

Harmonium or Organ?

The Instrumental Question in Louis Vierne's *24 Pièces en style libre*



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## Abstract

Louis Vierne indicated his *24 Pièces en style libre* as being for organ or harmonium and he provided separate registrations for each instrument. Nevertheless, several organists and authors have noted a disparity in the work's success on the two different instruments. This study begins with a look into the development of the harmonium and a consideration of some important traits of standard harmonium literature as exemplified by Franck and Guilmant. An examination of Vierne's pieces from this harmonium perspective reveals several problems, mostly in the areas of compositional texture, the harmonium's air supply, and Vierne's harmonium registrations, which often point in opposite directions from his verbal indications in the score and his organ registrations. This study concludes that Vierne's *24 Pièces* are genuine organ music and that Vierne made little attempt to conform to the musical capabilities and constraints of the harmonium, even as he hoped that indicating the harmonium would increase the market appeal of this volume.

## Résumé

Louis Vierne indiqua que ses *24 Pièces en style libre* étaient écrites pour orgue ou pour harmonium, et il fournit des indications de registration pour les deux instruments. Toutefois, plusieurs organistes et auteurs ont noté une disparité entre le succès de l'œuvre sur l'un ou l'autre des instruments. Cette étude s'intéresse tout d'abord à l'histoire de l'harmonium ainsi qu'à la littérature pour harmonium, telle qu'illustrée dans certaines œuvres de Franck et Guilmant. Une analyse des pièces de Vierne, du point de vue de l'harmonium, révèle plusieurs problèmes, notamment en ce qui concerne la texture musicale et le système de vent de l'harmonium, ainsi que les registrations pour harmonium, qui souvent indiquent le contraire de ce qu'indiquent les instructions verbales et les registrations pour orgue. Cette étude conclut que les *24 Pièces* de Vierne constituent une musique d'orgue véritable, et que Vierne ne fit que peu d'efforts pour les adapter aux capacités et limitations de l'harmonium, en espérant que l'harmonium permettrait à ce recueil de trouver un public plus large.

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N.F.

Piteå, August, 2010

## Introduction

Alphonse Mustel, celebrated harmonium performer and nephew to the great harmonium builder, Auguste Mustel, in his definitive 1903 harmonium method, *L'Orgue Expressif ou l'Harmonium*:

L'Harmonium a pour lui autre chose encore que la beauté et la variété des timbres ; il a l'EXPRESSION. L'expression, qualité suprême ! L'expression, que le Grand-Orgue n'a pas et qu'en vain jusqu'ici les organistes et les facteurs ont rêvé pour lui ; son modeste puîné la possède et c'est sa revanche.

*L'Expression*, en musique, c'est l'âme, c'est la vie.

Cette qualité, dans un instrument, de pouvoir chanter la mélodie, prime en importance toutes les autres, y compris même la *polyphonie* et le *timbre*.

Pourquoi le violon est-il, sans conteste, le roi de l'orchestre, et, à la fois, l'instrument le plus admiré.

Il n'a pas le son aussi pur, aussi beau que la flûte; son timbre a même naturellement quelque chose de grinçant que tout l'art du virtuose développé par de longues études, s'applique à modifier, à adoucir.

Mais il est *expressif* ! Il l'est au degré suprême ; sous l'archet, il chante, il pleure, il rit, il parle presque.... et ce merveilleux pouvoir d'émotion qu'il possède fait oublier ses défauts, s'il en a, lui vaut l'admiration de tous et l'amour de l'artiste qui se dévouera au plus laborieux des apprentissages.

La faculté expressive est donc hautement appréciée du musicien. Eh bien ! comme le violon, l'Harmonium la possède, et seul parmi les instruments à clavier, il la réunit à la polyphonie absolue et à la prolongation du son : de là sa dénomination d'*Orgue expressif*, donnée à l'origine. C'est bien là, en effet, son caractère distinctif.<sup>1</sup>

This spirited plea for the harmonium's artistic merit unintentionally betrays that many people spoke disparagingly of the instrument. Mustel's earnest writing spans pages and pages; why else would he write like this, if not because many people questioned the instrument's musical qualities? Louis Vierne, organist of Notre-Dame Cathedral in Paris, seems to have been among these harmonium skeptics. While many first-rate French organists and composers of the nineteenth and early twentieth centuries not only wrote for, but also owned harmoniums for

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<sup>1</sup> Alphonse Mustel, *L'Orgue Expressif ou l'Harmonium*, vol. 1 (Paris: Mustel Père & Fils, 1903), 7-8.

their private music making, among them Saint-Saëns and Franck, others like Vierne seem too much preoccupied with the large pipe organ to concede the merits of this smaller instrument. Indeed, Vierne reportedly considered the harmonium a “big nasal accordion,” a “pitiful caricature of the pipe organ.”<sup>2</sup> Why, then, should one consider Vierne and the harmonium? The reason is simple: Vierne inscribed his *24 Pièces en style libre* as being *pour orgue ou harmonium*.

Vierne's *24 Pièces* are written on two staves and in such a way that the music may be played by two hands alone, without the compulsory use of a pedal keyboard as in most organ music. Furthermore, Vierne provides both harmonium and organ registrations in the score. Despite this, Vierne scholars note that the music seems significantly more successful on organ than on harmonium.<sup>3</sup> Meanwhile, many organists overlook these pieces in favour of Vierne's larger *Pièces de fantaisie* or his monumental organ symphonies, but their importance to Vierne himself is borne out by the fact that he programmed these pieces in many of his recitals, including his American début concert on 1 February 1927 in New York City.<sup>4</sup> The purpose of this study, then, shall be to examine this significant collection of pieces and to identify compositional and registrational elements in the music that compromise its success on the harmonium.

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<sup>2</sup> Louis Vierne quoted in Rollin Smith, *Louis Vierne: Organist of Notre-Dame Cathedral* (Hillsdale, NY: Pendragon, 1999), 536-7.

<sup>3</sup> Smith, *ibid.*, and John Thomas Longhurst, *A Pedagogical Study of the Pièces de Fantaisie and Vingt-Quatre Pièces en Style Libre of Louis Vierne* (DMA diss., University of Rochester, 1970): 13-15.

<sup>4</sup> “Vierne is acclaimed on first visit to U.S.,” *The Diapason* 18 (March, 1927), 1-2.

## Towards an Expressive Keyboard Instrument

In the early nineteenth century, instrument builders faced an increasingly urgent challenge as they strove to keep pace with changing musical aesthetics. The problem was surely greatest with keyboard instruments, which are by nature the most technically complex instruments, machines really. Whereas wind instruments link the musician's breath and lungs to the instrument by the mouthpiece, and whereas bowed stringed instruments offer direct contact between the player's fingers and bow and the instrument's strings and resonator, keyboard instruments require a highly complex mechanical apparatus in order to offer a similar degree of connection between player and the sound. Furthermore, the instruments themselves pose limitations that wind and string instruments do not. As a plucked instrument, the tone of the harpsichord dies away quickly and it is not possible to alter the intensity of held notes. This is also true on the piano. On the organ, the fact that the pitch changes with increased or decreased wind pressure means that each pipe is restricted to one dynamic level. Pitches can be sustained, but cannot be modified in any way other than by very subtle changes in note-durations that may impart a sense of stress and relaxation to the music.

