

JOSEPH MEIFRED'S MÉTHODE POUR LE COR CHROMATIQUE OU À PISTONS (1840).¹

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One of the most frustrating gaps in research on the horn and horn-playing is that of understanding how hand technique gave way to valve technology. Some answers are provided in a French horn method book entitled *Méthode pour le Cor Chromatique ou à Pistons* [*Method for the Chromatic or Valved Horn*], published in Paris in 1840. In attempting to discover how contemporary technological and artistic resources might be combined in performance, the author of this method, Joseph Émile Meifred, promoted an approach that is dependent on exercising options. The contemporary technological and artistic resources to which I refer are 1) the technology of the valve, new and considered progressive in the early nineteenth century; and 2) the use of hand technique, employed throughout Europe, but apparently in use longer in France than anywhere else. Hand technique--which I am sure needs little explanation for readers of this *Journal*--involves placing the hand in the bell of the instrument in order to obtain pitches not naturally available. There is little evidence that Meifred's *Méthode* was used outside of Paris, but this book is worth examining in detail because it offers information that represents an important part of an evolution of *thought and perception* regarding the horn, and promotes an approach that is at once forward-looking and respectful of the past.

The purpose of this article, in part, is to examine briefly how horn players and composers in France perceived both the instrument itself and the evolving valve technology that was applied to it. It is not my intention, however, merely to summarize existing studies relating to issues of technology and orchestration. Certainly I shall cite relevant research in these critical areas, but my principal focus will be Meifred's *Méthode* and the combinations of hand and valve manipulations described therein. Meifred's perspective on the horn was built on a familiar principle: to use the best of all resources available in order to make music-making easier and more effective.

I

The evolution of valve technology has been the subject of many interesting and informative research studies. Particularly noteworthy are the studies of Herbert Heyde, Reine Dahlqvist, Reginald Morley-Pegge and others, which rely heavily on original documents such as patent records.² From this research emerge several important points emerge bearing specifically on Meifred and his participation in the promotion and development of this technology:

1. The first commercially successful and artistically satisfactory valve mechanism

was built in 1814 by Heinrich Stölzel, first in Pless, Prussia, and later in Berlin. There is much confusion and disagreement as to whether Stölzel was in fact the true inventor, and whether this first valve was square, tubular, or of the double-piston variety; in any case, it worked on a piston concept.

2. A supposed later version of this valve, attributed to Stölzel, appears to have come to France around 1826. Gaspare Spontini, formerly of the Paris Conservatoire and Opéra and, at that time, Kapellmeister at the Imperial Court of Frederick Wilhelm III in Berlin, sent samples of valved instruments to Paris to show certain teachers and performers what they were and how they worked.³

3. Meifred and an instrument maker, Labbaye, made various improvements on this mechanism. As reported in *Revue Musicale* in 1828, these improvements included: 1) the addition of movable tuning slides to the valve tubing (the first account of this addition); and 2) the attaching of the valve cluster to the bell branch of the horn rather than the main tuning slide. This increased the valves' stability and also allowed the tuning slide to move more freely so that internal crooks could then be used.⁴ Below is a diagram of the horn described in the article.

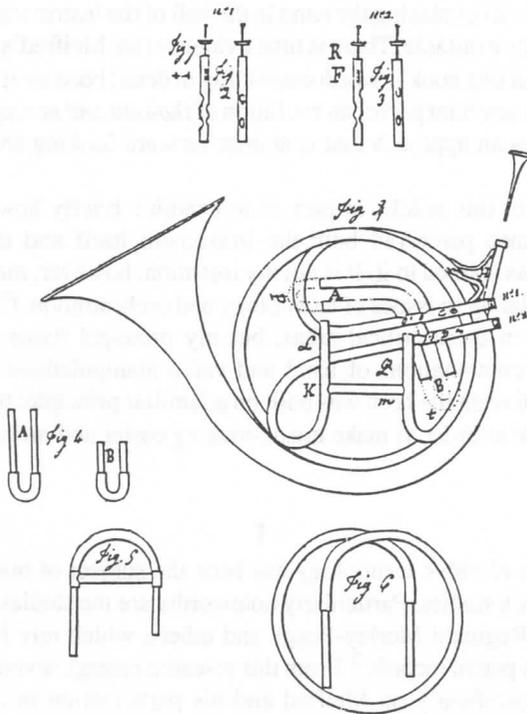


Figure 1
Diagram of "Meifred" horn.⁵

Meifred's improvements represented significant changes. In a sense they appear to offer a compromise between the German concept of playing the valved instrument as though it were at a fixed pitch, completely open and chromatic; and the advanced hand technique and preference for crook timbres, typical of the French. Meifred also offers a compromise in his choice of two valves: German players generally chose to use instruments with three, while most French players at the time generally preferred none at all.

There is one problem, related to valve technology, that has yet to be resolved convincingly. Unfortunately, it has a direct bearing on Meifred and his *Méthode*. In his book, there is a picture of a horn that has what appear to be two rotary valves (Figure 2).

