The 'harpe organisée', 1720-1840 : rediscovering the lost pedal techniques on harps with a single-action pedal mechanism

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Chapter 4

Works with pedal indications

This chapter identifies and discusses the different ways of pedalling that are found in eighteenth- and nineteenth-century pieces for harps with a single-action pedal mechanism, where instructions or symbols are written in the score either by the composer or publisher.[1]

The repertoire

The first pieces for the harp were published in Paris in 1760. They are three collections of airs with accompaniment for the guitar, harpsichord or harp.[2]

The original repertoire for the harp not only consists of songs with harp accompaniment, but also solo works including sonatas, variations, potpourris, chamber music and concertos.[3]

[1] The word "harp" is used throughout this thesis to refer exclusively to a harp with a single-action pedal mechanism.

[2] Simon, *Second Recueil*; chevalier d'Herbain, *Recueil d'Ariettes*; Petilliot, *Recueil d'airs*. These three collections were advertised in "L'Avantcoureur: feuille hebdomadaire," 1760, 139, 207, 734. The Petilliot collection may be the one found today in the F-Pn: Petilliot, *Recueil d'airs choisis avec accompagnement de guitarre et de harpe* (Paris, 1776), as the work has the same title as the magazine advertisement. However, the F-Pn catalogue attributes the year 1776 to this collection, referring to another advertisement in *Annonces, affiches et avis divers*, 1776, 366. The advertisement states: "*Recueil d'Air choisis, avec accompagnement de harpe*". It does not mention the guitar as an alternative accompanying instrument, so the author concludes that the 1776 advertisement refers to a later collection by Petilliot.

[3] Klaus-Peter Brenner, *Die Naderman-Harfe in der Musikinstrumentensammlung der Universität Göttingen: ein französisches Instrument des 18. Jahrhunderts als Maschine, Skulptur, Möbel, Prestigefetisch, Ware und Klangwerkzeug* (Göttingen: Ed. Re, 1998), 190, for harp repertoire in Cousineau and Naderman music catalogues; Maydwell, "Georges and Jacques-Georges Cousineau and the Harp in the Latter Half of the Eighteenth Century." For pre-1800 published works see Catherine Michel and François Lesure, *Répertoire de la musique pour harpe publiée du XVIIe au début du XIXe siècle* (Paris: Klincksieck, 1990). For a selected list of 550 works for the harp, see Barthel, "La harpe.". Modern repertoire books include some eighteenth-century repertoire: Annie Glattauer, *Dictionnaire du répertoire de la harpe* (Paris: CNRS ed., 2003). Most of the research here has been carried out using my own personal database of harp pieces. This database contains more than 2,000 works, which the author has consulted personally in libraries and private collections.

The largest volume of works published for the harp are songs with harp accompaniment, either as a *basso continuo* or as a written-out accompaniment.[4] This genre remains a static form for many decades, where the notated music remains unchallenging.[5] Even Spohr wrote an *Aria* for harp which reflects the simple compositional style of this genre rather than his usual fiendishly difficult harp parts.[6] These songs were composed and published for amateur harpists who played for their own amusement in domestic settings, where the cultural significance of this repertoire and playing the harp were highly important at the time.[7]

The remaining repertoire consists of solo works for harp, chamber music where the harp has a principal role, and finally concertos. The scores from all of these genres provide much information about how and where to pedal on the harp.

There are two main styles of composition within the chamber music repertoire of the harp. The first consists of works for harp where other instruments like the violin, flute and violoncello play *ad libitum* parts. An example of this instrumentation is Petrini's *Quatre Sonates*, Op. 4, where the violin part and the right hand of the harpist play the same line, sometimes in different octaves.[8] Other chamber music is composed in a way where the harpist's right hand dialogues with the melody instrument, while also providing a rhythmic and harmonic accompaniment. Sonatas by Giacomo Gotifredo Ferrari's are written in this style.[9]

Concertos for the harp show a certain flexibility in orchestration. They can be played either with a soloist and orchestra, or as a duo for harp and violin. An example of this orchestration is the *Cinquième Concerto* Op. 7 by Krumpholtz, where the title page states:

> "Cinquieme Concerto pour La Harpe…Avec accompagnement De deux Violon, Alto, et Basse, deux Hautbois, deux Cors, une Flûtte, et un Basson Ad Libitum…Ce concerto est non seulement arrangé pour la facilité de l'execution pour ce qui regarde la partie de la Harpe; mais aussy pour les accompagnements, car il peut à la rigueur s'éxecuter en Sonate, avec le premier Violon seulement, en passant les Tutti indiqués avec les petites notes."[10]

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[4] See section 5.2.1 for an example of both types of songs from the eighteenth century with harp accompaniment.

