

CHAPTER 7

MUTED INSTRUMENTS

Introduction

Mutes were used in the French orchestra before 1810 on stringed and wind instruments and the timpani. Although the employment of mutes on different instruments and in different contexts made for widely divergent musical results and in the theatre evoked very different images, the phenomenon of muting is convenient to discuss under one heading. Not only will this conclude the technical discussion of individual instruments that has proceeded from chapter four, but it will lead directly into consideration of orchestration proper. Some aspects of orchestration thus introduced will come up for renewed discussion later, but the majority lead to conclusions related to the expressive purpose of muting.

Over the whole literary field of the period remarks on mutes themselves or on muted sounds are few. Most notably, none of the instrumental tutors or treatises for the guidance of composers so far examined contain such remarks. The note in H. C. Koch's Musikalisches Lexikon on horn muting will be quoted below as will the information furnished by writers after 1810; but for the period 1789 to 1810 in France almost all the available information comes from the music itself.

Before the Revolution the Encyclopédie of Diderot dealt with "Sourdine" on a purely practical level. However, the Supplément of 1776-7, under the same heading, extended the topic somewhat to include remarks on performance practice and the effects of muting.

"La sourdine en affaiblissant les sons, change leur timbre, et leur donne un caractère extrêmement attendrissant et triste. Les musiciens François qui pensent qu'un jeu doux produit le même effet de la sourdine, et qui n'aiment pas l'embarras de la placer et déplacer ne s'en servent point, mais on en fait usage avec un grand effet dans tous les orchestres d'Italie: et c'est parce qu'on trouve souvent ce mot sordini écrit dans les symphonies."

This assessment of the comparative situation in France and Italy appears justified in the light of the small number of French passages using mutes before 1780 and the information on Italian practice found elsewhere. In particular the Italians seem to have continued muting oboes into the epoch of Paer and Spontini. The generally more active and rhythmical style of Italian eighteenth-century string playing described in chapter two would naturally have been more effectively transformed by muting than the French style of before about 1780. The more frequent French adopting of mutes after this date may perhaps be seen not simply as the result of searching for another expressive orchestral technique, but also a natural outcome of the adoption of Italian string practice following the teaching of Viotti and the dissemination of the Tourte bow.

Certainly by 1787 Meude-Monpas sought in his Dictionnaire de musique to give the impression that the use of mutes was not a rarity.

"Sourdine ... on emploie ce moyen, non seulement pour adoucir le son des accompagnements, mais encore pour avoir un son concentré et étouffé qui puisse, dans certaines occasions, peindre la suffocation et la douleur. Dans les grands Orchestres on se sert souvent de sourdines."

The shift of emphasis from Diderot's "attendrissant et triste" to "concentré" (smothered, suppressed) and "suffocation" (choking, stifling) is marked; in fact, there was one outstanding piece of French music performed by 1787 which could have inspired the impressions above which proved to be so accurate a portent, namely the orchestral piece which opens act 2 of Grétry's Richard Coeur de Lion (1784). This interlude (Ex.61), employing muted violins, horns, trumpets and timpani, accompanies the depiction on stage of the interior of a fortress, seen as dawn is breaking. Such an example was to prove an inspiration to more than one composer of opéra-comique,¹⁾ and even if its language now appears excessively symmetrical for

¹⁾ Beethoven may have seen the work in Vienna (Theater auf den Wieden) in 179

the context, the power of the visual image combined with a radical experiment in orchestral colour (for this it was) was a crucial mixture.

By no means all composers were to use muting to comparable ends, however and many other human associations were exploited. This variety is not apparent in printed scores before Meude-Monpas unfortunately and there are insufficient examples of muting so surviving to warrant his phrase "se sert souvent" if applied to Paris. There is a possibility therefore that muting was introduced after 1780 or so at the instigation of the leader or individual player, and regarded in the same way as a musical ornament. The case of *timpani* is important from this point of view.

The steadily expanding uses found for muted instruments after 1789 as we as those which related directly to Grétry's archetype are reflected in the remarks in Le Courrier des Spectacles of 12 April 1801.

" [la sourdine] produit un effet mystérieux et charmant dans l'accompagnement des chants nocturnes, dans l'expression de la crainte, de l'hésitation." 1)

In tracing these lines of development the discussion must be subdivided according to the class of instrument mainly concerned.

(1) Muted strings

All stringed instruments with the exception of the double-bass were susceptible to muting. Quantz specifically associated muting only with violin, viola and cello,²⁾ and Kastner's Traité général (1836) stated, "sur la contrebasse on n'emploie ni les doubles-cordes ni la sourdine". There seems no reason to doubt this for the period around 1800.³⁾

Leopold Mozart wrote of string instrument mutes "made of wood, lead,

1) Quoted in Favre/BOIELDIEU, Vol.II p.256

2) Quantz/VERSUCH p.233

3) Pace Favre/BOIELDIEU Vol.II p.256, claiming Boieldieu's frequent use of muting "même aux violoncelles et aux contrebasses".

tin, steel or brass"¹⁾ with which Quantz agrees, although preferring steel.²⁾ The Encyclopédie simply gave "la petite plaque d'argent qu'on applique au chevalet d'un instrument à corde pour en éteindre le son".

The muting of strings was chiefly associated with dramatic music in France; even in Germany the slow movement of a concerto (e.g. Steibelt's 4th piano concerto) was the only place in the orchestral repertoire likely to attract this particular tone-colour. In dramatic music the French used muted strings in contexts which may often be classified. The first and one of the most traditional classes was that of the romance, the air on an amorous theme and the love duet. Frequently the romance concerned romantic longing, and from the following list of examples purely diverting or incidental romances have been excluded.³⁾

<u>Ex.54</u>	1764	Philidor, <u>Le Sorcier</u> p.107	(air)
<u>Ex.54a</u>	1778	Grétry, <u>L'amant jaloux</u> , p.136	(air)
<u>Ex.55</u>	1786	Dalayrac, <u>Nina</u> , p.45	(romance)
<u>Ex.56</u>	1791	Cherubini, <u>Lodoiska</u> , p.196	(air)
	1792	Dalayrac, <u>Roméo et Juliette</u> , f.375	(duet) ⁴⁾
<u>Ex.57</u>	1793	Steibelt, <u>Roméo et Juliette</u> , p.53	(arioso)
<u>Ex.58</u>	1797	Gaveaux, <u>Sophie et Moncars</u> , p.62	(air)
<u>Ex.59</u>	1798	Dalayrac, <u>Le château de Monténéro</u> , act 2, no.8	(romance)
<u>Ex.60</u>	1801	Dalayrac, <u>Léhéman</u> , p.182	(duet)
<u>Ex.62</u>	1803	Boieldieu, <u>Ma tante Aurore</u> , p.15	(duet)

1) Mozart/VIOLIN p.52

2) Quantz/VERSUCH p.233. He claimed that mutes of brass and wood produced a "worthless", "growling" tone. Presumably his sympathies lay with weightier types, as he believed the mute should be in the "correct ratio with the size of these instruments". Experiment shows that today's ordinary wooden mutes transform cello timbre admirably. The reservations made by Forsyth/ORCH and F. Corder (GROVE/V, "Mute") seem quite groundless.

3) Some sources indicate muted strings in Alceste's avowal of love, "Je n'ai jamais chéri la vie" in Gluck's opera, C.E. p.212

4) B.N., MS 2594

The similarities of subject-matter and the technical development of orchestral expression within this family of examples are equally striking. Dalayrac's Roméo duet and that in his Léhéman are love duets; in Boieldieu's duet, two male characters sing about a girl. The remaining solo pieces ring the changes on the theme of the absent lover, a theme epitomised in Dalayrac's "Quand le bien-aimé reviendra" from Nina, which became one of the most famous songs of the subsequent decade. In the dramatic situations which prompted these various musings the progress of the opéra-comique from sensibility to pre-Romanticism is interestingly displayed. Philidor's Agate thinks she is going to be married off to the wrong man; Cherubini's Lodoiska is in captivity; Steibelt's Juliette will sing, "O nuit profonde, redouble ton obscurité pour cacher l'objet que j'adore". With this personification of night as worthy of mystery and guilt may be compared that of Grétry's librettist: "O douce nuit, sous ton ombre paisible reçoit l'aveu de mes premiers soupirs". Gaveaux's Moncars, a full five years before the publication of Chateaubriand's René, is in love with whom he imagines to be his sister, and intends to enter a monastery.