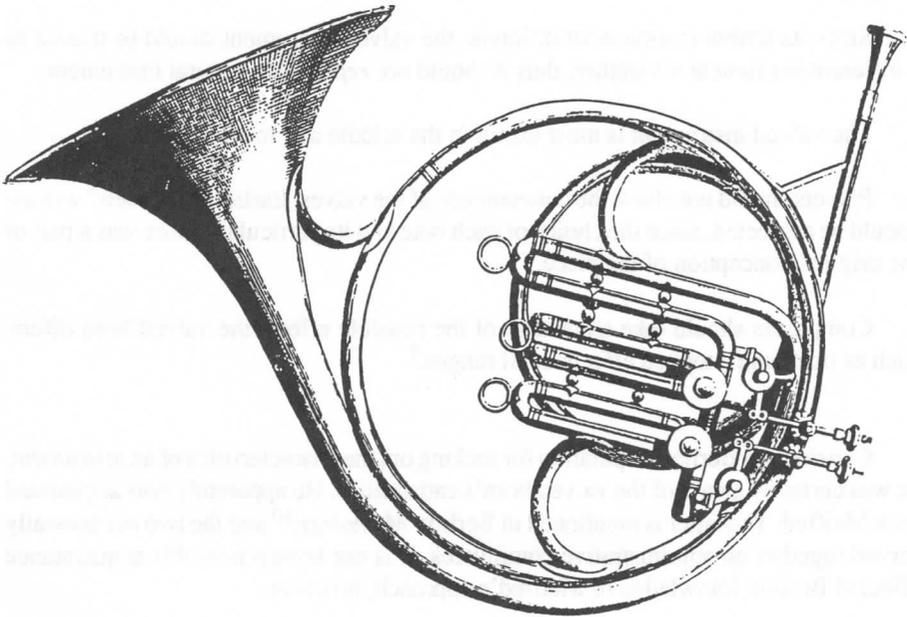


Figure 2

Diagram of Halary horn, from Meifred, *Méthode...*, i.

The appearance and use of rotary-valve technology has been the subject of heated debate. Since there has been no convincing resolution to this controversy, it must suffice to say that while the technology did exist by the 1830's, there is as yet no clear evidence for the manufacture of rotary valves in France at that time. Speculation persists regarding the existence of related devices such as the "swivel-disc" mechanism,⁶ but conclusive evidence is lacking.

II

Perhaps the most revealing source of information on the horn in France at this time is Hector Berlioz' *Traité d'Instrumentation et d'Orchestration*, published in Paris in 1843.⁷ In his discussion of orchestration, Berlioz clearly separates the valveless instrument (*cor*) from its valved counterpart (*cor à pistons* [French use] *et à cylindres* [German use]).⁸ After discussing at length the natural instrument and its idiosyncrasies, Berlioz alerts composers to the fact that valves can serve to change the key of the instrument, and that horns with valves can be treated as chromatic instruments. He then offers his own opinion as to their proper use, emphasizing by way of summary four principal areas of concern:

1. Since its timbre is somewhat different, the valved instrument should be treated as a different instrument altogether; thus it should not *replace* the natural instrument.
2. The valved instrument is most useful in the middle and low range.
3. Players should not abuse the convenience of the valves. Earlier composers' writing should be respected, since the choice of each note and its particular timbre was a part of the original conception of the piece.
4. Composers should take advantage of the possible effects the valved horn offers, such as open *and* stopped effects in all ranges.⁹

Considering Berlioz' reputation for seeking out the characteristics of an instrument, he was certainly aware of the valved horn's capabilities. He apparently was acquainted with Meifred. The latter is mentioned in Berlioz' *Mémoires*,¹⁰ and the two occasionally served together on administrative committees. It is not known how this acquaintance affected Berlioz' knowledge of Meifred's approach, however.

III

While there is disagreement regarding Meifred's date of birth,¹¹ the most reliable source, Théodore Lassabathie's *Histoire du Conservatoire Imperial* (1860), states that he was born 22 November, 1791, in Colmars, in the Basse-Alps region of France.¹² Apparently Meifred showed a great deal of promise as a child in many areas of his

education, especially writing. In 1815 he entered the Paris Conservatoire in order to study the horn with the very famous but still rather young Louis François Dauprat. Meifred's study of the horn was quite successful, as he won the *premier prix* in horn in 1818. A year later, upon graduation, Meifred won the low-horn position with the Théâtre-Italien. In 1822 another low-horn position opened at the Paris Opéra; Meifred auditioned, and won the position, remaining with this orchestra until 1850. When Spontini sent valved instruments to Paris, Meifred gravitated to the technology, probably because of the availability of low notes. One year later an improved version of the same valve mechanism (Figure 1 above) won a silver medal at the 1827 Exposition of Products of Industry in Paris. On 9 March, 1828, Meifred gave what is believed to be the first public solo performance of the valved instrument at the inaugural concert of the Société des Concerts du Conservatoire. Nothing is known about the piece he performed except that it was one of his own compositions.¹³ A review of the concert by François Joseph Fétis, noted critic and editor, in *Revue Musicale* was very favorable:

Difficult passages, not executable on the ordinary [natural] horn, and multiple modulations were performed by Mr. Meifred with an ease that demonstrated even to less-informed listeners the advantages of the new process. I do not doubt that the valved horn will be generally adopted, as soon as an expert maker can replicate them and Mr. Dauprat publishes the excellent method he has composed for the use of this innovation.¹⁴

In fact, Dauprat did publish a method for valved horn as a supplement to his huge *Méthode de Cor-alto et de Cor-basse* of 1824, but it may have seen only a single edition. One reason for this may have been that in 1829, Meifred produced a modest publication called *De l'Étendu, de l'emploi et des ressources du Cor en général, et de ses corps de rechange en particulier, avec quelques considérations sur le cor à piston; ouvrage destiné aux jeunes compositeurs, et dédié à M. E.-F. Bonjour, par J. Meifred, artiste de la Chapelle du Roi et de L'Académie royale de Musique* (*On the range, the use and the resources of the Horn in general, and of its crooks in particular, with some considerations about the valved horn; a work aimed at young composers, and dedicated to Mr. E.-F. Bonjour, by J. Meifred, artist of the Royal Chapel and of the Royal Academy of Music*). This method included practical information on how to play both the natural and valved instruments, as well as advice to composers on how to write for them. The publication was advertised as having been produced with the assistance of Dauprat, and was clearly the predecessor to his *Méthode* of 1840. It also received favorable reviews from Fétis in *Revue Musicale*: "We think that young musicians who study it [the book] carefully will find it all that is necessary for using the horn properly in orchestration, and to pull [bring] out the many varied and rich effects one can produce today."¹⁵

In 1833, Meifred was hired by the Conservatoire to teach valved horn, supplementing the natural horn teaching of Dauprat and later, Jacques François Gallay, Dauprat's replacement in 1842. Meifred's duties were not necessarily to promote the use of valves

as much as to produce low-horn players for orchestras. His interest in valved instruments also took him naturally to military bands, which was one of the reasons Spontini sent the instruments to France in the first place.¹⁶ Meifred conducted the Third National Guard Band of Paris for thirty years, beginning in 1837. He also served as one of the founders of the *Gymnase Musical Militaire*, a school for musical training specifically for military personnel. Meifred finally retired from the Conservatory in 1864, and died three years later after medical complications resulting from a serious fall down a stairway. His obituary in the *Revue et Gazette Musicale* of September 8, 1867, written by Antoine Elwart, the Conservatoire archivist, roughly 10 days after his death, portrays him as a beloved and important teacher and performer.

IV

What is most important to remember in the discussion leading up to Meifred's *Méthode* is the normal expectations regarding horn-playing: first, in France, the natural horn was already perceived as a chromatic instrument; and second, timbre changes were desirable to composers who chose to use them. It is perhaps this last idea that made the valved horn so radical: hearing *open* notes that were normally closed, listeners were surprised by the unexpected *evenness* of timbre. Aside from normal resistance and negative response to change, composers in particular were confused at first, since their training showed them the varied color palette of the natural horn.

A third issue to remember is Berlioz' statement that the valved horn is most useful in the low range. This attitude was shared by many composers who were exposed to this technology. The qualms with the natural horn, if any, were focused primarily on the lack of available sonorous notes in the low range, and on the smaller, particularly chromatic, gaps in the middle. The first clear evidence of extended valved horn use in the Opéra orchestra comes seven years after Meifred's introduction of the instrument to the public.¹⁷ Parts for two *cors à pistons* appear in Jules Halévy's 1835 production of *La Juive*. In spite of the significance of this opera, its first performance received a rather lukewarm review, which fails to mention valved horns. According to Adam Carse, the two parts were performed by Meifred and Antoine François Duvernoy, a relative of former Conservatoire professor and Opéra hornist Frédéric Duvernoy, possibly his brother.¹⁸ A brief examination of the pitch contents of all of the horn parts in *La Juive* by Halévy supports the contention that the valved horn was (at least initially) most useful in the low range.

NATURAL HORNS

Horn 1

Horn 2

VALVED HORNS

Horn 1

Horn 2

Figure 3

Pitch materials for Horns in Halévy, *La Juive*, 1835.

As can be seen from this figure, the pitch materials chosen for the natural horn include chromatic pitches above middle C, with the second horn range extending into the lower octave on notes in the natural range. While the pitches chosen for the valved instrument include most of the same notes in the natural range, the difference is seen in the lower octave, where both valved horns use chromatic pitches down to the low written B^b. The use of these instruments is confined to special effects in specific dramatic contexts. Their first appearance is in a section of Act 3, a violent and confusing part of the drama, where the melodic materials consist primarily of chromatic and step-wise motion in the lower octave. Halévy also uses the valved horns throughout Act 5, though the instruments are integrated into the texture in a middle register similar to low natural horns, playing notes in primarily chromatic and stepwise motion.¹⁹

V

Meifred's *Méthode pour le Cor Chromatique ou à Pistons* is in three sections. The first communicates the materials which form the foundation of his approach. The second advances the student to a second level of performance, demonstrating a number of options in musical contexts, and addressing other practical issues and details that apply to all hornists pursuing performing careers. The third section expands the previous materials, demonstrating to both performer and composer practical applications and possibilities that exist on the valved instrument.