[5] Both forms of accompaniment could be made as difficult as one would like, by the realisation of the *basso continuo* part or by elaborating on the written-out accompaniment, according to HIP. Bruce Haynes, *The End of Early Music: A Period Performer's History of Music for the Twenty-First Century* (Oxford: OUP, 2007), 14.

[6] Louis Spohr, *"Was treibt den Waidmann in den Wald" für Singstimme mit Begleitung von Harfe oder Klavier und Horn*, WoO. 92 (Vienna: Bermann, 1825).

[7] See Chapter 7 for the social and cultural aspects of playing the harp.

[8] Henri Petrini, *Quatre Sonates pour la harpe avec accompagnement de violon ad libitum*, op. 4 (Paris, 1780).

[9] Ferrari, *Three Grand Sonatas*. Giacomo Gotifredo Ferrari (1763-1842), harpist and composer.

[10] Jean-Baptiste Krumpholtz, *Cinquieme Concerto pour La Harp*, op. 7 (Paris, 1778): "Fifth Concerto for the harp…with accompaniment of two violin, viola, and bass, two oboes, two horns, one flute, and one bassoon ad libitum…This Concerto is not only written for ease of performance with respect to the

Other concertos can be played either with orchestra or simply as a solo harp piece. An example is the *Sixième Concerto* Op. 9 by Krumpholtz, where these instrumentation options are detailed on the title page:

> "Sixième Concerto pour la Harpe Avec Accompagnement de deux Violon, deux Hautbois, deux Cors, une Flûtte, Taille et Basse par M. Krumpholtz... Ce Concert peut aussi s'exécuter sans aucun accompagnement quelconque. En passant tous les Tutti indiqués avec les petites notes".[11]

Piano and harp concertos were regularly played as solo pieces, without the orchestra accompaniment. The pianist John Field performed Krumpholtz's *Sixième Concerto*, Op. 9, on the piano in his debut concert on April 4, 1792, at the Rotunda, Dublin.[12]

Solo pieces, chamber music and concertos are valuable sources for most facets of pedalling, when indications or symbols are included in a score. This information merely corroborates with the mass of information that is found in the harp treatises and methods. This time, the information is applied to an exact bar or note, so the various ways to move pedals can be reproduced by following the instructions on the score.

4.1 The "base" key

The single-action harp can be set-up in several different "base" keys, however, the most usual key is E-flat major.[13] Each "base" set-up key allows certain pedal solutions and limits others. In most published works, no instruction is included at the beginning of a piece to tell the harpist how to set-up up the harp.

A rare example is Petrini's *Sonate*, Op. 39 where "le Ton est en Mi♭" appears before the music staves on page 2. The following statement is written at the bottom of the page: "l'auteur dans toutes ses œuvres ne s'est jamais départi de cet accord."[14]

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harp part, but also for the accompaniment, as it can be played as a Sonata, with the first violin only, omitting the Tutti parts indicated by the smaller font." At a first glance, it would appear that only the bassoon is an *ad libitum* instrument, if the concerto is performed with an orchestral accompaniment. However, at the bottom of the title page, Krumpholtz gives an alternative instrumentation of simply harp with one violin. The harp part includes, in small print, the bass line and first violin line, so actually the concerto could be played as a solo harp piece.

[11] Jean-Baptiste Krumpholtz, *Sixième Concerto pour La Harpe*, op. 9 (Paris, 1783): "Sixth Concerto for the harp with accompaniment of two violins, two oboes, two horns, one flute, viola and bass by M. Krumpholtz...This Concerto can also be played without any accompaniment. One leaves out all the place where *Tutti* is indicated with the notes in small print".

[12] John Field (1782-1837), Irish pianist and composer. Brian Boydell, *Rotunda Music in Eighteenth-Century Dublin* (Blackrock: Irish Academic Press, 1992), 144; Patrick Piggott, *The Life and Music of John Field, 1782-1837, Creator of the Nocturne* (University of California Press, 1973).

[13] See section 3.1.