The melodic and harmonic coincidences between the examples also show the development of musical language with which orchestration was intimately connected. Philidor's air consists of a balanced phrase, rising and falling, over four slowish bars; all the other examples save Cherubini's and Dalayrac's Monténéro have predominantly falling melodies at their outset. All the melodies use appoggiaturas, growing in importance from Philidor's repeated grace-notes to virtually half the length of the theme opening the duet in Léhéman; more pertinently, with the exception of the cello melody in Gaveaux's example, the length of the initial melodic phrases decreases, necessitating a shift in orchestral style from counterpoint and accompaniment towards homophony and tonal sustenance. Harmonically, Philidor's air

looks forward in its adoption of a degree of stasis which seems natural to the expression of mental concentration. In conformity with the idiom of the whole this pedal note is repeated rather than held, as is the violin part, the indentations emphasized by the harpsichord. Such stasis is not reproduced in later examples, but similar effects are achieved through the use of held pedal-notes in some and repeated ones in others over which (or under, in the case of Boieldieu) the harmony is free to alter. (Nina and Monténéro are the exceptions.) Held notes automatically exclude the intrusion of harpsichord tone, and if the continuo instrument had a mute stop itself it would surely be applied in the example from Nina. Deprived thus in some cases of continuo harmony and contrapuntal interest an orchestral accompaniment had to be formulated; but in order for the muted quality of the strings to be heard, every composer except Philider and Grétry evidently considered that the wind instruments should be kept to a minimum, and should at most act in a doubling capacity. As a result, the resources of the strings in several early examples were stretched by dividing the violas. A richer string texture was also found by Steibelt, but through the solo violin.¹⁾ Not only does this use of the violas have seemed to have been an attractive one in itself, but to have focussed attention upon the tenor string voice in melodic conjunction with muted instruments. While this interest may obviously be demonstrated in numerous other types of orchestration, its effect in the present associative context was undeniably direct. Grétry places violas above violins, doubling them with bassoons. In Sophie the cello solo replaces the usual violin melody but the rest of the layout remains traditional, even to the extent of the divided violas. The tone-quality of the cello, deliberately

1) Composers and printers hardly ever thought it necessary to cancel muting instructions in opera scores. Steibelt's, p.58, is a case where one is not certain whether the instruction still applies, or indeed applies to the violin solo as well as the accompaniment.

emphasized by the muted accompaniment, is designed in the music to embody romantic longing.¹⁾ The love duet in Léhéman is equally forward-looking in the sense that for the first time the composer using muted strings began to shape the design of the layout round the given timbre rather than adapting a conventional layout with muted tone. The two solo cellos "replace the divided violas of earlier examples and Boieldieu's Aurore."²⁾ The bass and the violins are not simply an accompaniment but by their interjections extend the imaginative scope of the whole; the violas also find their rôle changed, sometimes sounding above the first cello, sometimes below. The texture is both fluid and dynamic, deals satisfactorily with the short phrases and prominent appoggiaturas, and presents a conception quite removed from Philidor's example, or even Dalayrac's own Nina. While more conventional in balance, Boieldieu's duet gathers up and redistributes the various given expressive and orchestral devices convincingly; the shifting of the pedal point to the violins is the outstanding feature, because it combines this harmonic function with an expressive one normally given to the middle strings, as in Steibelt's example. Moreover, its sensitive use of wind instruments adds a new dimension to the sounds which could not be achieved by strings alone.

The 'incidental' romances in Deshayes's Zélia (1791) and Woelfl's L'amour romanesque (Ex.30), while similarly concentrating on string timbre rather than wind, do not share concentration on the tenor register, in keeping with the less introverted sentiments expressed. The latter example will be discussed later in considering the rôle of the harp in the ensemble, as will Ex.77 from Steibelt's ballet, Le retour de Zéphire (1802). Here,

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- 1) If the melody itself recalls "Dalla sua pace" the use of the cello is surely more Weberian, not to say Tristanesque.
- 2) Labels such as "soli", as described in chapter three, were usually ambiguous. The singular "violoncelle" in Ex.60 is the important term.

as in Woelfl, the muting of strings is almost purely a tone dampening device and of little particular interest. A similar idea was specified by Gluck when the oracle sings in Alceste, since the singer's voice had to sound out from behind the statue on the stage.

The next group of examples using muted strings is concerned with the expression of religious or 'heavenly' imagery in various ways.

<u>Ex.63</u>	1789	Paisiello, <u>Le barbier de Séville</u> , p.123	(air) E flat
<u>Ex.64</u>	1802	Winter, <u>Tamerlan</u> , p.78	(air) E flat
<u>Ex.65</u>	1803	Paisiello, <u>Proserpine</u> , p.303	(chorus) C
<u>Ex.66</u> & <u>Ex.34</u>	1804	Spontini, <u>Milton</u> , pp.156-8, 166-7	(ensemble) E flat
<u>Ex.67</u>	1810	Catel, <u>Les Bayadères</u> , p.108	(chorus) E flat

The air from Le barbier is Rosine's prayer, "Juste ciel, permets la feinte"; Seyda's air in Tamerlan is prompted by threats of religious persecution and the singer's fears for her small son; the trio for female voices in Catel's opera is an invocational prayer to Dourga. The remaining two examples exploit less personal situations. In Milton the poet composes the narrative of the first love in Paradise, and Proserpine's example depicts this realm itself.

As a rider to this group we may compare the duet from the last act of Gluck's Orphée, "Je goutais les charmes", Ex.68.¹⁾ Here heavenly bliss is recalled by Euridice.

All these examples excepting Proserpine are in E flat. In one sense this was an obvious key to select since its tonic and dominant can only be fingered notes on the strings.²⁾ Yet it cannot be thought as coincidental

1) Although the "con sordini" instructions for the preceding solo for Euridice, "Fortune ennemie", are not cancelled anywhere in the printed score, the editor of the C.E. (p.361) notes the marking "Plus de sourdines" just before the reprise of that solo in the Académie copy score. This suggests that the above duet was played muted in Paris.

2) cf. Quantz/VERSUCH p.234: "When you play slow pieces with mutes, the greatest force of the bow should not be used, and you must avoid the open strings as much as possible".

that not only these examples but also those discussed below concerning the imagery of night should almost all be in this key, because, as seen already, much sharper keys were sometimes given to muted strings.

There are indeed other features common to the present examples. One is slow speed, andante or larghetto; and Gluck and Paisiello in Le barbier are the only exceptions to the rule of four pulses per bar. Another is the melodic use of woodwind instruments, more especially the clarinet, bassoon and horn. The melodies themselves in each case tend to be in a balanced arch of rise and fall. In the harmony this balance, connected undoubtedly with the notion of mental composure, is reflected in calm alternations of tonic and dominant and unwillingness to modulate. By contrast with several earlier examples, there is little inclination to create predominantly sustained string accompaniments. Varied but steady movement of parts is sought instead, with the effect of making the string body as a whole sound in greater parity with voices and instruments. In both excerpts by the older master, Paisiello, this parity is expressed by the simple alternation of wind solos and string passages. Greater prominence is given the violins than the lower strings. Winter's resources for richness are greater, though lacking the Italian's lyricism: nevertheless, both alternation and accompaniment between wind and strings groups provide the same expressive balance, the same feeling of 'rapt' string tone giving way to heightened melody. If Winter sounded too Viennese, Catel is positively Mozartian.¹⁾ The derivation notwithstanding, the care and subtlety of orchestration is entirely creditable; wind and strings are not now merely juxtaposed but united. The contrasts between them are inseparable from the phrasing and harmonic progress of the whole paragraph. Paisiello shows no inclination to superimpose

1) Les mystères d'Isis, Académie 1801, was a popular success in Paris. The opening of the act 2 finale of Die Zauberflöte, to which Catel here seems indebted, was performed at the beginning of the fourth act of Les mystères. See Servières/EPIISODES, p.165

wind instruments further than regarding them as substitutes for the top melody-line of the string group. Winter and Catel superimpose wind chords as well as woodwind melodies over the string texture, and reinforce the lower strings either by movement or by making the cellos independent.

The most complex and original invention of the group is seen in Milton, and on the level of classification it shares characteristics with the first group of examples discussed as well as describing "ce premier aveu de l'amour dans les jardins d'Eden". The system of dividing the orchestra, including strings, into muted and non-muted groups is seen on the first page in Ex.66. The importance of muted strings occurs later (Ex.34). On p.166 of the latter example muted cellos form a strong countermelody to Milton's account and are therefore directly congruous with the cellos in Sophie and Léhéman. Horns and bassoons create here the tonal continuum noted in Léhéman and other examples. Page 167, by contrast, shows elements more in common with Paisiello and Catel: muted violins in octaves (cf. Le barbier), shared wind and string chords and a more broken texture, attention centred on muted violas and cellos. Most importantly, the whole of the first part of the ensemble - the muted instruments unmute at p.175 - shares the expressive duality between muted strings and wind instruments common to all the other examples.

On p.172 Spontini attempted a technique apparently unique for its time: a melody for muted violins in thirds doubled an octave below by unmuted violins also in thirds. That he did not repeat the idea in his later French operas may indicate that it proved more ingenious than effective. Even in Vienna Milton's difficulties were felt. Beethoven complained, "in the short and easy opera Milton ... the orchestra so went to pieces that the Kapellmeister and the leader and the orchestra really

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suffered

shipwreck -- for the Kapellmeister, instead of giving the beat in advance, gave it later, and then only did the leader come in".¹⁾ Yet the opera had been mounted with some regularity since the Vienna première in 1805.

Before discussing the use of muted strings in connection with the depiction of night and nocturnal events brief attention may be given to those instances where sleep is portrayed, sometimes independently of darkness, because these form a small yet coherent group. Four Académie operas in particular are connected, each showing a dream or dreamlike sequence on the stage. Piccinni's Atys (1780) shows in act 2 scene III the eponymous hero first in a tortured monologue and gradually thereafter overcome by sleep, succeeded by a "choeur des songes". Example 69 illustrates the instrumental interlude as Atys succumbs to sleep. In Tarare (1787) Salieri fixed on the idea of having a large part of the prologue accompanied by muted strings in different styles of music to depict the shades of unborn mortals. Dressed in white, they are shown "froids, sans passions, sans goûts", unable to express themselves. Le Sueur's Ossian (1804) contains in the fourth act an extended scene for the hero's sleep and dreams: Ex.70 shows the opening of the first pantomimic episode. Finally, in his Abel (1810), Kreutzer set a prelude and monologue for the wandering and exhausted Cain, situated at the opening of the third act. Part of his air, "Doux sommeil", is reproduced as Ex.71; it was followed by Cain's dream of the unhappy future of his race and the bliss of Abel's.

