must be understood in the reverse sense of its own meaning.

21. This last metal has been preferred as lighter and more sonorous; the 1st quality is incontestable; the 2nd is still real, in which the sound can acquire a very great resonance, without which its quality would be altered by it, [and] which performers would not obtain with silver or copper instruments.

22. I have given to the *Zero* , in this work, its ordinary function in music, which is to indicate an open sound, and thus more sonorous, in order to satisfy Horn players who are accustomed to stringed instruments. The unity has even replaced here the *Horizontal Bar* which signified the opposite of the *Zero*. & Further, since these signs are purely conventional, and an explanation always accompanies them, one will not be confused by them.
& *See the Score of Trios, Quartets and Sextets, as well as the Op. 13 Six Duos, etc.*

23. NOTE. I have explained sufficiently in my *Score of trios, quartets and sextets, for Horns in different keys* (1 Volume in 8vo Paris, etc.) why one must prefer, in this relationship of two clefs, the usual manner of composers to those of Mr. DOMNICH. Meanwhile, since all Horn Professors do not have the work mentioned above, I will reproduce, in part, the reasoning by which the assertions of Mr. DOMNICH can be refuted.

The g clef, in its true range, really only suits the Key [or Crook] of high *C* on the Horn. Also, the range of this clef is reputed to lower itself by degrees, according to the other Keys [or Crooks] connected more [closely] to the highest key. This clef terminates the same [way], being one octave lower than its real range when it uses the key [or crook] of low C. Thus, it approaches more closely the *F* clef, and the supposed gap that Mr. DOMNICH observed no longer exists. Further, it is easier to suppose that the *G* clef lowers itself proportionally as the keys of the Horn become lower, than to suppose that the *F* clef raises itself proportionally as these keys become higher. And the latter is much less in use than the former. Such are the reasons that all composers should use, so they preserve the manner of writing Horn parts indicated in the preceding example. [A note of clarification is needed here: In his *Méthode de Premier et de Second Cor* (Paris: Conservatoire Imprimerie, 1808): 6, Domnich advocates using what today we call "modern" bass clef notation, suggesting that it better represents the actual pitches heard, and removing the apparent notational gap between a treble-clef middle C and a bass-clef second-space C, which are considered to be the same note in "old" notation. Here, Dauprat suggests that since C-alto is the only crook that produces notes at the actual notated treble-clef pitch, and that successive, longer crooks lower the range toward the bass-clef C, the gap perceived by Domnich is filled by the actual pitches created

by the crooks themselves.]

24. The Professor must thus study the instrument of his student in order to become accustomed to this in good time [and thus] to correct the same defects himself in his different lessons.

25. The *F#* on the 5th line and the *A* a third above are sometimes exceptions: we say sometimes, because these two notes, naturally too sharp, especially in high keys, become less so in proportion to the Scales using more sharps, or if the Key is too low. Further, the quality and the accuracy of these sounds still depends on the good or bad disposition of the performer's lips, at the moment he uses them.