Meifred states that the goals of this method are as follows:

1. To restore to the horn the notes it lacks.
2. To restore accuracy [of intonation] to some notes.
3. To render muted notes sonorous, while preserving the desirable timbre of lightly stopped ones.
4. To give the leading tone in every key or mode the "countenance" it has in the natural range.²⁰
5. Not to deprive composers of changes of crook, each of which has a special color.²¹

Meifred is quick to support the teachings of his mentor, Dauprat, and recommends that his method be considered supplementary to Dauprat's monumental *Méthode*. He writes, for practical and perhaps political reasons, that there is little value in restating material that has been said well and then trying to take credit for it. Meifred supports the overall concept of sound that Dauprat professes, and his intent is to use valve technology to create more options within that concept. He does not agree, however, with Dauprat's delineation of *cor-alto* and *cor-basse*. Meifred says very pointedly that while he respects the differences between the two types, he feels that the valved horn can effectively cover both. He says that separating the two types is like saying to two violinists: "You, sir, will play only the E string and the A string, and you, sir, will play on the D and the G."²² He supports his position by reminding the reader that if a student practices in all ranges, he or she will be able to play in all ranges. Meifred however opts for a compromise position between the two types and his comprehensive attitude, dividing the range of the horn into three octaves, the low, middle, and high.²³ Next, Meifred recommends that the student read six articles in Dauprat's method dealing generally with embouchure (physiognomy and placement), holding the instrument, the hand in the bell, breathing, and the modifications of sound (pitch, intensity, timbre, fullness).²⁴

The next part of this first section of Meifred's *Méthode* contains an explanation of the symbols used for fingerings and hand positions. There are five: *S*, representing the valve closest to the mouth (the "Superior" or highest), which lowers the pitch a whole step; *I*, representing the second valve ("Inferior"), lowering the pitch a half-step; *S/I*, representing a combination of the two; a Zero (○), representing notes that need to be raised slightly in pitch by opening the hand position in the bell; a Half-filled Zero (◐),

representing a pitch requiring a half-stopped, or “lightly stopped,” positioning of the hand in the bell. In response to a variety of hand-position proportions offered by other authors, Meifred states that the true hand positions are governed by the ear. Mathematical proportions are irrelevant, especially considering the variety of individual hand sizes and shapes.²⁵ Valve indications are indicated above the notes and hand positions are notated below because sometimes they move together. Meifred also advocates the use of hand-stopping the bell in combination with the valves to produce an echo effect, which, in his opinion, should replace the use of the mute.

Next, Meifred addresses one of his most important issues, the treatment of the leading tone. As mentioned before, it is his general attitude that notes in a leading-tone position should always be lightly stopped, to preserve the countenance and intonation. This forces the combination of the valve and the hand, since the valves allow the tonic and dominant of any key to be played open, so that the leading tone can be produced with the same fingering, while the hand, lightly stopping the bell, lowers the pitch. An example of this type of exercise is provided in Figure 4 below. As mentioned before, Meifred notates hand positions below the staff and valve combinations above (S = first valve, I = second valve, = continue to hold the valve down).



Figure 4
Sample leading-tone exercise, from Meifred, page 9.

Meifred presents a process for tuning valves, then Meifred comments on other authors of method books who choose to put an “Abridgement of the Principles of Music” in the front of their methods. His objection is that students can hardly learn enough about music in two pages, implying that method books should be a part of a larger course of study, not ends in themselves.

The body of the exercises in the First Part are organized first by octave. In the middle octave, presented first, he makes a significant statement: in the exercises, the student should practice using valves on the sixth and seventh scale steps of the key in loud

versions and lightly stopping the sixth and seventh scale steps when playing softly. It seems, however, that Meifred's intention here is to encourage the student to be comfortable with available options, not necessarily to state a hard-and-fast rule of performance. In the sections devoted to each octave, there are leading-tone exercises that use every note of the range. Also, for each section, as a compromise with the concept of *alto* and *basse* playing, specific crooks are recommended for high and low horn players. The implication is that these are included in order to expand the resources of the player, if only to learn how to make hand and valve adjustments for each crook. A final significant issue that Meifred addresses is chromaticism. Specific exercises, constructed to encourage combinations of hand and valves, are used as an aid to the understanding and accomplishment of chromatic and enharmonic relationships. Meifred recommends, as a general rule, that sharps should be treated as leading tones, thus lightly stopped, and flats should be played with open fingerings.

After demonstrating the three octaves, Meifred presents fourteen exercises which combine them. As Meifred points out, the majority of them focus on notes in the lower two octaves where the options that the valve creates can best be exploited. He also says that this range is chosen in order to encourage the use of the valves in general, though their use is more appropriate and frequent in these lower octaves. Meifred recommends that the student, after mastering these exercises, continue with specific exercises in Dauprat's method.²⁶ His recommendation, however, is merely to apply valves to the exercises and to continue scale and interval patterns into the low octave.