The three illustrations show substantial elements in common. The keys are similar, there is a tendency towards harmonic stasis and an identical progression in all three from tonic to subdominant harmony over a tonic pedal. Again, violins are the most important instruments. Each

¹⁾ Letter to Breitkopf & Härtel, 7 January 1809. From Emily Anderson's The letters of Beethoven, London, 1961, Vol.I pp.212-3 and footnote.

example shows a long and sinuous melodic line supported by quietly moving accompaniments. Wind instruments are reduced in importance generally. The effect created by all three is distinct from that produced by previous groups in that the former strive to attain a hypnotic quality. The continuity and repetition of similar violin figures, sustained accompaniments (with repeated broken chords in Ossian) and the gradual motion of bass-lines all contribute to this end. Perhaps Abel looks most obviously towards the future within the framework of Académie tradition, because it isolates the particular muting technique concerned and makes it a point of focus through the impressive and still rather unusual feature of octave doubling of all strings.

These cases, taken from comparatively long sections of music, suggest that this pattern of orchestration was considered appropriate only in more ambitious contexts. In opéra-comique, where the dramatic situations involving sleep were domestic, different uses were generally found for muted strings. Jadin's Le coin du feu (1793), Ex.69, comes closest in musical imagery to Académie orchestration. Here a character (ironically!) is only pretending to sleep. Dalayrac's Camille (1791) sings a lullaby with muted violins at the beginning of act 3; the following year, in Gaveaux's L'amour filial, Louise falls asleep to a violin solo with muted strings accompaniment. Neither is musically worth quoting. An orchestral plan even more typical of the genre (Ex.72) comes from Gaveaux's La famille indigente (1793). The scene portrays a poor wife trying to keep her children from waking: "Le sommeil est le plus beau présent que le ciel ait accordé aux malheureux ... " The musical gestures are thus straightforwardly broad. While the idiom cannot of itself be labelled as that of sentimentality, it is interesting and typical of the period that the 'popular

clarinet (much more commonly used in melodrama than the oboe and nearly always present in the orchestra lists of smaller theatres at the expense of other upper woodwinds) should be the solo instrument selected. A later composer would perhaps have preferred a violin solo, but 'sentimental' violin solos did not occur at the time, and the instrument of the street and popular theatre did duty in the circumstances.

The imagery and associations of the night (see also chapter 10) were too powerful a current to be limited either to any one dramatic genre or to any single kind of situation. Some attention will be given the topic here from the technical point of view: as a sound-ideal it will receive discussion later.

Some references to darkness have been manifest in examples already seen. In Tamerlan the singer in Ex. 64 resolves to conceal herself in "ces retraits sombres"; Grétry's Isabelle and Steibelt's Juliette arrive on stage in darkness, and Cherubini's Lodoiska must surely be in semi-darkness at the beginning of act 2. The musical description of these situations, as of practically all the others discussed so far, has reflected the resolved, common thought of one or two individuals or sometimes of a small group. In the sense that such resolution enabled the composer to exploit a special technique like muting over a notable period of musical time, the following set of examples represents the logical culmination of a homogenetic area of orchestration.

They depict either the unified action of groups of individuals in darkness, or the background to this. The latter is the closest that a composer could approach to the painting of night itself, but unmuted examples of this, somewhat paradoxically, are more common than muted ones. Their analysis must therefore be reserved.

<u>Ex.73</u>	1789	Rigel, <u>Les Amazones</u> , no.23	E flat
	1790	Berton, <u>Les deux sentinelles</u> , f.107	G min
<u>Ex.74</u>	1793	Gossec, <u>Le triomphe de la République</u> , p.19	E flat
<u>Ex.75</u>	1794	Rochefort, <u>Toulon soumis</u> , act 1, scene 1	E flat
<u>Ex.76</u>	1794	Martini, <u>Sapho</u> , opening of act 3	E flat

The examples by Rigel, Berton and Gossec are more in the nature of adaptations of established orchestration patterns than newly thought out ones. All depict nocturnal marches. The given illustrations show expected squareness of phrase and triadic opening themes. Although the coincidence of flutes, clarinets and horns is notable it is apparent that these are spaced in a conventional attitude of doubling and blending behind a principally string timbre.¹⁾ Harmonically by contrast Rigel's "marche lugubre" is the most up to date of the present nocturnes in its insistence on the flat 7th and 6th. Such inflections have been largely absent from other pieces, Lodoiska being the chief exception using the flat 6th. Rigel's melodrama, produced at the popular Théâtre de l'Ambigu-Comique, was written for a string ensemble of about 4-3-2-1.²⁾ These numbers may have lessened the effect of the mutin in louder passages but been advantageous at low dynamic levels.

If the orchestration of Rigel and Gossec is compared with the entr'acte from Grétry's Richard discussed above (Ex.61) the lines of inspiration apparent apart from muting seem to be key, supremacy of violin timbre and the flat tone of the flute which tends to emphasize the hollowness of the string sound. Further comparison shows Grétry's superior originality in

1) To these may be added the entrance of priestesses in act 3 scene VI of Cherubini's Démophon.

2) ALMANACH/1791, which gives only the players' names.

the layout as a whole. The reason is that his followers used literalism rather than suggestion, conventional part-writing with muting added. Grétry, it seems, exploited the particular sound of muted violins to greater effect. The two-part writing and the initial omission of violas allows for the muting by forcing the ear to fix on the contrast between a high, thin treble and an unadorned bass. The contrasts first of brass and timpani and then of loud and soft phrases (p.110) represent the right sort of broad alternatives to set off the muted sounds advantageously. In this exploitation of contrast and the effectiveness of an exposed muted violin line Grétry's example may be placed beside many later passages as well as the earlier Atys.


A far different and highly original treatment of a nocturnal assembly is evinced in Sapho. Martini's customary unpredictability was in Ex.76 completely attuned to the spirit of the time. On stage a group of men, at night and before a temple, is dispersing in order to hide. The choice of key, the subdivision of strings and the concentration on violas, cellos and double-basses anticipate many more well-known examples of the exploitation of 'dark' orchestral string colour.¹⁾ Muting of violas and cellos must add materially to the general effect, but what is most convincing is the conception of a particular layout which would lose much if arranged in any other way. The sound desired determined the arrangement of the orchestration, and, for France, a fertile novelty was the result.²⁾

Martini's music is too mediocre to be allowed a position of importance amid the French music of its time, but it enables us to see that a later near-masterpiece, Cherubini's Chant sur la mort de Joseph Haydn (1804), did

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- 1) cf. C. M. von Weber's 2nd symphony and first piano concerto of the next decade.
- 2) "La musique ... est remplie de beautés": review in DPh, 24, 30 frimaire An 3, p.557

not lack specific roots in its orchestral techniques as well as its musical imagery. As often happens, the finer piece took up ideas previously used in less memorable contexts. The result in this case was a slow orchestral introduction of some 113 bars' length which overshadows in power and quality its two succeeding vocal sections. (See Ex.91, comprising pp.2-8 and 13-16)

Two main orchestral combinations use muted strings. Cellos, divided into four groups, are muted up to p.10; violins and divided violas are also muted to p.10, remove mutes for 16 tutti bars thereafter, and re-take mutes from p.13. Before the entrance of the muted cellos a fragmented introduction gives out foreshadows of arpeggiated themes used in the first vocal section. The music seems to come to life only with difficulty, and the importance of instrumental colour as a disorientating factor is immediately established alongside the reluctance of the music to reveal its tonality until the second page. When the cellos begin there is still conspicuous melodic fragmentation, and indeed the entire introduction seems to be shaped towards the building up of a continuous melodic line (pp.13-14) and its subsequent collapse.

Cherubini had taken the idea of cellos divided into four playing alone, the triple metre and  anacrusic rhythm from the overture to Méhul's Ariodant. Superimposing mutes on this specialised layout and writing so frequently below the A string, he created great eloquence of tone in the top parts and clarity in the lower registers. By any standards the music is highly individual, yet it reflects its own time well. As was seen above the opening years of the nineteenth century saw greater exploitation of the cello in muted form: this was itself part of a general enthusiasm for the cello similar to that for the horn in the earlier 1790's.¹

¹) A check on Conservatoire concert programmes shows a performance of Reichardt's cello concerto in 1797, then Bréval's *sinfonia concertante* for 2 cellos in 1800. But 1802-4 saw the composition and performance of new cello concertos by Platel, Romberg (then Conservatoire professor), Reicha and Auber and the revival of one of Berteau's much older concertos.

Taking a rôle in the musical imagination of the period as symbolising something akin to Romantic longing if not actually Chateaubriand's "vague des passions", the cellos in Cherubini's Chant are to be seen intellectually as part of the contemporary musical response to cultural melancholia. By using mutes the music was automatically to be placed beside operatic night-pieces. When the cello paragraph passes in parallel to the upper strings but in the relative major key (p.7) an entirely new orchestral effect is produced, one which seems to realise the seraphic implications of Proserpine and Milton in a fully effective way.¹⁾ Unfortunately for Paris Cherubini's invention was not to be allowed to enter the common experience: all copies were rapidly recalled when Haydn was found to be alive.