The harpsichord and the organ served music well during the Baroque, with its generally more terraced dynamics and with its greater focus on intricate ornamentation than on Romantic-style charged and changing emotional content. But even then, François Couperin remarked that “les sons du clavecin étant décidés, chacun en particulier, et par conséquent ne pouvant être enflés, ni diminués: il à paru presque insoutenable, jusqu'à present, qu'on put donner de l'âme

a cèt instrument [sic].”<sup>5</sup> His comment suggests that he longed for a keyboard instrument expressive in the ways of other instruments like the violin. Joris Verdin has suggested a link all the way from this comment of Couperin to the invention of the harmonium, which many contemporaries viewed as solving this problem more fully than the piano or the organ.<sup>6</sup>

The pianoforte began its existence with strong tie-overs from the harpsichord and especially from the clavichord, with limited dynamic potential and a more hammer-like sound with quick decay. But the increasingly extroverted music leading into the nineteenth century made ever greater demands on the piano, as it did on the organ and other instruments. Piano builders sought to remedy the situation by inventing ever stronger frames, new hammer-covering techniques, and more complicated and stronger actions that facilitated a greater degree of contrast in how the pianist could strike the keys. Meanwhile, organ builders strove to design pipes that imitated the timbres of modern orchestral instruments. They experimented with putting one large division of the organ inside a box with shutters operated by the organist to free at least some of the pipes from their eternal condemnation to a single dynamic level, and they also experimented with wind pressure, putting certain ranks of pipes at higher wind pressure than the rest of the instrument, allowing for an expansion of the expressive possibilities of the instrument by increasing the variety of available registers.

These developments of the piano and the organ are generally well-known,

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<sup>5</sup> François Couperin, *L'Art de toucher le clavecin* (Paris, 1716), 15.

<sup>6</sup> Joris Verdin, “The Aesthetic Principles of the Harmonium: The Essence of Expression,” *GoArt Research Reports 2* (Göteborg: Göteborg Organ Art Center, 2000), 141-153.



and they are of great importance to music history. But this simplistic nineteenth century history of keyboard instruments omits an important chapter, or perhaps several important chapters, concerning free-reed instruments, the instruments that for Mustel and many others were the most modern, most expressive keyboard instruments. Among the earliest to recognize the free-reed's artistic potential was none other than Gioachino Rossini, who at the time was by all accounts the most celebrated, most wealthy, and most influential composer in all of Europe.

After he composed the most ambitious of all his 39 operas, *Guillaume Tell*, which was launched in 1829, Rossini entered a long phase of ill health and inactivity. He thus unintentionally went into retirement at the height of his career, to make a comeback no sooner than 25 years later. Although he was not well enough to continue composing, and although the French Revolution of 1830 also contributed much to hinder his activities, he still managed to support the efforts of certain other composers, such as Giacomo Meyerbeer, whom he had introduced to the Parisian public in 1825. While on his way back to Paris in 1832 from an extended stay in Spain, Rossini attended a production of Meyerbeer's *Robert le Diable* in Toulouse, in which a precursor to the harmonium, a *poïkilorgue*, was used in place of an organ. Rossini was so impressed by the sound and expressive capabilities of this free-reed instrument that he urged its Toulouse-based inventor, Aristide Cavaillé-Coll, to go to Paris to develop this kind of instrument there, rather than to waste his talents in the French provinces.<sup>7</sup> Cavaillé-Coll did move to Paris, but rather than continuing with free-reed instruments he began to focus on building large organs, and it is in this field that he became one of the most

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<sup>7</sup> Fenner Douglass, *Cavaillé-Coll and the Musicians*, vol. 1 (Raleigh: Sunbury, 1980), 2-5.

revered builders in history. Rossini himself did not lose his interest in free-reed instruments, however, as proven by his monumental, yet ironically named, *Petite Messe Solonelle* of 1864 for soloists and chorus, harmonium, and two pianos. The harmonium is an essential part of this piece both harmonically and polyphonically; moreover, the work features a brilliant *Offertorium: Preludio religioso* for harmonium solo.

What Rossini heard in the poïkilorgue of 1832, and what he would write for 32 years later, was a keyboard instrument that could sustain pitches indefinitely, that could perform crescendos and diminuendos even on held individual notes or chords, and that had a beautiful and penetrating reedy timbre perfectly suited to accompanying voices or instruments, or for playing solos. This was Rossini's first experience with instruments of the harmonium family, then in their infancy.<sup>8</sup> Indeed, Alexandre Debain took out a patent for his invention of the harmonium no less than ten years later in 1842, and the instrument continued to undergo many significant technological developments through the 1870s, when the builder Victor Mustel standardized the larger and more powerful *harmonium d'art*.

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<sup>8</sup> Joris Verdin, "Cavaillé-Coll's poïkilorgue: A precursor of the harmonium," *GoArt Research reports* 3 (2000): 96.

## The Harmonium

The harmonium (Illustration 1) usually has a single manual and two pedals, each of which operates one of two bellows that supply the free-reeds with compressed air. Free reeds are not dependent on the presence of resonators to determine their pitch, as are the beating reed stops of an organ or the reeds of wind instruments like the clarinet, but only on their shape, size, and mass.

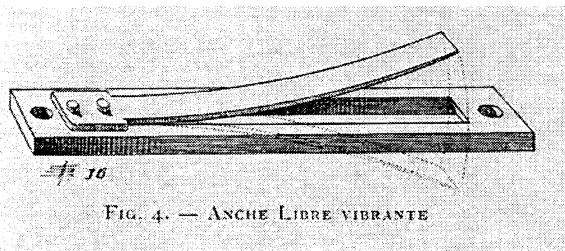


*Illustration 1: Harmonium by Mustel, 1875. Photo: Cambridge Reed Organs, [www.harmonium.co.uk](http://www.harmonium.co.uk).*

Illustrations 2 and 3 show harmonium reeds of various sizes and pitches, each mounted on its reed plate, through the hole in which it vibrates. Free reeds vibrate on the same principle as swinging pendulums, in which the amplitude has no bearing

upon the frequency of oscillation. Musically, this means that the pitch of the reed stays constant, no matter how softly or loudly the reed is played. (By contrast, the reed pipes of organs must be supplied with constant air pressure, or the sounding pitch will immediately rise or fall.)

Illustration 4 shows a reed



*Illustration 2: A free-reed mounted on its reed plate. Mustel, *L'Orgue expressif*, vol. 1, 29.*

vibrating at minimum  
and maximum  
amplitude, or volume,  
both at the same  
frequency or pitch.

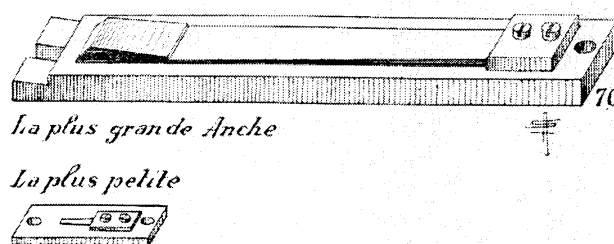


FIG. 54

The harmonium performer implements

dynamic contrasts (i.e., changes the amplitude of the reeds' vibration) by applying differing levels of air pressure by means of the foot pedals and the bellows. This

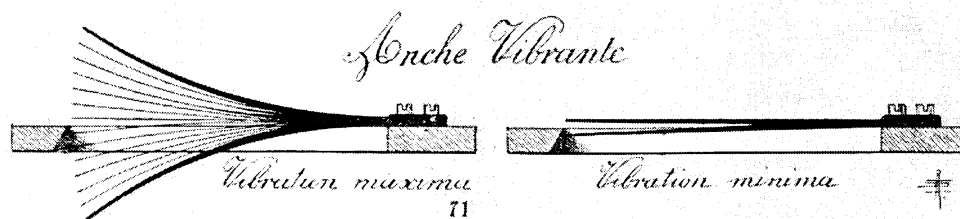


FIG. 51

*Illustration 4: Free reed vibrating at maximum and minimum amplitude or volume, both at the same pitch. Mustel, L'Orgue expressif, vol. 1, 139.*

inherent expressive capability of the harmonium is at the center of the arguments of those who, like Alphonse Mustel, find the large organ to lack the type of lyrical expression essential to late nineteenth century musical aesthetics.