The Second Part of this method, as mentioned before, takes this approach to a second level of understanding and application. It begins with a discussion of the valves as effecting immediate crook changes. To aid in performer choices, Meifred gives pitch equivalencies for each of the three valve combinations. It is interesting to note that Meifred begins with a premise of the horn crooked in F. This rationale is not explained and is somewhat confusing, particularly in view of Dauprat's identification of E^b as a good compromise key for *alto* and *basse*. Perhaps Meifred's choice is related to the traditional *cor mixte* use of the F crook, or perhaps it is an enticement to German players who crooked their horns permanently in F. A Synonymic Table is provided, offering different fingerings and hand positions for every note in the range. Meifred then rearranges the table to provide a scale consisting of all notes produced with open fingerings, and a second scale with all notes lightly stopped. This is followed by an explanation and table of leading-tone strategies in all keys for both tonics and dominants, with samples of bad choices, e.g., an open leading tone to stopped tonic.

Meifred provides exercises for all major and minor scales over three octaves, as well as leading-tone exercises covering the same three octaves, and identifies certain exceptions and enharmonic considerations, including double sharps and double flats. He then offers twelve exercises in major keys. Only a few exceptional fingerings are included, as Meifred states that the student should have understood the preceding instructions. He then takes an opposing approach to twelve exercises in minor keys for what he calls "practical considerations" involving both intonation and timbre. He

provides a model which demonstrates not only several enlightening hand-valve combinations, but also gives the impression that while these combinations are recommended, the performer can choose from a variety of options depending on the specific context of each note in question. This model is provided in Figure 5 below.

MODÈLE en MI MINEUR.

SICILIENNE

Figure 5

Meifred, Minor Exercise Model (in E minor), *Méthode*, page 47.

As can be seen, choices of valves and/or hand positions relate to harmonic and melodic relationships. One such relationship involves modulation, seen in measures 15-19, where a key change to B major produces a passage in which the valve is used as a legitimate crook change. A second relationship involves the leading tone: for example, a half-stopped F# in measure 1, functioning as a leading tone to G, its relative major, compared with second-valve F# in measure 2, functioning as an arrival on the fifth step of the dominant harmony (B).

After the carefully notated minor exercises Meifred provides a review of all twelve major and all twelve minor keys. This is followed by a pair of duets-- one major, one minor--taking the performers through the twelve keys in a circle of fifths. A third exercise, in the form of a single-voice *Prelude*, pursues the same goal. He then discusses a variety of ornaments, including trills, appoggiaturas and grace notes, showing various options for hand and valve combinations.

The next portion of this section is quite enlightening. In it, Meifred discusses more sophisticated ways of combining hand and valve. He first discusses the use of the valves as crooking devices in order to facilitate transposition. For clarification, he demonstrates how to play in the effective key of the instrument, using different fingerings and "typical" half-stopped notes in places appropriate in the transposed composition. Then he discusses all orchestral transpositions, using a movable-clef method for reading the transposed parts. He recommends using the F crook for any transposed part. Exercises in modulation follow, but it is not clear whether he intends that these should use the valves as crooking devices or to produce individual notes without regard to natural patterns. It seems likely that he hopes the student will combine both ideas for an individual performance. Some examples for *echo* horn re-emphasize the use of this technique to replace the mute. Next he presents a variety of "typical" patterns of horn music, with suggestions for alternate fingerings to make these patterns easier--once again using the horn primarily as a crooking device. Then Meifred includes passages from horn concertos and solos as examples for the application of his ideas.

Meifred next gives a rather obligatory statement regarding three-valved horns. He identifies the practical issues in his choice of the two-valved instrument. First, he states that the technology itself is imperfect, and if more of it is used, the more imperfect will be the result. The imperfections he identifies are the sharpness of the angles of the tubing, which cause repercussions (or *resistances*) of air, and the undesirable changes in tone color that these angles produce. He states that his choice of two valves is based on the precept of using the minimum amount of technology required to produce the desired effects. If he could do all that was asked with one valve, he says, he would use only one. For Meifred, the only advantage offered by the third valve is the ability to play three additional notes in the lower octave, which can be played "facticiously" on the two-valved instrument with the same fingering (S/I for low E^b, D, D^b). He does suggest, however, that players of the three-valved horn can use his method and approach to the instrument, using a Synonymic Table of fingering equivalencies that he provides. This table uses the same symbols as those for the two-valved instrument, with a 3 for the third valve.

In the Third Part of this method Meifred describes the application of his instructions to horn ensemble music. This is perhaps intended as a brief lesson in orchestration for composers, or as a demonstration of another level of practical application for performers. Using a few duets and a Funeral March by Dauprat (Figure 6) as examples, Meifred demonstrates the fingerings he feels are appropriate for valved-horn performance. He again names Dauprat as the composer who has done more for the evolution of horn technique than any other.