The second main combination leaves upper strings muted but places them against the full band and muted timpani. There is observable kinship in the pedal C and sustained first violin line with the Académie's 'sleep' examples quoted above, and the supporting winds resemble several other examples, but Cherubini is too original for comparisons to be pursued very far. Rather, granted the integrity of the muted string tone, other aspects follow. First violins are doubled with only one flute, while oboes and clarinets are often at lower pitch. A broad counterpoint is present in the first horn and bassoons on p.14 but everything else tends to be heard as homophonic accompaniment over pp.13 and 14. The thick inner texture of second violins and lower strings boldly continues the constricted sound of the opening cello paragraph. Muted second violins and violas are so adapted as to obtain a reduction in volume rather than a perceptible change of timbre, which is another aspect of muting technique. This technique is used further on p.15

¹⁾ In retrospect the path to Lohengrin seems a short one, especially considering the unusual arch-form of Cherubini's introduction.

where a contrast of woodwind sound is required to help resolve the climax.

Cherubini's example provides good evidence for the use of silence itself in producing an effective means of showing off the timbre of muted strings; a few earlier pieces can be isolated to show that silence or disjointedness in a slow tempo were used to similar ends. In all four pieces a certain degree of tension prompted the result: two were act openings and two were melodramatic episodes.

<u>Ex.78</u>	1789	Dalayrac, <u>Raoul sire de Créqui</u> , opening act 3
<u>Ex.79</u>	1791	Dalayrac, <u>Camille</u> , p.57
<u>Ex.80</u>	1800	Cherubini, <u>Les deux journées</u> , p.268
<u>Ex.81</u>	1800	Boieldieu, <u>Beniowsky</u> , prelude to act 3

Dalayrac's examples form part of the pattern of music related to darkness. In the first, portraying the hero a prisoner and discovered at daybreak, unprepared diminished chords enhance an obvious design. Similar harmonic instability, together with silent periods, characterize the melodrama from Camille. If Grétry's Richard was the ancestor of this excerpt the concentration of tonal elements was carried forward considerably, with the factor of muting taken for granted. There is hardly even an air of experiment about the way in which the strings are juxtaposed with muted brass.

The two other pieces of this set show how the dramatic terms of reference allied to muted strings broadened, as was the case with the romance. Cherubini's accompanies a physically warm situation, Boieldieu's a snow-covered mountain on the peninsular of Kamchatka. Unfortunately no real technical advances are correspondingly manifest here, with the exception of Boieldieu's "sur la même corde". (I have assumed that mutes were removed at the double bar of this example.) The use of silence is, however, present in both instances and the continuing recourse to E flat major bears witness to the particular associative value of this key.

As Camille showed and further examples will substantiate, muted strings entered into more dramatic relation with other instruments when the object was to present a high degree of human stress and a lesser degree of reflection. Pre-Revolutionary examples of this kind show an elementary degree of string-wind combination. "Fortune ennemie" from the third act of Orphée, or the oracle scene in Alceste (Ex.82), or even an opéra-comique storm (Ex.83 from Gossec's Toinon et Toinette of 1767) are all agitated enough, but use muting as a mere aid to understatement. Even in Dalayrac's La maison isolée (1797), where similar techniques obtain, there is more ancillary activity, the gruff interjections depicting the fearful nervousness of the solitary victim (Ex.83). In Ex.84 from Berton's Montano et Stéphanie of two years later, the pace is increased and the language correspondingly more clearly organised. The muted horns (rendering a modern 'cuivré') are a development forward from Camille's soft and comparatively tentative brass, and the answering bass motif thrusts the rhythmic element into a prominence never achieved in the melodically defined examples by Gluck. The stage situation is nocturnal and precedes the dramatic mainspring of the story, but we may appreciate without knowing this the modernism of the orchestral sound. The muted strings themselves have become a primary focus of attention.

The final group of compositions principally using muted strings forms a more coherent and forward-looking pattern. All are in moderate to brisk tempos and express feelings of tension coupled with physical quickness or alertness. The group is divisible into two according to instrumental detail, but all eight examples are essentially of one type.

<u>Ex.85</u>	1789	Dalayrac, <u>Raoul sire de Créqui</u> , p.115	D
<u>Ex.86</u>	1793	Steibelt, <u>Roméo et Juliette</u> , p.47	A
<u>Ex.52</u>	1798	Gaveaux, <u>Léonore</u> , p.100	E flat

<u>Ex.87</u>	1799	Dalayrac, <u>Adolphe et Clara</u> , p.101	E flat
<u>Ex.74</u>	1804	Gaveaux, <u>Le diable couleur de rose</u> , p.19	E

The examples from Raoul, Roméo, Léonore and Adolphe are connected with action performed in darkness; two are in E flat, as so many of the previous cases.

In Ex.85 the opening of the opera is shown; it is night, with the sense of expectancy increased by three knocks. The excerpt from Léonore is taken from the gravedigging duet. Adolphe's example is an ensemble preceding the flight of the lovers. The remaining two pieces involve more active situations. In Raoul the hero has just escaped from his tower to get help and in Gaveaux's comedy the devil arrives from hell and jumps into a tree. The sharper keys of the last two, outward and bright, represent a deliberate effect in combination with muted string tone; in Roméo the risk of brightness is reduced through the absence of a continuous violin line.

All five pieces except Adolphe eschew anything like comprehensible melody and all use static or repetitive tonic-dominant harmony. Together with these features sustained chords are of importance, particularly in the tenor register. A disjunct bass line is apparent in all save the last example. All these characteristics help to accommodate the muted string timbre, since if melody and rhythm are mesmeric rather than memorable the ear must necessarily fasten on the quality of sound that is displayed. The first four pieces are all taken from situations in which two or more characters will sing, so it may readily be seen that a discursive vocal structure would complement the orchestral imagery, not oppose it. The last piece is interesting and exceptional in that it is an extended pantomimic episode with no vocal part; thus it consolidates the orchestral status of this particular layout. Its use of low flutes in held thirds was an

uncommon one. In itself and in conjunction with muted strings it points towards a new kind of orchestral sensibility, namely the functional freedom of all sections of the ensemble.

The last three members of this group are:

- | | | |
|--------------|------|--|
| <u>Ex.88</u> | 1787 | Salieri, <u>Tarare</u> , p.47 |
| <u>Ex.89</u> | 1798 | Boieldieu, <u>Zoraime et Zulnar</u> , pp.214-5 |
| <u>Ex.90</u> | 1803 | Boieldieu, <u>Ma tante Aurore</u> , opening duet |

Each Boieldieu example is related in detail to the characteristics of the first five pieces above. The major point of difference is that the violins are staccato, not the reverse. The extract from Tarare is drawn from that part of the prologue in which the "ombres curieuses" surround the future Tarare and Atar, "en les enveloppant". It represents orchestrally a possible point of departure for Boieldieu, for this kind of pictorialism appears likely to have been an innovation in Paris; Salieri's fluttering effect is at a large remove from Gluck's angry palpitations in Orphée and from contemporary French music. In any case, Boieldieu's two examples represent one of the most inventive orchestration-types to emerge from opéra-comique of the period. They appear the more felicitous beside other (contemporary) instances of the same effect because they extend the range of each component part of the orchestration. As a result there is a happier abundance of detail, and these details -- muted horns, blended woodwinds in Zoraime, woodwind and viola answering phrases in Aurore -- are impelled by an exceptional rhythmic vitality. Perhaps the chief agent of this vitality in each case is the violin parts: there are more notes for the violins to play than in, say, Gaveaux, and the patterning covers a greater range than in Dalayrac or Steibelt. Because the violins in Zoraime are

extended in range, the held wind chords could become full and satisfying, yet not overbalance the strings. Because all the violins have 16 notes per bar in Aurore the wind chords do not obtrude, but add through their alternation of timbres a complementary element of colour and rhythm. Nevertheless, Boieldieu's conception of the required sound closely followed contemporary examples; he merely extended the effectiveness with which it was found generally that muted strings in faster tempos could give the orchestra a lightness, brilliance and suggestive tension that was quite new.

With the exception of Tarare the examples above were written for the opéra-comique stage. It is therefore instructive to consider that the orchestration group most nearly resembling it, that of the depiction of sleep in Atys, Ossian and Abel, was composed for the Académie. Both groups expose the muted strings in related fashion, yet while the former developed as an idea (in sound and dramatic context) and showed the growing virtuosity of the opéra-comique orchestra the Académie group shows a minimum of idealistic and technical advance, and tends if anything in Abel to adopt principles of opéra-comique scoring. In short these principles are summed up in what may be termed the conceptual unity of the orchestra. Académie operas by Frenchmen, in fact, have played an almost insignificant part in the preceding survey (Catel, Gossec) and compare rather unfavourably in quality with those by Italians and Germans. Whether the reason for this was the foreigners' unfamiliarity with French playing style at the Académie or a needless sense of inhibition on the part of the French, must be answered in due course. Some measure of the continuing sense of orchestral cross-reference in opéra-comique on the other hand is shown in Ex. 117 (from Gaveaux's L'échelle de soie, 1808) in which elements of the romance, amorous intrigue and a nocturnal situation are combined, and where the key (E major) and use of wind instruments show freedom and therefore evolution.

(2) Muted woodwind instruments

The extract from the *Encyclopédie* quoted in the introduction to this chapter has already added weight to the supposition that muting in general and of wind instruments in particular, was commoner in Italy than in France. In Prussia Quantz treated the process as a matter of course.