The compass of the harmonium keyboard is five octaves, from C two ledger lines below the bass staff to the second C above the treble staff. Standard harmoniums have at least four ranks of reeds, two at written pitch and one each an octave higher and lower; furthermore, all ranks of reeds are divided between E and F above middle C so that different registrations may be employed in the treble

and in the bass. Harmonium composers indicate registrations, the various possible combinations of the four basic ranks of reeds, solely by number in a shorthand that works on all French-style harmoniums, since all are built according to the same plan.

In considering the registers, one should be conscious of their location within the instrument, since the case of the harmonium is designed to give the front reeds, which are concealed beneath the keyboard, a more rounded and mellow tone, and the back reeds, which project directly out the top of the case, a more open and brash timbre. Of the standard four ranks of reeds, numbers one and two are located in the front tone chamber, and ranks three and four in the rear chamber. Illustration 5, Mustel's *Tableau synoptique de la régristration*, shows the keyboard's compass and break between E and F above middle C, as well as the pitch level of each of the harmonium's basic four registers plus the additional registers standard to an *harmonium d'art*.

Sigfrid Karg-Elert, harmonium composer and theorist, characterizes rank one, which is at written pitch, as “round, somewhat thick” in the bass and as resembling a wooden flute in the treble, while rank two, sounding an octave lower than written pitch, is “dark and thick” in the bass, and “full and thick” in the treble. Meanwhile, rank three, in the back of the case and sounding an octave above written pitch, is clear and distinct in the bass and nasal or even shrill in the treble, and rank four, at written pitch like rank one, is expressive like a cello in the bass and very light and clear in the treble.<sup>9</sup> The combination of all four ranks is referred to as *Grand-jeu*, which has its own register labeled *G* or *GJ*. See

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<sup>9</sup> Sigfrid Karg-Elert, *Die Kunst des Registrierens*, vol. 1 (Berlin: Carl Simon, 1911), 77.

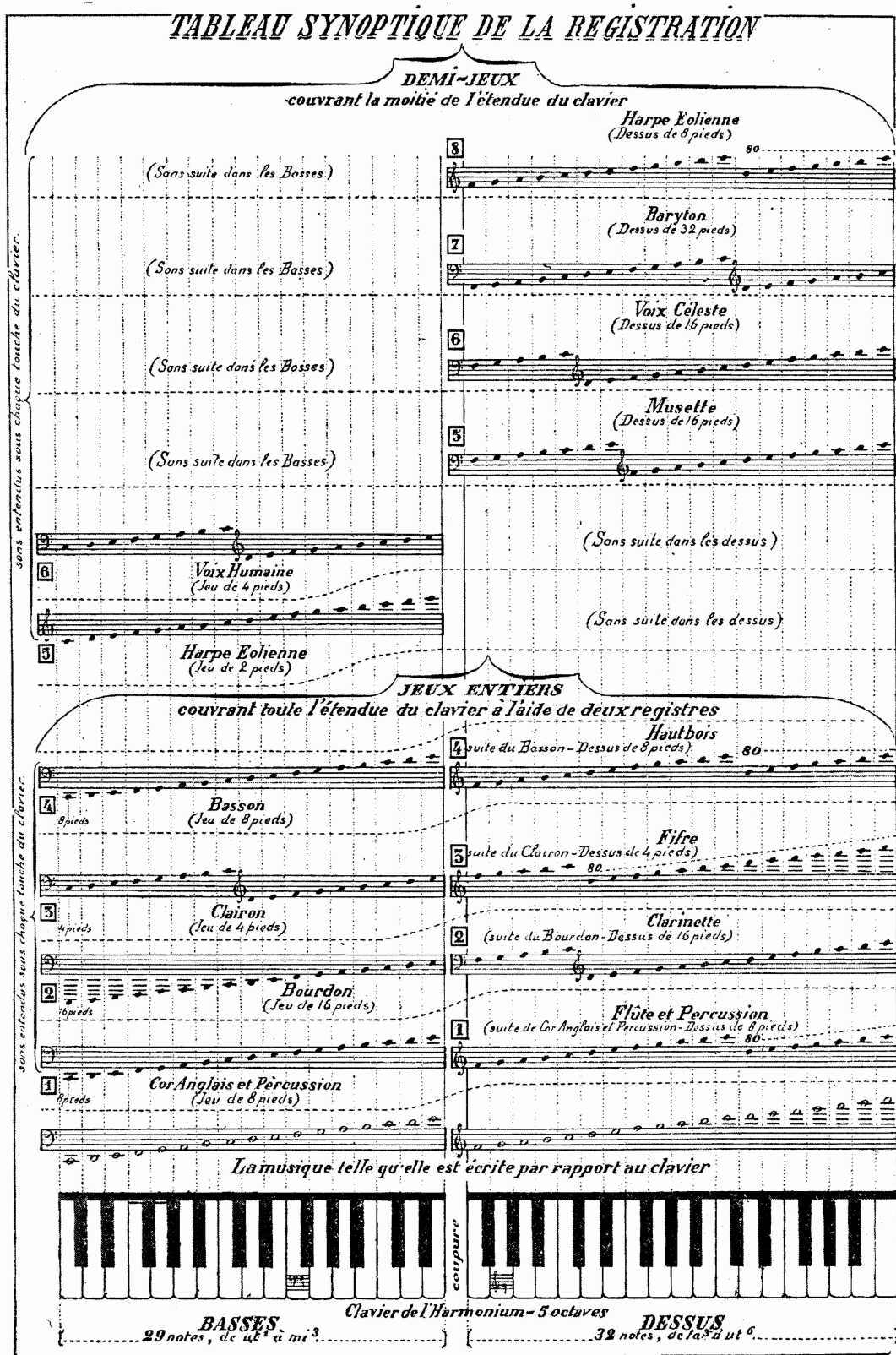


Illustration 5: Mustel's illustration of the harmonium keyboard and the registers standard to the harmonium d'art. Mustel, *L'Orgue expressif*, vol. 2, 164.

Illustration 6 for Karg-Elert's registration table, which gives a verbal description of all of the possible combinations of registers one through four.