Cor-Alto en sol
Cor-Alto en FA
Cor-Basse en FA
Cor-Basse en si

Handwritten musical notation for the first system, including dynamics (f, dol., mf) and articulation (S, i) markings.

Handwritten musical notation for the second system, including dynamics (f, mf) and articulation (S, i, tr) markings.

Handwritten musical notation for the third system, including dynamics (f, mf) and articulation (S, i, tr) markings.

Figure 6

Dauprat, *Marche Funèbre*, from *Quatuors*, Op.8, in Meifred, pages 84-85.

The image displays three systems of handwritten musical notation for brass instruments. Each system consists of three staves. The notation is dense and includes various articulations and dynamics. The first system begins with a treble clef and a key signature of one flat. It features a variety of note values, including eighth and sixteenth notes, and rests. Dynamics such as *f* (forte) and *f* (f) are indicated. The second system continues the piece, showing more complex rhythmic patterns and dynamic markings like *ff* (fortissimo) and *ff* (ff). The third system concludes the piece, ending with a double bar line and repeat signs. The handwriting is clear and professional, typical of a composer's manuscript.

Figure 6 (Cont.)

The final portion of the method is a collection of ten vocalises composed by two vocal teachers at the Conservatory, Marco Bordogni and Auguste Panseron. Meifred deems these vocalises appropriate for performance as salon pieces, as examples for study, and as opportunities for artistic performance in the manner of singers. He points out that it is through the understanding of artistic singing and its application to instrumental performance that one can best communicate meaning in music.

VI

In conclusion, Meifred's *Méthode pour le Cor Chromatique ou à Pistons* occupies a unique position historically. As one of the only comprehensive methods that explains how to combine hand and valve, it may be regarded as a "missing link," bridging a significant gap in our knowledge of the evolution of the horn and horn-playing. Considering the prevailing conservative attitudes in the Paris Opéra and Conservatoire, however, it is perhaps only because Meifred's *Méthode* was a *compromise* that it was accepted at all. It is more appropriate, then, to view this method in the spirit Meifred intended: as a supplement to a larger work, that of Dauprat, whose own *Méthode* represented a culmination in horn pedagogy, describing an instrument, the natural horn, which was effectively complete, or chromatic. Meifred's choices in adding valve technology to hand technique were made with the recognition that neither the technology nor the technique were perfect. Thus, using the best of both would accomplish the new without sacrificing the old, which did not need to be fixed, and which gave the horn its special identity.

The unfortunate situation at this time is that while there are many references to Meifred's influence and teaching in Paris, there is not yet enough evidence to relate his approach to performing practices in other countries.²⁷ Still, considering the importance of Paris to the musical pulse of Europe, this evolution in thought and perception demonstrates a dynamic and progressive approach to horn performance and pedagogy. Meifred's approach, dependent on context and thoughtful decision-making, is useful to an understanding of the application of valve technology to mid-19th-century performance and interpretation—and therefore also useful today. More important than the application itself, however, is the process by which it was conceived, for it offers a clearer picture of the attitudes toward and forces upon musical performance and composition in France during the first half of the 19th century.

NOTES

1. This article is a version of a presentation with the same title, given at the Seventh Early Brass Festival, Amherst, MA, August 3, 1991. A larger, more comprehensive study of Meifred, his method, and the arrival and application of valve technology to the horn in France is my recent DMA dissertation, "Joseph Meifred's *Méthode pour le Cor Chromatique ou à Pistons* and Early Valved Horn Performance and Pedagogy in Nineteenth Century France" (University of Wisconsin-

Madison, 1991), which includes a complete English translation of the *Méthode...* (Paris: Richault, 1840). Prior to this study, the most comprehensive treatment of Meifred and his method is to be found in Birchard Coar, *A Critical Study of the 19th Century Horn Virtuosi in France* (Dekalb, IL: Coar, 1952), pp. 113-122, 156-157.

2. The most comprehensive discussion of valve technology to date is Herbert Heyde, *Das Ventilblasinstrument* (Wiesbaden: Breitkopf and Härtel, 1987), an extension of his series of articles, "Zur Frühgeschichte der Ventile und Ventilinstrument in Deutschland, 1814-1833," *Brass Bulletin*, vols. 24-27. Also, notable contributions, corrections and clarifications have been provided by Reginald Morley-Pegge, *The French Horn*, 2nd ed. (New York: Norton, 1973), and Reine Dahlqvist, "Some notes on the Early Valves," *Galpin Society Journal* 33 (1980): 111-124.