"Let me say in passing that wind players would do better to insert a piece of damp sponge, rather than paper or other materials, into the opening of their instruments when they wish to mute them." 1)

French wind tutors are silent on the question of mutes. The only descriptive evidence directly concerning woodwind muting is a passing reference in the historical note to Domnich's Méthode de premier et de second cor, and has little or no bearing on the Paris of 1789 and after. (Domnich stated that Anton Hampel (d.1771) was inspired to investigate stopped horn notes by the practice of oboists who used cotton bung mutes for solos.) Much later the Encyclopédie Méthodique declared simply "Il y a aussi des sourdines pour les cors et autres instrumens à vent". 2) This may represent an early reference to the wooden pear-shaped oboe mute, an invention which has so far proved impossible to date. 3) Eighteenth-century clarinet mutes were made, as in 1785 Tuerlinckx of Mechelin sold "23 clarinets with A-joints and sourdine" to a military band. 4) But there is nothing to link this commercial development with the very few instances of clarinet muting found in orchestral music.

The flute has never been muted and experiments with bassoon muting are very uncommon: the latter technique appears in the early eighteenth century but does not impinge at all upon the period in hand.

1) Quantz/VERSUCH p.234

2) METH, 1818, article "Sourdine"

3) GROVE/V, Vol.V p.1044; Bate/OBOE p.153

4) GROVE/V, ibid, after "Bulletin du cercle archéologique de Malines", 1914.

Of the three instances discovered in France, the oboe and clarinet muting by Spontini in Milton is both the earliest and the most ambitious. There is no indication in the score (see Ex.66) of which method was to be used; all that can be deduced from the music is that it did not affect the instrument's range nor quietened the tone too much for ensemble work. In particular the wind writing on p.157, while not fundamentally original in conception, shows off the oboe and clarinet together and provides an opportunity for the muted clarinet to be heard as a soloist. The preceding page juxtaposes groups of muted and unmuted wind instruments in a unique experiment in the mixing of timbre. The sensitivity of the writing guarantees much of its effect without the need for mutes, which is perhaps why in Fernand Cortez the muted wind writing paints a very different picture from the Garden of Eden. Example 92 shows p.394 of the printed score, where oboes and clarinets play "en renfermant le bas de l'instrument dans une bourse de peau". Some writers have mistakenly credited Berlioz with inventing this technique. It will be seen that the muting in this case is only an alternative to the provision of an offstage band since the music accompanies an approaching chorus of Spaniards. In fact, the autograph score originally read "en sourdines" by the oboe and clarinet staves, so that the more precise instructions, in a later hand, may have been inserted for the benefit of the printed version only. There is in fact no proof that the music for these instruments was originally performed at this point with mutes of any kind since the part-books and the copy full score make no mention of muting except for the single remark written by the scribe, not the player, "ôtez les sourdines" (equivalent to p.406 of the printed score) which is found in the clarinet part-book. Since there are clear indications in the manuscript material at the Opéra that offstage musicians were used at various parts of

Cortez, it is quite probable that Spontini's leather bags were chimerical, an interesting suggestion that his successors took up.¹⁾

At least one Italian opera with muted oboes was given in Paris. This was Paer's Achille, originally played at the Vienna Kärntnerthor in 1801 and performed in Napoleon's private theatre in 1808. The oboes are heard muted in the C minor funeral march in act 2 (Ex.93).²⁾ The scoring is a simple reproduction of established (but non-French) band style in which the oboes, not the clarinets, take the melody, and horns and timpani are muted in order to produce a completely muffled effect. The important difference between Paer's and Spontini's examples is that the latter were specially designed whereas the former used an everyday technique of orchestration.

Although in the cases of Achille and Milton one cannot at present prove that traditional woodwind mutes were used in Paris, my opinion is that they probably were; French and Italian ideas were less unknown to one another under Napoleon than for some time previously. A professional player would hardly have balked at so simple a request.

(3) Muted brass instruments

The brass will be discussed in order of increasing frequency of muted application. The trombone seems from all evidence not to have been muted at all. The muted trumpet was occasionally used. Almost as if in keeping with the long history of muting which this instrument possessed, most of the examples found in dramatic music evoked military or signalling imagery. The traditional trumpet mute was wooden and hollow throughout. GROVE/V

1) Modern criticism has regarded the leather bags as fact, e.g. LAVIGNAC, Vol.II p.2283 and Abraham/SLAVONIC p.231. It is worth noting that Berlioz in Lélio wanted the whole clarinet, not just the end, enclosed in a "sac de toile ou de peau".

2) B.M., RM.22.i.16, f.187ⁱⁱ. GROVE/V, ibid, states that oboe muting died out after the mid-eighteenth century.

(article "Mute") reproduces Mersenne's drawing of 1636, and Diderot's Encyclopédie described an identical type: "un morceau de bois ... percé tout du long; il sert à rétrécir l'ouverture de cet instrument, ce qui en étouffe le son ... " This type of mute raised the pitch of the trumpet by a tone, so that the player used a crook a tone below that otherwise required. In Germany, Altenburg (1795) described three kinds of trumpet mute. The first was narrow at both ends, the other two flared. They were of wood, and transformed the tone "almost to that of an oboe". The pitch was raised by a tone.¹⁾

About 1800, however, new shapes of trumpet began to be experimented with.²⁾ Some prototypes may therefore have been bow-shaped like the Lyons trumpet of ca. 1820 illustrated in P. Bate's The trumpet and trombone. It is likely that at least some of the inspiration for such types stemmed from the advances in horn stopping technique, since the only advantage of a curved over a straight trumpet is that the player's right hand could now reach the bell. Thus hand-stopping may also have been tried.

The musical examples in France were as follows:

<u>Ex.61</u>	1784	Grétry, <u>Richard Coeur de Lion</u> , pp.109-110	Trumpet in E flat
(example below)	1789	Dalayrac, <u>Raoul sire de Créqui</u> , p.25	Trumpet in E flat
<u>Ex.79</u>	1791	Dalayrac, <u>Camille</u> , p.57	Trumpet in E flat
	1797	Cherubini, <u>Hymne funèbre sur la mort du général Hoche</u> (P.131)	Trumpet in C
(example below)	1800	Boieldieu, <u>Beniowsky</u> , no.10	Trumpets in C and D
<u>Ex.94</u>	1801	Dalayrac, <u>Léhéman</u> , pp.123-9	Trumpet in C
<u>Ex.93</u>	1808	Paer, <u>Achille</u> , act 2 funeral march	Trumpet in C

1) Altenburg/VERSUCH pp.86-7. Unfortunately these are not illustrated.

2) I am indebted to Mr. Anthony Baines for this information.

The Cherubini example exists only in the wind ensemble version of the Hymne, now in Berlin, and has not been examined. The trumpet part in Achille appears in a copy score in Paris¹⁾ doubling the horns.

Grétry's muted brass in Richard provided the model for Raoul and Camille in aural conception in the use of E flat trumpet and in doubling with French horns. The dramatic contexts, by contrast, were moving away from the overtly military. In Raoul Gérard, in a duet with his son, recalls a glorious past in battle.

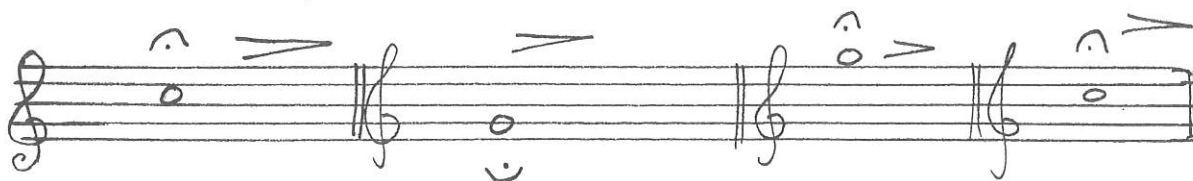
Handwritten musical score for three staves. The top staff is labeled "Obs" and contains a melodic line in treble clef with a key signature of two flats. The middle staff is labeled "(Muted?) Cors and Muted Tps (Eb)" and contains a similar melodic line. The bottom staff is labeled "Strings" and contains a bass line in bass clef with a key signature of two flats, featuring a series of chords and a final whole note chord.

The idea of using muted trumpets as a non-associative tone-colour was uniquely exploited in Camille, where an extremely menacing impression is created through the addition of the brass to a slow crescendo, enhanced especially by the timpani and violas. The employment of a single octave for the horns and trumpets is the clearest proof of a deliberate attempt to avoid military imagery and use the pure value of the sound.

¹⁾ B.N., D.12012, f.593. No trumpets are in the B.M. copy score.

The first three examples tabulated above all use what was normally the rather high E flat trumpet with much military association; this fact and the fact that there were no D flat crooks existing suggest (if the mute altered the pitch) some compromise adopted by the player to reach the result. The latter examples, chiefly in C, seem calculated to avoid military tone-colour by using a lower trumpet and to facilitate the execution by requiring the readily available B flat crook.

Both Léhéman and Beniowsky used the muted trumpet for the distancing effect in a solo that the Encyclopédie had described, and both are instances of dramatic interruptions in the manner of Fidelio. In Beniowsky an ensemble is in progress when "all the exiles climb on rocks and blow a prolonged note on a wild horn [steer-horn?], imitated here by the muted trumpet, to which the other exiles reply with muted horns".



2^e Trompette en Ré
dans la coulisse à
gauche

Réponse dans le loin-
tain derrière le
théâtre. Un cor en
sol con sordini [sic]

1^{er} Trompette
en Ut dans la
coulisse à
droit

le même Cor
derrière le
théâtre con
sordini.

This episode was omitted from the 1824 revised score. In Léhéman the technical conventionality of the music is balanced by the echoes of trumpet tone-colour that are injected into the texture when the fanfare itself has ceased, on p.124.