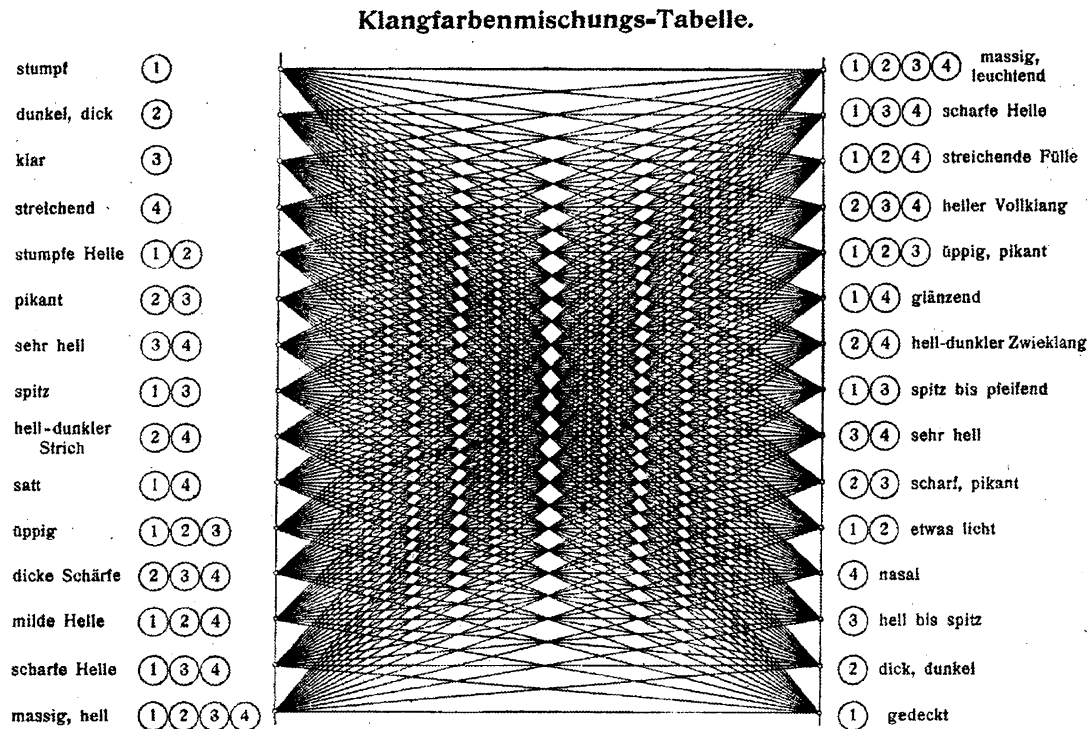


Illustration 6: Sigfrid Karg-Elert's "Tone-Colour-Mixture Table" providing a verbal description of the timbre of every possible combination of the harmonium's four basic registers, in bass (at left) and treble. Karg-Elert, *Die Kunst des Registrierens*, 77.

Idiomatic harmonium music most often features different registrations on the treble and bass sides of the instrument in order to take advantage of the contrasts that this affords. In the registration course within Mustel's harmonium method, it is telling that in his illustration of the use of register number one, all of the first 10 of 14 examples taken from harmonium repertoire show register one being accompanied by a different register.<sup>10</sup> Effective use of the harmonium's variety of registers often results in a very different arrangement of the hands on

<sup>10</sup> Mustel, *L'Orgue expressif ou l'harmonium*, vol. 2, 168-71.

the keyboard and of the actual sounding pitch-levels of the notated music, than one would expect coming from the perspective of other keyboard instruments. As an example, Franck's *Offertoire funèbre* in F#-minor from *L'Organiste* (Illustration 7) begins with the parts for both hands sounding in exactly the same compass from F# to C# although they are written and played two octaves apart, since the right hand on register two sounds an octave lower than written and the left hand on register three an octave higher. In this case, the left hand part projects over the right hand due to register three's more clear and distinct timbre, as discussed above.



Illustration 7: Franck: *Offertoire funèbre* in F#-minor, *L'Organiste*, mm. 1-4.

Another interesting example of effective harmonium registration comes in Franck's *Poco andantino* in Db-major, also from *L'Organiste* (Illustration 8). The treble registration is 2 and 5, both of which sound down an octave, while the bass indication is register 1, which sounds at written pitch. Interesting here is that the

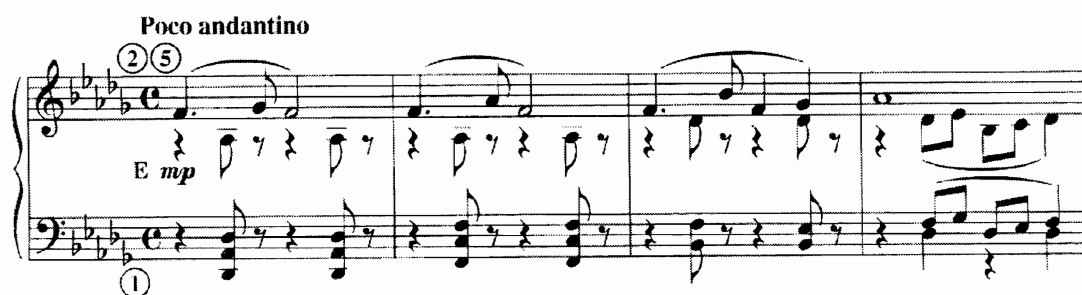


Illustration 8: Franck: *Poco andantino* in Db-major, *L'Organiste*, mm. 1-4.



right hand plays a melody line that has as its lowest note F above middle C, the very bottom note above the instrument's break, but it also takes part in the offbeat chordal accompaniment below the instrument's break. The accompaniment notes played by the right hand's thumb thus sound above the melody, meaning that the melody is actually in the tenor voice, though one would never guess this from a quick glance at the score. This piece is a brilliant example of the harmonium's break and registration capabilities being used to great effect.

Perhaps the stop most fundamental to artistic playing on the French harmonium is the one referred to as *Expression*. Indeed, the first thing any seasoned harmonium player is expected to do upon sitting down at a harmonium is to draw this stop. Primarily for the purpose of protecting the instrument from the rough pedaling of amateurs and to make their uneven pedaling less musically devastating, harmonium builders supply the instrument with a reservoir that is engaged by default, and that may be bypassed by drawing the *Expression* stop. This reservoir enables the player to tread freely and, by way of springs and an automatic escape valve, supplies the reeds with constant air pressure. Although competent harmonium performers avoid using the reservoir in nearly all circumstances, it can occasionally be useful in a musical context with a thick texture that demands copious amounts of wind. Harmonium composers indicate the use of *Expression* by the letter *E* placed between the staves at the start of a piece (as noted above in Illustrations 7 and 8) or wherever it is to be brought on during a piece.

Harmonium builders like Alexandre Debain and Victor Mustel invented

several additional features that were introduced to more advanced harmoniums, and which gradually became standardized into the larger *harmonium d'art*, or *Kunsthharmonium*. These include ranks of reeds numbers 5 through 8, which are not usually present on smaller instruments, as well as the following:

- *Percussion*, a small hammer underneath each reed in register number one that, when the percussion stop is drawn and a key pressed, strikes the reed, thereby quickening the reed's speech. This device is especially useful in quick-moving pieces such as scherzos and is absolutely essential in portions of quick pieces that should be executed softly, for the reeds will respond too slowly without this device.
- *Double-expression*, a pneumatic device that allows the performer to differentiate the air pressure supplied to the treble and bass sides of the keyboard in order to solve problems of balance. The performer controls *double-expression* by means of two knee-levers or *genouillières*, one to the side of each knee; pressing the lever increases the proportion of wind pressure that will be supplied to that side of the instrument, treble or bass.
- *Forte expressif*, a set of shutters overtop of the reeds located at the back of the instrument (registers 3, 4, 5, and 7) that opens as the player's supply of air pressure increases, thus producing not only dynamic contrast between soft and loud playing on a single registration, but contrast in timbre as well, since the reeds assume a more rounded, soft timbre when the shutters are closed, likening them to the reeds located in the front of the instrument.

- *Forte fixe*, a device that simply locks the *forte expressif* in the open position.
- *Métaphones*, additional shutters over the reeds located in the back of the instrument, causing them to sound more rounded, softened, and distant.
- *Prolongement*, a mechanical device that sustains any single note pressed in the bottom octave of the keyboard until another note is pressed, or until *prolongement* is canceled.
- *Talonnères*, heel-levers that may be activated even as the performer is pumping the bellows by moving the heel of either foot toward the center, and thus calling or canceling the *Grand-jeu* or canceling the *prolongement*.