3. Evidence that Spontini sent valved instruments to France at this time comes from a wide range of primary and secondary sources, most notably Spontini himself:

I sent from Berlin to Paris, between 1823 and 1831, a number of valved horns, trumpets or cornets with two or three pistons or valves (the first known in Paris), notably to Mr. Barrillon, to horn professor Mr. Dauprat, and to the director of music of the national guard, Mr. David Buhl, and it is according to these examples that some Paris makers *are believed to have invented or perfected, whereas they only imitated and copied, as it always was with all wind and brass instruments in use in France, all of which were invented and perfected in Germany.*

This quotation is taken from a letter by Spontini, quoted in Georges Kastner, *Manuel Générale de la Musique Militaire* (Paris: Didot, 1848), p. 192. The translation is my own and I have italicized Kastner's original underlining. The year 1826 is specified in many places, most notably by the members of the Conservatoire who first received and examined the instruments: F. G. A. Dauverné in his *Méthode pour la Trompette* (Paris: Brandus, 1857), p. xxii, and Louis François Dauprat, *Le Professeur de la Musique ...* (Paris: Quinzard, 1857), pp. 119-120.

4. François Joseph Fétis, "Exposition des Produits de L'Industrie, Instruments de Cuivre: Cors à Pistons," *Revue Musicale* 2 (1828): 153-162. Fétis also describes another horn displayed at the same exposition, built by Antoine (Halary). This horn had three valves, "in imitation of Berlin trumpets." Though he does not so state, his description implies that the three valves were attached to the main tuning slide. *Ibid.*, p.161.

5. *Ibid.*, opposite p.159.

6. See, for example, Morley-Pegge, *French Horn*, pp. 45-46.

7. *Traité d'Instrumentation et d'Orchestration*, (Paris: Lemoine, 1843). Berlioz also seems to be one of the first to use valved instruments in Paris: a pair of valved trumpets appear in his *Grand Ouverture des Francs-juges* (1826).

8. *Ibid.*, p.185. This distinction by Berlioz has also raised a bit of controversy. Many writers identify Berlioz' *cor à cylindres* as a horn with rotary valves—most recently Ernest Gross, in "The

influence of Berlioz on contemporary nineteenth century use of brass instruments," *Brass Bulletin* 68 (1989), pp. 35-36. Gross does not make a specific case for rotary valves. In fact, he seems to assume, as do many others, that this is the technological distinction made by Berlioz. There is a noticeable discrepancy, however, appearing in Dauverné's *Méthode* of 1857, noticed by Dahlqvist ("Early Valves," p. 116). On page xxv, Dauverné provides the reader with a picture of several types of trumpets. In this picture there is a three-valved instrument by "Stölzel of which the primitive invention is attributed to Blühmel," sent by Spontini in 1826. There is furthermore a two-valved instrument *système Français* from 1828, also with Stölzel valves. Later, Dauverné (p. xxvii) observes that this type was abandoned when the three-valved instrument was perfected. Finally, there is a drawing of a trumpet à 3 cylindres, *système Allemand* which clearly has double-piston valves.

9. Berlioz, *Traité*.

10. The anecdote in question tells of a brief encounter in a rehearsal, in Berlioz' (*Memoires*. Paris: Calamann-Levy, 1904), pp. 301-302. Berlioz describes one of his frustrations in working with musicians: virtuosos seem to think that criticism directed at them individually is an affront to the entire group (my translation follows):

It happened one day, during rehearsals of *Benvenuto Cellini* in Paris, that I had to point out to a second horn (Mr. Meifred, a man of spirit nevertheless) that he had made a mistake in an important passage. To this observation, made softly, and with all possible politeness, Mr. Meifred, standing angrily and losing his spirit completely, cried out: "I did what is there! why do you distrust the orchestra so?..." To this I responded still more quietly: "First, my dear Mr. Meifred, it does not concern the *orchestra* at all, but you alone; next I do not distrust anything, because mistrust supposes doubt, and I am perfectly certain that you are mistaken."

11. In earlier editions of the *Biographie Universelle des Musiciens*, Fétis stated that Meifred was born 23 October 1793, probably because Meifred was supposed to have entered the Conservatoire at age 21 in 1815 (1st ed. [Paris: Didot, 1840] 6: 359). In the 1880 edition of the *Biographie Universelle* (2: 197), the October date is refuted ("born . . . 22 November 1791 [and not 23 October 1793]"), but no explanation is offered. Even before this correction, however, the November date was generally adopted in most sources, taken, most likely, from Antoine Elwart, *Histoire de la Société du Concerts du Conservatoire* (Paris, 1864), or Théodore Lassabathie, *Histoire du Conservatoire Imperial de Musique et de Déclamation* (Paris: Lévy, 1860). There is one confusion that is yet unresolved—a birth date of 13 November 1791 in the *Riemann Musik Lexicon* (Mainz: Schott, 1961) 2: 188. In one further discrepancy, the year 1795 in Hans Pizka's *Horn-Lexicon* (Kirchheim: Pizka, 1986) seems to be a misreading of the earlier Fétis edition, in which the 3's resemble 5's in the typescript.

12. Lassabathie, *Histoire*.

13. The concert was given at 2:00 in the afternoon in the Salle des Concerts and the program was the following (Elwart, *Histoire*, pp.130-131):

Heroic Symphony [Eroica] of L.V. Beethoven.

Duet from the opera *Semiramide*, of Mr. Rossini, sung by Miss Nélia and Miss Caroline Maillard.