The French horn, embodiment of so much in musical ideals of tone-colour, was the wind instrument which also accommodated the most successful and most varied attempts at muting. In principle, late eighteenth-century mutes worked in the same way as trumpet mutes, but the instrument's pitch

was not altered. Fétis describes that invented and used by the player Jean Lebrun. De Pontécoulant's Organographie (1786) provides a terminal dating for this type; ¹⁾ Lebrun worked in Paris until 1792.

"Lebrun avait inventé une sourdine composée d'un cône de carton ouvert à son sommet et percé d'un trou à sa base; en l'introduisant dans le pavillon du cor, il tirait de cette sourdine quelques beaux effets dans l'adagio." ²⁾

B. Brook reproduces the plan of an apparently identical horn mute specified in the score for the performance of F. Parisot's *sinfonia concertante* for two horns, of ca. 1816. ³⁾ Koch stressed in 1802 the tonal modifications caused by muting the horn.

"Through the insertion of this mute the horn takes on the sound as if it were heard in the far distance, and with it a piano becomes modified to the faintest breath." ⁴⁾

This special quality did not encourage all composers to use the tone in a very poetic way. Some (as we have seen) used the muted horn like the muted trumpet. Martini's Annette et Lubin (1789) portrays a hunt in the overture. A footnote in the score explained that square brackets over horn music meant that the instruments "doivent avoir des sourdines pour imiter l'Echo et le double Echo. Il faut proportionner des sourdines au Local". This is at least clear evidence for the general existence of horn mutes. A more poetic echo effect occurs in the same opera at the end of an otherwise undistinguished romance, p.112. To enhance the tierce de picardie ending each strophe a muted horn call is introduced. Analogous treatment is found in Grétry's late Elisca, 1799. ⁵⁾ This calls for a mute made of brass in the unaccompanied horn solo to Elisca's air, "Viens Ziméo", p.70.

1) GROVE/V articles "Horn" p.372 and "Mute" p.1044

2) Fétis/BU article "Lebrun"

3) Brook/SYMPHONIE, Vol.II p.526

4) Koch/LEXIKON article "Horn": "Durch das Einschleiben dieses Sordins bekommt das Horn den Ton, als ob es in weiter Entfernung gehört würde, und des Piano kann dabey bis zum schwächsten Hauche modificirt werden."

5) I have been unable to discover whether the relevant solo was one of those later composed by Grétry in 1812: Clercx/GRETRY p.80. See also Appendix

"Cor en Fa avec
une sourdine de
cuivre"

"Un peu ad libitum"

331
[Grétry's notation]

Grétry's choice of notation is enigmatic since from the context it is apparent that the horn should sound in F major. The notation suggests that the composer thought the mute altered the pitch in some way. It is the only documented appearance of the brass mute and is therefore of considerable curiosity.

Effects quite different to fanfares or distancing were imagined in Rochefort's Toulon soumis (Ex.75), Boieldieu's Zoraime (Ex.89) and Fernand Cortez (Ex.96). The first depicts "La nuit qui rend le Calme à la nature entière" in the ritornello to a recitative, and in atmosphere, key and technique may be compared with the quintet already discussed from Spontini's Milton. In both the muted horn sustains, is combined with other wind instruments and has brief solo music; moreover the ritornellos to both end with valedictory horn calls. The musical gesture may not have been uncommon (compare the opening of Beethoven's Les Adieux, Op. 81a) but the scoring is original and effective. In Zoraime the composer has felt no compunction in using the muted horn as an additional colour within the ensemble, and this attitude to what had formerly been a technique marking out a noteworthy dramatic event is comparable to the general changes in attitude towards new instruments like the cor anglais or the tam-tam.

Example 96 where the player is enjoined to play "avec la main" appears to be like a modern "bouché" passage, i.e. where open notes are muted by partial stopping. No other instance of this instruction has been found.

Another part of modern horn technique, "cuivré", can also be seen to have an ancestry extending at least as far as the French Revolution. This effect was on the face of it anathema to late eighteenth-century players since it meant blowing a stopped note loudly and creating what Vandembroeck described as "un son de cuivre ou bien de chaudron".¹⁾ He and other writers


¹⁾ Vandembroeck/TRAITE p.24

stress the desire for equality of stopped and open notes, and this has been explored in chapter four. The two examples of music that point to "cuivré" use mutes rather than hand-stopping but the distinction between the results was probably a nice one.

Camille is the first (Ex.79); several muted notes are specifically marked forte and are written in the punctuated style common to cuivré passages. The second is Berton's Montano et Stéphanie of seven years later (Ex.84). This is an outstanding example, obviously placing the horns in a position of prominence and using the effect to powerful dramatic advantage. Little remains here of any relationship with earlier instances of muted writing.

One final type of muting remains to be discussed. It is a special case in that its usually accepted genesis is found in secondary evidence; no trace of the technique remains on the written page. The origins are the thrice-repeated fanfares of the underworld in the air, "Caron t'appelle" from act 3 of the Paris version of Gluck's Alceste (Ex.97).²⁾ In terms of the whole work these notes are of minute significance but they caught Berlioz's imagination and he devoted more than a page to them in A travers chants. He tells us that Gluck sought to alter the timbre of the open notes in the score. "Enfin il s'avisa de faire aboucher les cors pavillon contre pavillon; les deux instruments se servant ainsi mutuellement de sourdine, et, les sons s'entre-choquant à leur sortie, le timbre extraordinaire fut trouvé."¹⁾ Difficulties of execution meant that performers, according to Berlioz, adopted other methods or else ignored the tradition. He mentions no dates, however, and one would happily assume the tradition's rapid decline after Gluck's departure if it were not for later music specifying exactly the same technique. Although one respects the matter of

1) Berlioz/CHANTS p.185

2) 113 however is Philidor's Érécabade 1767 in which a horn  represents a voice from a horn. Berlioz/Alceste 287

Berlioz's remarks his final account of the Gluck effect being imitated "précisément" at the Academie by means of conventionally stopped notes (A flat and E flat on the horn in E, since the piece was given in C) is unconvincing as evidence for the early nineteenth century simply because of the later examples of the technique. He is in any case inconsistent in his explanation: these stopped notes were "précisément celui que Gluck voulait obtenir", yet in the preceding paragraph the expedient gave "un résultat plus frappant encore" than "le moyen dangereux inventé par Gluck"; in a final attempt to tie up scientific ends he admits the slender relation between the two techniques: "Le grand maître connaissait probablement l'effet de ces sons bouchés (stopped) du cor, mais l'inhabilité des cornistes de son époque l'aura empêché d'y recourir". The fact is that with bells placed together hand-stopping was automatically impossible.

There is every reason however to accept Berlioz's technical account of the original experiment, whether this was in fact performed under Gluck's guidance or at a later time. "I spent nearly the whole day yesterday with Berlioz; we went through the score of Armida and Iphigenia, and I learned many things that I was ignorant of and which he knows by tradition. He showed me effects that I should never have discovered by myself."¹⁾

There are three musical passages which follow Gluck-Berlioz; they were composed at so close a period of time that it is tempting to speculate that this particular method of muting was not the innovation of Gluck at all, but of Gaveaux, and that it was carried over into the contemporary revivals of Alceste at the Académie, whence it reached Berlioz's ears from players of the generation after Gluck.²⁾

1) Letter to his wife by Charles Hallé dated 17 August 1860: Hallé/LIFE pp.257-8.

2) Berlioz's enthusiasm for Gluck rather than Gaveaux may therefore have caused him to ignore Gaveaux's muting instructions in the comparative notes on Léonore and Fidelio in A travers chants, pp.87-9: less unconventional orchestral music by Gaveaux is on the other hand brought forward for discussion before a readership not assumed to have the full score to hand.

- Ex.98 1798 Gaveaux, Léonore, opening of act 2
Ex.99 ca.1800 Le Sueur, Adam, p.426 (performed 1809)
Ex.100 1802 Catel, Sémiramis, pp.212-3 (performed to 1810)

Gaveaux's instruction was, "Le Pavillon l'un contre l'autre"; Le Sueur's was, "Pour obtenir les sons sourds exigés les Cors en Mi bémol posent leurs pavillons l'un contre l'autre", and Catel's was simply, "Les Pavillons l'un contre l'autre". Each instance is subterranean in inspiration and the desired effect clearly much more cavernous than that made by hand-stopping. In Léonore the horns begin the prelude to the dungeon scene. In Adam the horns represent "La trompette du chaos", sounding as if from below the stage during the diabolical ballet after Adam's death. Catel's horns accompany the ghost of Ninus, heralded by thunder and the visible opening of his tomb.

The first two examples are technically alike in using the soloistic aspects of the horn sound and in that there is only a semitone's difference in pitch between the horn music in each case. Both demonstrate the important difference from hand- or mute-stopping in that both rise in dynamic level to forte: this process would alter the tone of a horn muted in the former ways by producing a nasal sound. Placing the bells together obviated this. Catel's example, technically more adventurous, uses different and higher horn pitches. These are combined with trombones, bassoons and string basses in chords, together with the voice of the ghost. (Catel is here fusing the experimental design with the traditional orchestral writing for oracles: compare Ex.82 from Alceste.) The combination with these low sonorities seems likely to have been very effective, especially when the horns move to (sounding) G. Always at the top of the chords, their tone is intended to dominate the passage.

(4) Muted timpani

There is a tendency for facts concerning former timpani performance practice to elude the investigator to a degree exceeded only by that at which he senses the importance of the topic in general. Perhaps in no given period more than the one under discussion did attitudes change and experiments take place in the field of timpani composition and performance. As much may be surmised from the music and from a small body of written information.