Harmoniums proliferated in the mid to late nineteenth century, and contemporary sales catalogues give witness to a great variety in available instruments, ranging from the simplest single-rank instrument to the fully-equipped *harmonium d'art* and beyond to instruments with two or three manuals and an organ-style pedal keyboard. While the *harmonium d'art* was standard in more enlightened musical environments (usually the musical salons of distinguished, wealthy arts patrons which were frequented by influential musicians), basic four-rank harmoniums with none of the *harmonium d'art's* extra features were most common in other institutions such as churches, where the harmonium often served as a choir organ or replaced the organ entirely in smaller or more remote churches. Interestingly, the harmonium was the only instrument

other than the organ then permitted to be played in churches in France, due to its sustained sound that somewhat resembled that of an organ.<sup>11</sup> The presence of simple harmoniums rather than *harmoniums d'art* in churches was not primarily a matter of artistic taste but of finances; indeed, the *harmonium d'art* cost as much as ten times more than the standard four-rank instrument. Joris Verdin calculates that a single top-end Mustel *harmonium d'art* cost more than César Franck's entire annual salary at the *Conservatoire*.<sup>12</sup>

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<sup>11</sup> Rollin Smith, *An Introduction to the Organ Music of Louis Vierne* (Colfax, NC: Wayne Leupold, 2006): xvi.

<sup>12</sup> Joris Verdin related this information in a masterclass for the Eastman School of Music at the Memorial Art Gallery in Rochester, New York on 16 February 2009, and again in an interview with the author at the Katholieke Universiteit Leuven on 29 January 2010.

## Approaching Vierne's 24 *Pièces* from a Harmonium Perspective

Vierne writes in the preface to the 24 *Pièces en style libre* that “les pièces du présent recueil sont calculées de façon à pouvoir être exécutées pendant la durée normale d'un offertoire.” This indicates that he expects the pieces to be played in churches, where the vast majority of harmoniums were simpler models; a typical church harmonium might have no more than ranks one through four, left and right, and the *Expression* stop. It may be for this reason that Vierne restricts his registration indications throughout the 24 *Pièces* to ranks one through four, and that he never explicitly calls for any of the more advanced features of *harmoniums d'art*. In many cases he actually proscribes the use of the advanced features by failing to write carefully around the instrument's break and thereby prohibiting the use of the *Double expression*, for example.

Essential to the Franck examples discussed above is a high degree of dynamic expression by a sensitive control of the bellows, which is characteristic of fine harmonium playing. Franck writes many dynamic nuances into the score, and the performer may achieve these nuances only when the *Expression* stop is drawn and thus the reservoir disengaged, as discussed above and as Franck indicates with the letter *E* placed between the staves at the beginning of the piece. While in his 24 *Pièces* Vierne does appropriately indicate *Expression* or the lack thereof in many instances, the absence of expression in seven of the 24 pieces is clearly in error.<sup>13</sup> To take two examples, consider first the *Berceuse* (Illustration 9), one of Vierne's most renowned of the 24 *Pièces*, in which Vierne adapts the

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<sup>13</sup> *Expression* is clearly required by Vierne's dynamic indications in these seven pieces where Vierne omits the marking: *Canzona*, *Légende*, *Scherzetto*, *Arabesque*, *Berceuse*, *Carillon*, and *Postlude*.

melody of the well-known French lullaby, *Do, do, l'enfant do*. This piece uses parallel harmonic motion consistently coloured by upper extensions and non-harmonic tones, as well as a predictably rising and falling melodic compass, to impart a comforting rocking sensation. Vierne indicates subtle dynamic shading throughout this piece, for which the *Expression* stop is absolutely essential. Vierne might perhaps be excused from omitting the expression marking here because it so obviously must be drawn in this instance, but to grant him this pardon is to set him aside from the larger tradition of harmonium composition, wherein composers always indicate expression where it is required.

N.B. A l'Harmonium jouer à l'octave supérieure les passages registrés (VC) ②

The musical score for Vierne's *Berceuse*, measures 1-11, is presented in two systems. The key signature is D major (two sharps) and the time signature is 2/4. The tempo is marked 'Andantino' with a quarter note equal to 52. The first system includes a 'dolce' marking and a 'Man.' (Manual) instruction. The second system includes 'G.R.' (Grand Jeu) and 'Ped. R.' (Pedal Right) instructions. The score is marked with a 'VC' (Voix Céleste) symbol and a circled '2'.

Illustration 9: Vierne: *Berceuse*, mm. 1-11.

A different type of example of Vierne neglecting to indicate the expression stop where it is required occurs in the *Carillon* (Illustration 10), a piece in which Vierne creates a bass ostinato out of the theme he heard from the tower carillon of the chapel of the Château de Longpont in Aisne, and tops it with a majestic melody harmonized in block chords. Vierne's indications bid the organist to begin in *Grand-jeu* registration, perfectly suited to the use of the reservoir as Vierne

Allegro.  $\text{♩} = 126$

① ③ ④

⑥ *fff*

G.R.

④ ③ ① Ped. G. R.

Illustration 10: Vierne: Carillon, mm. 1-7.

correctly indicates by omitting the “E” at the start. However, expression is essential in the middle section (Illustration 11) in order to execute the dynamic

*simile*

R. *f*

*dim.*

*p*

Ped. R.

*cresc.*

*dim.*

*pp*

Man.

Illustration 11: Vierne: Carillon, mm. 35-43.

contrasts from *subito pianissimo* to *fortississimo* that Vierne indicates in the score, all of which is lost when the reservoir is allowed to smother the musical expression with constant air pressure. *Expression* ought to be drawn where *Grand-jeu* is canceled and canceled where the *Grand-jeu* is brought back on for the reprise. Let us turn to an example by Alexandre Guilmant, who handles a similar situation elegantly.

Alexandre Guilmant's *L'Organiste Liturgiste* comprises ten volumes which, like Vierne's *24 Pièces*, are also intended for “organ or harmonium.” His *Offertoire* in G-major from the second book (Illustration 12) begins on *Grand-jeu* without expression, like Vierne's *Carillon*, allowing for a full and powerful expression of alternating chordal and fast solo-melody phrases. Expression is added, and hence the reservoir disengaged, where the dynamic indication drops from *fortissimo* to *forte*. *Grand-jeu* is then canceled two bars later, leaving registers one and four, where a four-bar diminuendo leads to *piano*, at which point register four is canceled and a final expressive melody is played on register one alone, ending *pianissimo*.

One characteristic of fine harmonium writing is that composers lend special attention to the voicing of chords; generally, close voicing in higher registers coupled with smooth voice-leading creates the best effect, with single notes or octaves only in lower registers. While this is generally standard compositional practice regardless of instrument, and indeed the same is true of instrumentation in orchestras, the harmonium provides an unusually clear example of the problem that arises when one ignores this principle. Vierne's



① ④ ⑥  
 All.<sup>o</sup> (♩ = 104)  
 G *ff* G<sup>o</sup> 0.  
 ① ④ ⑥  
 PED.  
 S PED.  
 Récit.  
 Di - mi - nu - en - do.  
 Meno vivo  
 A piacere  
 p  
 Fends et Hautbois - Basson  
 Rit e dim  
 p  
 pp

Illustration 12: Guilmant: *Offertoire* from *L'Organiste liturgiste*, vol. 2, mm. 1-22.

*Marche funèbre* (Illustration 13) is a slow and sombre piece, wherein long legato melody lines played in octaves are punctuated by short, accented chords. Vierne registers it appropriately for the organ with piercing low reed stops, played low in

the keyboard's compass. Whereas this piece sounds strong and foreboding on the organ, serious air supply problems arise when one plays it on the harmonium according to Vierne's harmonium indications. Indeed, even an excellent *harmonium d'art* with a fine reservoir is unable to maintain sufficiently strong and regulated pressure to support the demands of Vierne's writing. The registration calling for three ranks of reeds demands lots of air, as does the heavy voicing of chords, often with six notes occurring simultaneously. This by itself could be managed well enough, but when a legato melody line in octaves should be executed simultaneously, the harmonium's air supply is incapable of supporting the music's demands. The legato melody line falls suddenly in volume and intensity each time an accompanying chord interjects.



Illustration 13: Vierne: *Marche funèbre*, mm. 1-9.