Solo for valved horn, composed and performed by Mr. Meifred.

Air of Mr. Rossini, sung by Miss Nélia Maillard.

New Concerto for Violin by Rode, performed by Mr. Sauzai.

Chorus, from *Blanche de Provence* by Mr. Cherubini.

Overture from Abencerrages by Mr. Cherubini.

Kyrie and Gloria from a Mass, by Mr. Cherubini, performed by large chorus.

14. Fétis, "Régénération de l'École Royale de Musique: Société de Concerts, *Revue Musicale* 3 (1828): 148. Translated by the author. The original text is as follows:

Un solo pour le cor à pistons, executé par M. Meyfred [sic], à qui l'on doit ses perfectionnemens, a donné une haute idée de toutes les ressources qu'on peut trouver dans cet instrument. Des difficultés, inexécutable sur le cor ordinaire, et des modulations multipliées ont été jouées par M. Meyfred avec une facilité qui a démontré aux auditeurs les moins éclairés les avantages des nouveaux procédés. Je ne doute pas que le cor à pistons ne soit généralement adopté, aussitôt qu'un facteur habile les aura multipliés, et que M. Dauprat aura publié l'excellente méthode qu'il a composée pour l'usage de cette innovation.

15. Fétis, "Publications Classiques: De l'étendu, de l'emploi et des ressources du Cor," *Revue Musicale* 6 (1829): 189-190 (my translation).

16. cf. endnote 3. "...and to the director of music of the national guard, Mr. David Buhl..."

17. It is generally agreed, however, that the first performance on valved instruments of any kind at the Paris Opéra was in Chelard's opera *Macbeth* in 1827. Chelard wrote parts for three valved trumpets, played by Dauverné, Legros, and Bénard. See Fétis, "Exposition...Cors à Piston," *Revue Musicale* 2 (1828): 161, as well as Dauverné, *Méthode*, p. xxvii. Valved horns were made their first appearance in 1835.

18. Adam Carse, *The Orchestra from Beethoven to Berlioz* (Cambridge: Heffer, 1948): 76. It should be noted that the younger Duvernoy was not on the permanent roster of the Opéra orchestra. He was apparently hired for the performance.

19. Jules Halévy, *La Juive*, ed. Philip Gossett and Charles Rosen (2 vols.), *Early Romantic Opera*, no. 36 (New York: Garland, 1980).

20. By this, Meifred means that a note in a melodic leading-tone position, for example B in the key of C major, should have a certain "countenance" or presence that emphasizes or reinforces the arrival on the tonic, in this case C. The implication from this comment and later discussion is that the important issues are the timbre and the pitch of the leading tone. Meifred maintains that the timbre of any note in a leading tone position should be half-stopped in order to emphasize the open sound of the tonic. In terms of pitch, notes in a melodic leading-tone position should have a slightly

higher pitch to reinforce the motion to and resolution on the tonic. Using hand-stopping technique, bending the tonic pitch down with the hand, allows for more control of the pitch by the performer. By encouraging the use of the hand on this note, Meifred may also be trying to give it more flexibility of general intonation, because the seventh scale step also serves as the third in a dominant chord, and thus would need to be lowered.

21. Meifred, *Méthode*, p.1.

22. Ibid., p. 4.

23. See Frédéric Duvernoy's *Méthode pour le Cor* (Paris: Leroi, 1803), pp. 39ff. Later, a similar attitude was reflected in exercises written by Jacques François Gallay in his *Méthode pour le Cor, Op. 54* (Paris: Lemoine, 1845). See Birchard Coar's discussion of *cor mixte*, a style that mixed *alto* and *basse* ranges into one comprehensive range ("Critical Study," pp. 24-29).

24. The specific articles are nos. 6, 8, 9, 10, 11, 12, pp. 11-19, in Dauprat, *Méthode de Cor-Alto et Cor-Basse* (Paris: Schoenenberger, 1824). Meifred, *Méthode*, pp. 4-5.

25. Meifred's attitude, no matter how realistic, did not reach all future authors of horn methods. Some authors divided hand position by intervals of fourths, others even by eighths. See, for example, Gallay, *Méthode*, p.13; Friedrich Gumbert, *Praktische Horn Schule* (Leipzig: Forberg, 1879), p. 16; Oskar Franz, *Grosse theoretisch-praktische Waldhorn-Schule*, 4th ed. (Dresden: Seeling, 1890; 1880), p. 35.

26. The recommended exercises are in Article 5 of Part Two of Dauprat's *Méthode*, pp. 25-66. Dauprat calls these "Exercises for High Horn." Implied is the inclusion of the "Exercises for Low Horn," Article 6, pages 67-116. Both Articles are collections of patterned technical exercises.

27. In my dissertation, however, I present evidence from several articles in German publications, such as the *Allgemeine musikalische Zeitschrift* and the *Neue Zeitschrift für Musik*, of an awareness of Meifred and, separately, a recognition that combining hand and valve could create more options for composers and performers. At this point, however, there is no evidence that German performers specifically knew about or used Meifred's approach.

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