One cannot even be completely certain what was done in response to the three instructions that pertain to muting the timpani, namely, "timbales voilées", "timbales couvertes" and "avec [or en] sourdines". Nevertheless the importance of the concept before 1810 is undeniable because these instructions appear in at least 27 operas performed in Paris from 1775 to 1809. The difficulty hinges on two facts in particular: our ignorance on the question of covered timpani sticks in Paris, and the completely different sounds which are produced by hard sticks on a covered drum-skin and by soft sticks on an uncovered skin.

In Germany, according to Eisel's Musikus Autodidaktos of 1738, a drummer might wrap the ends of the sticks with cloth.¹⁾ However, as late as 1825 Castil-Blaze's dictionary ignored all except what was obviously the traditional French method of muting.

"Pour diminuer leur sonorité et changer leurs roulemens éclatans en un murmure sourd et lugubre, on jette une pièce d'étoffe sur l'instrument, et le timbalier frappe sur l'étoffe qui en couvrant les peaux en intercepte les vibrations." 2)

Covered sticks were nevertheless known in Paris. As explained in chapter four, p. 214, the instructions "baguettes garnies" were found in

1) Quoted in Blades/PERCUSSION p.250

2) Castil-Blaze/DICTIONNAIRE, article "Timbales". The dictionary does not seem to contain any mention of soft-covered timpani sticks.

Dalayrac's Lina (1807) and "bâton de sourdine" in Spontini's Fernand Cortez (1809). What they were covered with, or indeed any further facts connected with these sticks, are at present not known.

I believe that covered sticks and covering the drum-head may be associated as common efforts to ameliorate the tone of the timpani. On modern instruments, as suggested above, the two techniques produce opposite results. Even a thin cloth robs the tone of its clarity of pitch and makes for a very dry, thudding sound. Covered sticks and no cloth enhance the pitch clarity and make legato playing easy. Mr. Croft-Murray has kindly confirmed that the same results occur on the early nineteenth-century English timpani in his possession.

Historically quietness of tone was the object before the concept of legato playing was explored.

"It must be understood that in this exercise the drums must be muted [gedämpft] in order that the tyro may hear the violins and learn to follow the other players where the tempo etc. are concerned. In general one has to impress on the drummer not to play equally strongly all the time but to modify the tone as the situation demands. As is well known, the drums penetrate acutely and not infrequently drown the other instruments." 1)

In France the covered sticks of Dalayrac and Spontini may be seen as one outcome of a continually evolving situation. It is impossible to say exactly when covered sticks were first used, whether they rapidly or gradually became the norm for any particular player and whether any timpanist or indeed composer regarded covered sticks as a valid and superior form of muting. As in previous instances Spontini's written exactitudes are helpful here: his music suggests that the term "sourdine" meant for him a covered stick. This is apparent because until 1807 all French composers (including Cherubini) always used the terms "timbales voilées" or "timbales couvertes".

1) Altenburg/VERSUCH p.130f. It has been suggested that an alternative method of muting that preserved the tone might have been used, such as partially covering the head with cloth but drumming on the actual skin. This method is used by military side-drummers. But the English Household Cavalry do not use it for their timpani at funerals: these are simply hung with drapes round the perimeter. The technique must remain speculative. (Letters from Mr. E. Croft-Murray and Major T. L. Sharpe)

Spontini too has "couvertes" on p.137 of La Vestale, but "en sourdines" on pages 131 and 389. (This is the case too in the autograph and copy scores). In Cortez p.47 the phrase, "avec le bâton de sourdine", also in the autograph and copy scores, appears only once; but the other six instances of instructions in the opera have "sourdine" rather than "couvertes" or "voilées". Thus from 1807 both the Académie and the Opéra-Comique may well have used covered sticks: the differences and uncertainties of terminology are good evidence of an innovation.

Therefore, whatever the conditions in Germany, it would be wrong to assume that in the Paris of 1795, "it is more logical to suppose that cloth-covered sticks were regularly used in orchestral playing while the wooden sticks were used in outdoor music or for specifically military [indoor] effects ... "1) Kastner noted no cloth stick coverings in 1845.²⁾ Instead we may investigate the kinds of music written for 'muted' timpani and try to deduce the kinds of context that might have invited the use of softer-covered sticks or covered heads.

In terms of simple numerical distribution, written operatic and other examples of the muted timpani increased with the years. From 1775 to 1795 ten French operas required them. In the next decade nine operas and Cherubini's Chant sur la mort de Joseph Haydn did so too, and from 1806 to 1809 a further seven operas are found, if we include Lina. The instruction has not been found in other orchestral music. But the average number of times that muting was demanded in each opera was also on the increase. These figures should not necessarily be taken at face value, but could reflect in part the greater accuracy of and responsibility vested in printed full scores after 1790, and a greater fastidiousness in composers' demands.

1) Longyear/TIMPANI p.92

2) Kastner/METHODE p.35ff

Earlier composers and printers saw to it that muted timpani were noted as such at particularly important dramatic and orchestral points. Almost all examples before 1794 were treated exceptionally, in the same way as new instruments. The majority, echoing a functional tradition, were introduced at solemn, chiefly funereal moments, especially choruses or marches. The first two examples noted, in Grétry's Céphale et Procris (1775), are associated with a "danse infernale" and with the death of Procris. Moreover, several attracted special instrumental combinations as well, such as muted strings and brass in Richard Coeur de Lion and the bell in Steibelt's Roméo et Juliette. The only two 'normal' contexts were the overture to Méhul's Stratonice (1792) which was therefore ^{INSERT BALLOON OPPOSITE} "timbales voilées", and the coda of the defiant duet between Alphonse and Séraphine in act 2 scene VI of Le Sueur's La Caverne (1793). Deathly associations persisted after that year in Beniowsky (physical collapse of the hero), Ossian and Uthal (heard with the ceremonial tam-tam), La Vestale and Achille (funeral marches) and the Cherubini ode for Haydn. All these examples were a surviving symbolic link with the past and demonstrate the characteristically avid ingestion of received aural imagery into the sophistication of orchestral art-music.

A gap exists from 1794 to 1798 in which no examples have been found; but from 1799 the contexts and examples increase and vary considerably. Special dramatic contexts sometimes moved from the mortal to the mentally or physically abnormal. Méhul's Adrien (composed ca. 1792) has a vengeance chorus sung over a muted timpani^a pedal point; similar musical devices later used by Berton in Le Délire and Montano et Stéphanie help portray insanity and complete distraction. The remainder are probably more significant. Whereas, as we have seen, four operas for Paris after 1798 use the old death-imagery and a further three or so develop this line of

"abstract" orchestral
the first piece of ~~purely instrumental~~
French writing of the period to
incorporate

association, another eleven operas containing some twenty-three separately noted muting examples conform to neither extreme and in many cases betray no particularly unusual dramatic association at all. This is good evidence both for increased impromptu use of muted timpani from ca.1800 and (since scores were becoming more accurate) for some impromptu use of them before the Revolution. Two details support these theories. Dalayrac's Léhéman (1801) has "voilées ou pp" in the course of an ensemble, p.171; and his Lina demands "baguetes garnies" not for a special effect but in the overture.

The various contexts described above do not coincide in a neat fashion with the kinds of orchestration technique then available. Layout of the orchestra, dynamic level and rhythm varied greatly, and muted timpani are observable on every semitone between F natural and f natural inclusive, excepting only G sharp and c sharp. However, aside from the 'normal' examples of Stratonice and La Caverne and deliberate allusions to military trumpet-and-drum style, all muted categories are centred on the technique of the roll, and these are the most obviously forward-looking.

The fact of the roll is important in interpreting the position of the covered sticks as an intentionally evolutionary one. It indicates, for example, that despite the dryness caused by covering the drum-head, this procedure was apparently intended to produce or enhance a legato sound before the Revolution. Grétry in 1775 asks for "roulé" on the covered drum (see Ex.102). Diderot's Encyclopédie in 1765 conveniently confirms that a "roulade sur un tambour" was a "bruit continu ... Ces percussions répétées lestement sur un corps élastique et tendu, font sur l'organe de l'ouïe une impression continue, à cause de la rapidité avec laquelle elles se succèdent".¹⁾ Unmuted, the timpani roll was common enough before 1789

¹⁾ ENCYCLOPEDIE, 1765, article "Roulade"

and after (see Ex. 129), but it is the muted examples that suggest first that composers or players encouraged the development of the covered stick in order to realise a tone-colour that was recognisably imperfect, and second that any timpani roll was liable to have been muted in one way or another by the discerning performer.

The notation of a roll was certainly not standardized, but composers often made their intentions clear, whether the music was in slow or fast tempo. Three early examples show how the problem was tackled in slower music; in fast music semiquavers generally sufficed.

1775	Grétry	<u>Céphale</u>	Larghetto	$\frac{4}{4}$ p	"roulé"
1790	Berton	<u>Les Rigueurs</u>	Slow	$\frac{4}{4}$ p	
1793	Steibelt	<u>Roméo</u>	Adagio non troppo	$\frac{2}{4}$ p	"roulement"

The muted timpani roll in the orchestra produced imaginative gestures in the music which can be analysed into four interrelated concepts. First was that of bass legato tone itself. At a period in which the rhythmic bass-domination of orchestral music was loosening its hold and techniques in producing a homogeneous balance of different tonal groups were on the ascendant this concept was central. The second was that of the extended timpani roll as the true bass of the orchestra, either in octave doubling or (rarely) solo. This sound was directly in opposition to the rhythmical articulation of the classical style; both this and the first concept almost automatically excluded the participation of the trumpet, the traditional partner and also rhythmic ally of the classical style.