A similar situation, though less dramatic, arises in Vierne's *Prélude*, a mono-thematic piece of only 38 bars which alternates polyphonic imitative writing with questioning monophonic statements built on the same rising pattern.

The piece begins with a four-part imitative texture very low in the keyboard's compass, indicated for the harmonium on registers one and four (Illustration 14). These low voices speak only with great difficulty, especially the third voice, which enters below the second voice. By contrast, the organ has no problem in providing the support needed for this low-compass polyphony, and an expressive crescendo-diminuendo effect results from the rising and falling of the compass over the period of these first eight bars.



Illustration 14: Vierne: *Prélude*, mm. 1-5.

Vierne's *Arabesque* features a long melody line high in the treble register overtop of sustained low chords in the left hand (Illustration 15). The oriental character indicated by the title appears in the form of mordents, diminished intervals, and considerable use of the whole-tone scale. Vierne does not indicate expression, and as a result, the left hand chords dominate the right hand melody, which cannot be shaped dynamically because the reservoir is engaged. Vierne's intended effect may be observed in the organ indications, wherein the left hand



Illustration 15: Vierne: Arabesque, mm. 1-5.

chords are very soft and the right hand melody is expressive and in the foreground. The texture and compass of this example would work perfectly on any harmonium possessing *double-expression*, which would enable the player to provide more air pressure, and hence more volume to the right hand than to the left hand, but there is a problem. Vierne does not respect the instrument's break between E and F above middle C, so this effect would be nullified every time either part crosses the break, which just in this first section of the piece occurs three times: the first note in m. 4, the first three notes in m. 8, and the arrival and two preceding notes leading into m. 11.

Another example of the sustained notes overpowering the moving line occurs in the *Carillon*, in the middle section of which Vierne writes organistic staccatos and sustained chords, alternated between the hands in an echo technique (Illustration 16). This figure is unsatisfactory on the harmonium, since the held notes overpower the staccato melodies, which may not have sufficient air pressure to speak whatsoever. On the organ, by contrast, the staccato melody not only

projects confidently over the sustained chords, but also the crescendos and diminuendos Vierne indicates work to great effect.



Illustration 16: Vierne: *Carillon*, mm. 51-60.

A few bars earlier in the same piece (Illustration 17), the very high staccato melody over the pedal tone at bar 61 encounters a similar problem. Utilizing the percussion stop on a *harmonium d'art* helps to ensure that the notes



Illustration 17: Vierne: *Carillon*, mm. 61-63.

will speak, but nothing can be done to solve the problem of too much air going to the sustained note and not enough to the melody, since Vierne does not observe the instrument's E/F break.

All of these first several examples from Vierne's *24 Pièces* concern the air supply, either as relates to the use of the reservoir or the expression stop, or as relates to textures and registrations that make unreasonable demands on the harmonium, where no problem exists for the organ. Before moving to discuss registration, which is the largest problematic area in these pieces when played on harmonium, let us briefly touch on two examples, the first of which concerns a type of organistic writing that does not transfer well to the harmonium, and the second of which concerns playability.

Vierne's *Postlude* in B-minor begins with several virtuoso arpeggiated statements *à la Paganini*, marked *Vivace* and given an almost alarming metronome marking (Illustration 18), and continues with a section in which a double-dotted motive at a moderate tempo progresses and modulates to an exciting conclusion in B-major. Problems when playing this on the harmonium include insufficient time in the *Vivace* passages for the reeds to speak, the omission of *Expression* for the second section (Illustration 19), which has numerous dynamic indications from *subito piano* to *fortissimo*, and a textural problem involving the low sustained bass notes and the quick sixteenth-note figure in the left hand, overtop of which a melody vouches to be heard, all of it marked *piano* on the very air-consuming registration of one, three, and four. This texture and echo writing between the bass and soprano voices are natural on the

Quasi fantasia  
 ① ③ ④ **Largo** **Vivace.** ♩ = 138

① G. R. **ff**

④ ③ ① Ped. Man.

Rit.  
 long

**Largo** **Vivace** 8-----  
 h l'Orgue

Ped. Man.

Illustration 18: Vierne: Postlude, mm. 1-9.

organ, as are the virtuoso lines, but these do not work on the harmonium, where homophonic, lyrical legato playing reigns supreme.

All? non troppo vivo e sostenuto. ♩ = 80

**R. p**

(G. Ped. Fonds) Ped. R.

Illustration 19: Vierne: Postlude, mm. 24-29.

The concluding section of one of Viërne's pieces, the *Canon*, is at the verge of being unplayable with two hands and no pedal keyboard (Illustration 20). This section is polyphonic in four voices, combining a pedal tone on low A, moving to C and back to A, two canonic voices in the treble clef an octave apart, each voice encompassing an entire octave from F to F and predominantly in quick sixteenth notes, and a tenor voice moving mainly in eighth notes, filling out the harmony and providing additional polyphonic commentary. The spread is so wide

The musical score for the concluding section of Viërne's *Canon* (measures 53-69) is presented in four systems. The key signature is G major (one sharp) and the time signature is 3/4. The first system begins with the tempo marking 'Poco rit.' and 'a Tempo'. The second system is marked 'cresc.'. The third system is marked 'Ritard.'. The fourth system is marked 'dim.' and 'p'. The score features a complex polyphonic texture with four voices: a pedal point on low A, two canonic voices in the treble clef an octave apart, and a tenor voice moving mainly in eighth notes. The piece concludes with a final chord marked 'p'.

Illustration 20: Viërne: *Canon*, mm. 53-69.



and the motion so quick that one is extremely hard pressed to maneuver this passage without a pedal keyboard. That Vierne conceived the passage with pedals in mind seems obvious given the long pedal tones, and indeed he indicates *Ped.* at the start of this section for its performance on the organ. One searches in vain for another example anywhere in the harmonium literature containing such a nearly unplayable mass of polyphony.

The harmonium registration indicated for this *Canon* is one and three for both bass and treble; this is to say, the combination of the “wooden flute” timbre and the “nasal and shrill” timbre as previously discussed. Karg-Elert refers to the combination of one and three as “shrill and cutting,” while Mustel refers to it as “bringing other contrasts.”<sup>14</sup> Both authors suggest that it is appropriate only in a *pastorale* scene seeking to imitate bagpipes, and the harmonium literature demonstrates this as well. While this piece is no *pastorale* and does little to invoke bagpipes, Vierne's organ registration for this piece, the *Cornet*, is rich in harmonics like the sound of bagpipes and the combination of stops one and three on the harmonium. However, other places in the *24 Pièces* where Vierne indicates registers one and three show that he certainly does not intend the shrill and cutting timbre that his registration indications prescribe.

Vierne's *Complainte* (Illustration 21) is a lyrical lament, a piece in which a diatonic folksong-like melody alternates between statements on the *Fonds 8 doux et Nazard* of the *Grande-orgue* and the quieter *Flûtes 8 et 4* of the *Récit*, with the box closed. The numbers eight and four refer to pitch-level in organ terminology;

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<sup>14</sup> Sigfrid Karg-Elert, *Die Kunst des Registrierens*, vol. 1, 77, and Mustel, *L'Orgue expressif ou l'harmonium*, vol. 2, 262.

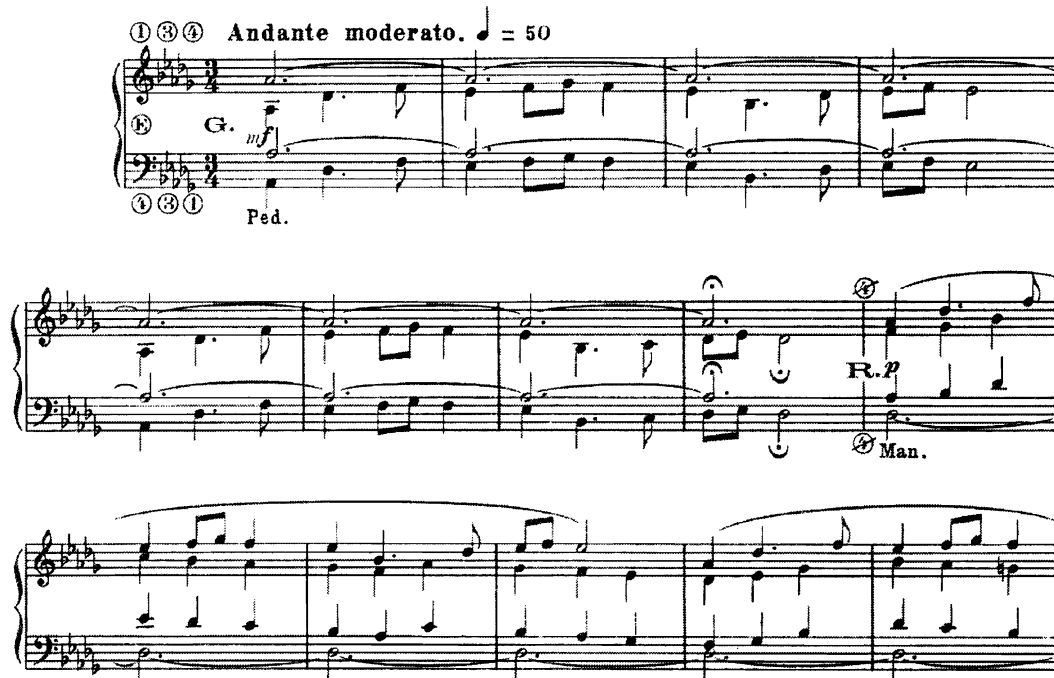


Illustration 21: Vierne: *Complainte*, mm. 1-14.

*eight-foot* corresponds to written pitch, since the lowest pipe of this rank is eight feet long, while *four-foot* designates an octave higher and *sixteen-foot* an octave lower. While Vierne's *Récit* registration of flutes at eight and four-foot pitch produces a serene and gentle sound that perfectly matches the singing legato music to which Vierne has applied it, the harmonium registration is one and three, which is shrill and cutting. An idiomatic harmonium registration matching the affect of the organ registration would be register one alone at written pitch for the *Récit* sections, and registers one and two played up an octave for the portions of this piece marked *Grande-orgue*. The same situation occurs in Vierne's *Pastorale*, and one suspects that Vierne arrives at this registration simply by translating the pitch-levels of the stops in the organ registration to harmonium registers, without being aware of the timbre of the stops he indicates. Guilmant,

to take but one example from the large repertoire that follows standard harmonium practice, always indicates register one alone where his organ indication calls for soft stops at eight and four-foot pitch.

Vierne's *Canzona* provides a good opportunity to look at registrations for pieces that contain distinct melody and accompaniment (Illustration 22). This piece is among the seven that clearly require expression, though Vierne has neglected to indicate it in the score. The organ registration calls for the *Trompette* on the *Récit* for the right-hand melody, which features many distinctive melodic major sevenths, and flutes for the accompanying left hand and pedal. Vierne

Illustration 22: Vierne: *Canzona*, mm. 1-4.

translates this for the harmonium as registers one and four for both bass and treble. While this combination, characterized by Karg-Elert as “sparkling, shining,” works and sidesteps problems of the keyboard’s break, it is not idiomatic for the harmonium in this case where there is a clear distinction between melody and accompaniment. Furthermore, this piece happens to be one of only two examples in all of the 24 *Pièces* where there is evidence of respect of the instrument’s E/F break. More likely than being conscious respect, it is probably by chance that Vierne kept the accompanying voices below F above middle C. Upon closest scrutiny, there is in fact one single accompaniment note that crosses

the break to the F above middle C; this occurs near the end of the piece in bar 57.

The *Récit Trompette* on all Cavaillé-Coll instruments like Vierne's is a prominent stop that commands much attention, particularly in comparison with the flutes that Vierne here indicates as its accompaniment. Rather than merely giving this solo voice the same harmonium registration as the accompaniment, as Vierne does here, it is much more effective to play the right hand up an octave on registers one, two, and four, with the accompaniment on register one alone. The middle section would best be played at written pitch on register one, left and right, with the solo registration returning for the reprise.

Like the *Complainte* and the *Canzona*, Vierne's *Choral* also suggests that Vierne's registration indications for harmonium are based in a literal translation of his organ registration pitch levels to harmonium registers. The *Choral* begins with low open fifths alternated with major thirds in parallel motion between the two hands (Illustration 23), a pattern that returns several times in the course of the piece, alternating with sweeter and more expansive choral statements that echo the great *Chorals* of Franck. The growling organ registration for the opening and



Illustration 23: Vierne: *Chorale*, mm. 1-4.

other interjecting statements is for the eight-foot foundation stops of both the *Grand-orgue* and the *Récit*, plus the *Récit Haubois et Trompette*. Vierne's

harmonium registration of registers one and four fails to capture the essence of this musical expression. One of the registrations discussed earlier where Vierne indicated registers one and three, or one, three, and four in a *dolce* section, where in that case it was the least appropriate alternative, here is essential, for here the cutting timbre is the precise one that Vierne requires.

To conclude our discussion of registration, let us consider one piece which affords the opportunity for an idiomatic, successful harmonium registration, though Vierne has not exploited it. Vierne's *Lied*, harmonically one of his most conservative pieces and of a naïve and delicate symmetry, features a sweeping and uplifting left-hand melody registered on the organ for *Grande-orgue Violoncelle et Montre*, accompanied by a shimmering ostinato pattern in the right hand registered for flutes at eight- and four-foot pitch (Illustration 24). For the

Illustration 24: Vierne: *Lied*, mm. 1-7.

harmonium, Vierne once again simplistically indicates registers one and four for both treble and bass, and there is no registration change throughout the piece for

harmonium, although indications bid the organist several times to change manuals, couple and uncouple the manuals, and to add or take away the pedal division. The simple solution which presents itself is once again to play the right hand up an octave on register two, and the bass solo voice on registers one and four. At bar twelve, both hands play on register two up an octave, with the initial registration returning at the reprise.

This discussion of Vierne's *24 Pièces en style libre* and the problems that result when this collection is played on the harmonium have touched on the following issues:

1. The use and indication of *Expression* and the reservoir;
2. Issues of air pressure and excessive polyphonic texture in a low range on particularly air-consuming registrations;
3. Registration and texture as relates to the projection of the melody overtop of the accompaniment, where there is a clear distinction between the two;
4. Issues of balance when low sustained notes overpower a high melody, particularly when that melody is marked staccato;
5. Playability with two hands and no pedal keyboard where Vierne clearly wrote with the pedal keyboard in mind;
6. Registration as relates to the resulting timbre and its application and connotations in the broader harmonium literature; and, perhaps most fundamentally:
7. The harmonium's treble/bass break and Vierne's complete lack of exploitation of this most basic of the harmonium's traits.