The third concept was that of controlled dynamics. Fluidity of dynamic level in all parts of the ensemble was exploited at the time and it was quickly seen that a muted timpani was ideal for managing fleeting $\langle \rangle$ passages as well as the more traditional gradual crescendo. Lastly there

was the concept of the timpani as a solo instrument. If rounder constructions and better vellums (see chapter four) improved the tone of the later eighteenth-century timpani, using covered sticks must have enhanced the process. Already in 1793 Steibelt gave the timpani solo rolls together with the bell-strokes in the opening scene of act 3 of Roméo.¹⁾

The different categories of technique will now be looked at separately.

1. The crescendo supporting the orchestral tutti

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|----------------|------|---|
| <u>Ex.</u> 102 | 1775 | Grétry, <u>Céphale et Procris</u> , pp.296-8 |
| <u>Ex.</u> 91 | 1804 | Cherubini, <u>Chant sur la mort de Joseph Haydn</u> , pp.13ff |
| <u>Ex.</u> 104 | 1809 | Spontini, <u>Fernand Cortez</u> , p.34 |
| <u>Ex.</u> 27 | 1809 | Spontini, <u>Fernand Cortez</u> , pp.522-3 |

Both slow and fast tempos occur here. Grétry's example is not marked "crescendo" but it shares the main contextual characteristics of this type. These are a certain independence of the timpani from the orchestral bass, rhythmic movement in the upper strings (whether syncopation, tremolando or trill) and support for the tutti at the culmination. The general appearance is both distinctive and determined. This technique was often used without muting instructions.

2. The soft pedal note

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|----------------|------|---|
| <u>Ex.</u> 105 | 1787 | Salieri, <u>Tarare</u> , p.480 |
| <u>Ex.</u> 106 | 1790 | Berton, <u>Les Rigeurs du cloître</u> , p.117 |
| <u>Ex.</u> 107 | 1799 | Berton, <u>Le Délire</u> , pp.1,3 |
| <u>Ex.</u> 108 | 1807 | Spontini, <u>La Vestale</u> , pp.141-2 |

The chief similarity with the first group lies in the differences between the timpani and the orchestral bass. In Tarare (like Céphale) there is a

¹⁾ By 1816 Reicha confirmed that the timpani gave "notes réelles de l'harmonie" see chapter 4, page 209. Compare Ex.105 (1787) where there is a semitonal clash between the bass and the timpani roll.

semitonal clash between the two; that it was intended to be heard as such is suggested by the stability of the harmonic progress in each passage. Both excerpts by Berton exploit the free movement of the bass against the timpani. ~~The slower excerpts by Berton exploit the free movement of the bass against the timpani.~~ The slower tempos allowed him to expand the bass into comprehensible melody, at first tentatively and then with boldness and assurance in Le Délire. Here also the muted roll is heard as a solo (thus displaying its unique qualities of dark foreboding) perhaps for the first time in French orchestral music. Berton was aiming at both these qualities in this passage since the music returns later in the opera when the afflicted Murville relapses into delirium, p.60.

Unlike the first group, the present one was associated in the music far more directly with the emotions of hopelessness. The traditional crescendo might be allied to triumph or despair, but the profound stylistic break with classicism embodied in the mysterious resonance of an arhythmic timpani roll corresponded closely in literature with dark feelings newly expressed through Goethe's Werther and found in so many sentient heroes who succeeded him. In Tarare the hero's death warrant is being signed; in Les Rigueurs the heroine is led towards the vault reserved for those committing extreme disobedience. Praying to Pluto for vengeance, the Parthan chorus sings in Méhul's Adrien in the harsh unfamiliarity of E flat minor. Using here as elsewhere others' discoveries more freely in his own works, Spontini placed the muted timpani in the first finale of La Vestale; for the principals the situation is tense, but the prevailing mood is triumphant.


3. Loud pedal note

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|----------------|------|---|
| <u>Ex. 103</u> | 1792 | Méhul, <u>Stratonice</u> , pp.1, 2 |
| <u>Ex. 109</u> | 1799 | Berton, <u>Montano et Stéphanie</u> , p.106 |
| <u>Ex. 110</u> | 1804 | Le Sueur, <u>Ossian</u> , p.471 |

The control that a good player might exercise over timpani tone seems required in the last two examples where, although the timpani doubles the bass, the music is agitated and the dynamics varied. Again, Berton's music proclaims his pioneering interest in orchestration. The situation (Montano witnessing his fiancée's supposed nocturnal infidelity) demanded and received orchestral animation. But Berton went much further than this, since he succeeded in expressing the hero's almost uncontrollable rage by giving the static bass line the animation of the timpani alone and suggesting physical movement in the spasmodic utterances of upper strings and winds. The dramatic polarity between the bass and treble of the orchestra adumbrated in this example was still a viable resource over a century later. Berton seems to have thought the hero's situation directly into orchestral terms, creating or refining sound-symbols in a liberated way paralleled later by the younger Mendelssohn, Berlioz and Wagner.

4. Colouration on the smaller scale, associated with more rapidly-changing dynamic levels

<u>Ex. 111</u>	1793	Steibelt, <u>Roméo et Juliette</u> , p.261
<u>Ex. 112</u>	1800	Boieldieu, <u>Beniowsky</u> , pp.245-6
<u>Ex. 113</u>	1806	Méhul, <u>Gabrielle d'Estrées</u> , pp.5, 77
<u>Ex. 114</u>	1807	Spontini, <u>La Vestale</u> , p.131

It is difficult to select examples for this category because, more especially after 1799, the technique was used with variety by many composers. The archetype in France was undoubtedly Ex. 111 which, although a funerary tableau, did not use the traditional drum patterns (see next section) but made the muted timpani into a more subtle and eloquent component. On p.279 we find, for example, —  —. Even more detailed markings ensure the completely 'modern' appearance of the final chord in Boieldieu's example;

Méhul's Gabrielle shows how the timpani roll was brought in on the spur of the moment, lending new colour to any kind of situation. On p.77 the entry is near the end of an ensemble and serves as an anticipation in the form of an orchestral link of the seriousness of Henri's "Amour, je m'abandonne à toi". In the Spontini example Julia has just identified Licinius and an assignation is about to be arranged. The timpani rolls, integrated into the ensemble and hardly audible themselves, point the way to standard nineteenth-century timpani technique.

5. Traditional trumpet-drum syndrome

<u>Ex.61</u>	1784	Grétry, <u>Richard Coeur de Lion</u> , pp.109-10
<u>Ex.115</u>	1789	Lemoyne, <u>Nephté</u> , p.76
<u>Ex.116</u>	1807	Dalayrac, <u>Lina</u> , p.15
<u>Ex.93</u>	1808	Paer, <u>Achille</u> , act 2

Here the dry tone of covered drum-heads was entirely appropriate. Seen at its simplest in Grétry, the orchestral evocation of the muffled drum known from lay experience was a pattern that is readily identifiable (cf. for example the Fire and Water ceremony in Die Zauberflöte.) The embellished versions by Lemoyne and Paer operate similarly even when, as in the former, no brass are playing.¹⁾ A Spontini example occurs in the march in La Vestale, p.389, "Périssette la vestale".

6. Exceptional uses

1793	Le Sueur	<u>La Caverne</u> , p.168
1802	Isouard	<u>Michel-Ange</u> , p.130
1806	Berton	<u>Les maris garçons</u> , p.85ff

The passage from La Caverne is the coda of a duet and that from Berton's comedy is a parody in which a lover knocks on a door without result and

¹⁾ It is interesting that the timpani MS part-book of the Lemoyne calls Ex.115, "Marche lugubre".

lays siege to the house in a martial declaration of affection. In both cases it seems that the composer used muting to ensure audibility of the singer's words. In Michel-Ange the scene is built on the accidental waking of a character, so the timpani are muted to reduce the sound-level in common with the rest of the band.

Conclusions

From 1792 (the date of Stratonice) and quite possibly before then, timpani might have been muted even in loud music to assist the production of a roll. From about the same date the same technique might have been adopted to combat inaudibility of a singer. In 1801, the date of Léhéman, it is confirmed that straightforwardly soft music might have included the timpani "voilées ou pp", at the player's discretion. These different examples suggest that a need was felt for more versatile treatment of the timpani and from the same period increasingly frequent instances are found in which a brief timpani roll, either soft or $\langle \rangle$, added significantly to the orchestral vocabulary. By 1807 a kind of covered timpani stick had been invented and introduced which went part of the way to answering such requirements without recourse to traditional damping of the drum-head. This latter procedure, although traditional and effective in solemn and defined rhythmic patterns, was not well suited to fulfilling the emerging styles of writing; these styles, responses to new aesthetic developments, could only be realised in the use of a soft-covered stick which has so far not been documented before ^rBelioz's Huit scènes de Faust. Nevertheless, the case of Lina shows how far French composers may definitely be seen to have travelled along the path towards such realisation. The maturity of French timpani technique in general during the period invites

speculation that covering the heads or even covered sticks found a place more frequently than the number of muting instructions would allow.¹⁾

¹⁾ The essay, "Histoire de l'orchestration" by G. Pierné and H. Woollett (1929) contains a footnote to the effect that the Judex Crederis of Gossec's 1790 Te Deum (P.3) instructs the bass drum to be played softly with timpani sticks. The implication is that timpani sticks were soft. The autograph of the composition contains no such instruction, and the music of the Judex Crederis never appears from the context to require the bass drum to be played quietly at all. (LAVIGNAC, Vol.II part 2, p.2286. The autograph is B.N., MS.1430.)