## Vierne's 24 *Pièces* Considered Within a Broader Context

Composed in 1913, Vierne's 24 *Pièces* primarily consist of short character pieces. The vogue for character pieces developed in the early Romantic period as purely abstract forms lost much of their appeal as literary influences and nationalism came to occupy a more important place in music. Character pieces usually seek to arouse a passive listener's feelings and associations, and are not strictly functional. Staples of the genre include Mendelssohn's *Lieder ohne Worte*, Chopin's *Nocturnes*, and Debussy's *Préludes*. All of these are for piano solo, which is indeed the most common medium for character pieces. Schumann's *Studien für den Pedalflügel* op. 56 and *Skizzen* op. 58, also for the pedal piano and both composed in 1845, are early examples of sets of character pieces hinting toward the organ as medium, since the pedal piano offers an organ-style pedalboard and primarily functioned as a home practice instrument for organists. Vierne's 24 *Pièces* come at the end of a distinguished tradition of sets of character pieces (as well as some closely related liturgical collections) for organ or harmonium by Romantic-era French composers:

- 1844: Berlioz: *Trois morceaux*, orgue-mélodium (i.e., harmonium)
- 1852: Saint-Saëns: *Trois morceaux*, harmonium
- 1858: Bizet: *Trois esquisses musicales*, harmonium
- 1858: Franck: *Cinq pièces*, harmonium
- 1859: Saint-Saëns: *Six morceaux*, harmonium
- 1861: Lefébure-Wély: *L'Office catholique*, organ or harmonium
- 1866: Saint-Saëns: *Trois rapsodies sur des cantiques bretons*, op. 7, organ
- 1869-1912: Guilmant: *Pièces de différents styles pour orgue*
- 1874-83: Guilmant: *L'Organiste pratique*, harmonium or organ
- 1881: Gigout: *6 Pièces*, organ or harmonium
- 1890: Boëllmann: *12 Pièces*, op. 16, organ or pedal piano
- 1890: Franck: *L'Organiste*, harmonium
- 1896: Boëllmann: *Heures mystiques*, op. 29-30, organ or harmonium
- 1901: Tournemire: *Suite de morceaux*, op. 19, organ

1904: Tournemire: *Dix Pièces (dans le style libre)*, op. 21, harmonium  
1910: Marty: *Dix Pièces en style libre pour grande orgue*  
1914: Vierne: *24 Pièces en style libre*, op. 31, organ or harmonium

Typical of character pieces, many of Vierne's titles give a strong indication of the character of each piece, and though this is a collection of organ music, only one of the 24 titles seems specifically drawn from church liturgy, the *Postlude*. Character pieces may be grouped according to the type of descriptive quality presented by the title, for while many suggest visual images, others suggest an action, a state of mind, an attitude toward the music, or a literary connection. Twenty-two of Vierne's *24 Pièces* may be sorted within these five different sub-genres as follows:

Titles that suggest a possible literary connection:

Complainte  
Építaphe  
Élégie  
Légende

Titles that suggest visual imagery:

Arabesque  
Pastorale

Titles that suggest an action:

Cortège  
Berceuse  
Marche funèbre

Titles that suggest a state of mind:

Méditation  
Idylle mélancolique  
Rêverie

Titles that suggest an approach toward the music:

Divertissement  
Scherzetto  
Préambule  
Prélude  
Lied



Épithalame  
Madrigal  
Choral  
Canzona  
Carillon

Vierne's title for the remaining piece (other than the *Postlude*, already discussed) is *Canon*, clearly identifying the piece's predominant compositional technique, though this tuneful piece, evocative of folk music like the French *musette*, could just have easily been given an evocative character-piece title like *Danse sentimentale*.

Vierne's pieces vary stylistically from homophonic textures and conservative common-practice harmony to rather dense polyphony and post-Wagnerian chromaticism. At the simpler end of the spectrum are the *Lied* and *Complainte*, while the most chromatic and densely packed are the *Cortège*, *Scherzetto*, *Élégie*, and *Épithalame*. Notable among the pieces that are midway along this spectrum is the *Berceuse*, with its pervasive use of parallel harmony with upper extensions and non-harmonic tonic, harmonic progression by thirds, and its immensely attractive melody that originates in the French lullaby, *Do, do, l'enfant do*.

Stylistically, Vierne's *24 Pièces* bear much in common with other organ and harmonium collections of character pieces, as well as with collections for piano. Perhaps the most immediate difference between these Vierne pieces and the famous collections by the likes of Chopin and Debussy is that, with the exception of the *Scherzetto* and the *Divertissement*, and less so the *Carillon* and the *Postlude*, these are pieces of very modest technical difficulty. Vierne did not

write these simple pieces for lack of virtuosic ability or tendencies, as is amply evident in his organ symphonies and the *Pièces de fantaisie*, but almost certainly in order to fill a market demand for pieces that could be played by organists of more average abilities. In restricting himself to modest musical materials, Vierne produced some of his greatest music. Norbert Dufourcq considered these pieces “perhaps Vierne's most beautiful works”<sup>15</sup> and Vierne's first biographer, Bernard Gavoty, wrote that “l'étroitesse des limites que Vierne s'était imposées avait suscité une ingéniosité d'exécution où se manifestait le meilleur de son talent.”<sup>16</sup>

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<sup>15</sup> Norbert Dufourcq quoted in Rollan Smith, *An Introduction to the Organ Music of Louis Vierne* (Colfax, NC: Leupold, 2006), xviii.

<sup>16</sup> Bernard Gavoty, *Louis Vierne: la vie et l'œuvre* (Paris: Michel, 1943), 236.

## Conclusion and Summary

While some of these pieces like the *Carillon* and the *Berceuse* have attained significant popularity both in concert programs and in recordings by organists, it is interesting to observe that not a single harmonium recording of any of these works seems to be extant, compared with the many available recordings of harmonium works by Franck, Guilmant, Karg-Elert and others. To be sure, some of the simplest and most modest of the pieces in this collection are problem-free for the harmonium, and they certainly are delightful miniatures that could nicely complement a program featuring bigger works by other composers, but all of the more interesting pieces in this collection can only be transferred to the harmonium with significant adaptations, if indeed they successfully transfer at all. Returning now to Guilmant's *L'Organiste liturgiste*, which once again is similar to Vierne's *24 Pièces* in that it also includes both harmonium and organ registrations, it is interesting to note how Guilmant deals with the problem of the different needs of the organ versus the harmonium.

While Guilmant writes primarily on two staves and gives both harmonium and organ registrations, like Vierne, the many sections that he deems work only on organ are given no harmonium registration, and hence he makes no compromise. Many of these sections are written on three staves as is standard in organ music, though the same also occurs in certain passages on two staves, where he acknowledges that the texture requires an organ and would not be satisfactory on a harmonium. In other cases, Guilmant writes the pedal on a separate staff and marks it *ad libitum*, thus giving effective options for both organ

and harmonium. In one particularly problematic place, the organ and harmonium parts are written entirely on separate staves. Finally, Guilmant sometimes writes additional notes in small typeface where the organist is required to fill out final chords. This is an essential part of playing these pieces on the organ, for the voice-leading compromises that arise when playing final cadences with two hands and no pedal make no sense on the organ, where proper voice-leading is virtually always maintained. All of these items show Guilmant to be conscientious to the needs of both instruments as separate entities with different needs, while Vierne too often seems unaware or inattentive to the different musical needs of the harmonium.

In conclusion, the inadequate harmonium registrations and unidiomatic writing are reasons why Vierne's *24 Pièces en style libre* are as a rule not played by harmonium players, but only by organists. Indeed, the evidence points toward a recognition of this music as genuine organ music, not harmonium music, music conceived by Vierne for Cavaillé-Coll instruments like the monumental organ that he presided over at Notre-Dame Cathedral in Paris. To be sure, the *24 Pièces* show Vierne scaling down the technical requirements of his writing, particularly in writing throughout on two staves, in order that the music may appeal to a broader musical public, not only to the few organ virtuosos. But the fact of merely writing on two staves no more guarantees the success of this music on the harmonium than writing on three staves automatically guarantees the success of music which a composer intends to be played on organ. Musical composition is much more refined and intricate. Thankfully, these pieces are refined and

intricate indeed, and represent one of the finest collections of small pieces for the organ. We can go to the likes of Franck and Karg-Elert for fine harmonium music and play Vierne's brilliant compositions instead on their proper intended instrument, the organ.

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