[14] "The key is E-flat". "The author in all of his works never departs from this tuning ["base" set-up key]."

Another example is Marin's *Six progressive Sonatinas*, Op. 16, *Sonatina*, no. 2 [c. 1800] (fig. 4.1) which is in the key of E-flat major, and the third movement, *Minuetto*, is in B-flat major.[15] The key signature for the *Minuetto* contains two flats, B and E, and a natural sign for the A, indicating to the harpist that this movement is in another key and that the A pedale must be fixed in the lower notch. It is written in the treble and bass clefs of the *Minuetto* to fix the A and then to unfix it for the *Trio* section.

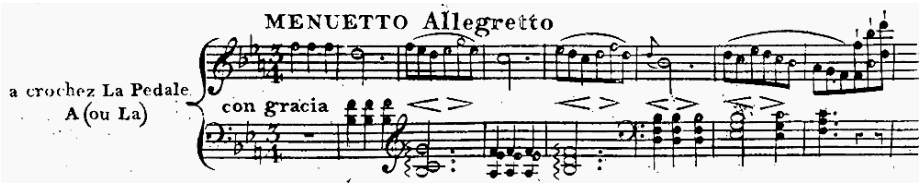

Figure 4.1: Marin, *Sonatina II*, Op. 16, *Minuetto*

In most circumstances it is usually up to the harpist to work out the "base" set-up key for themselves. This can be discovered by reading or playing through the whole work, deducing which notes are absolutely necessary and which notes can be played by their enharmonic alternatives.

The majority of pieces require a "base" set-up key of E-flat major, but there are also pieces that require other "base" set-up keys. A selection of pieces where the composer/publisher indicates at the beginning of a piece to set-up the harp in the "base" key of A-flat major are included in Table 4.1. This simply means that the harpist tunes the five A strings on the harp a semitone lower.

Table 4.1: List of pieces where the "base" set-up key is A-flat major.

Composer	Title	Key of work
D'Alvimare	*Sonata III*, Op. 18	F min./F maj.
D'Alvimare	*Sonata II*, Op. 9	C min./E♭ maj.
D'Alvimare	*Ouverture et airs du ballet de Daphnis et Pandrose*	C maj.
D'Alvimare	*Le Torrent, Romance* par Eusebe Salverte	A♭ maj.
D'Alvimare	*Six Airs russes*, Op. 25, no. 4	F maj./min.
Bochsa	*Les Cloches Bleues*	F maj./min.
Naderman	*L'Alliance Caprice pour harpe*, Op. 36	F min.
Spohr	*Fantaisie pour la harpe*, Op. 35	C min.

Spohr composed at least two works for a harp set-up in the "base" key of D-flat major. These are *Sonate* WoO 27/28 and probably also the *Concertante*, no. 2, WoO 14.[16] The harp part is in F minor and the violin part is in E minor which are the

[15] Vicomte de Marin (1766-1847), harpist and composer.

[16] The only known copy of Spohr's WoO 14 is part of the private collection of Heinz Holliger and

same keys as the *Sonate* WoO 27, so the author concludes that WoO 14 is in the same "base" set-up key. This cannot be confirmed until the score can be consulted.

The key signature of a piece does not necessarily indicate the "base" set-up key of the harp. Most of the pieces in Table 4.1 are in A-flat major or its relative minor key of F minor, and indeed these works do require that the "base" set-up key is A-flat major. However, two of the above pieces are in C minor and one in C major, and the composer/publisher forewarns the harpist from the beginning of the piece that D♭ is obligatory by delineating the "base" set-up key. This is due to the fact that normally an E-flat major "base" set-up tuning would suffice for a piece in C minor/major, but an A-flat major also works and is sometimes also essential.

Therefore, a simple rule is that the "base" set-up key must have, as a minimum, the same amount of flats or sharps as the key signature of the piece, but may also have more flats or sharps, but not less.[17]

Krumpholtz writes on the frontispiece of his *Deux Simphonies*, Op. 11, in the Naderman edition[18]:

> "Pour faciliter l'éxécution dans le maniement des Pédalles pour toute Musique quelconque composée pour la Harpe: l'Auteur indique quelque fois dans son Œuvre XI^{e} le Sol♯ en place du La♭ pour ne pas décrochez le La qui se trouve naturel à la Clef, ou bien Ut♯ en place de Re♭ ainsi que le Re♯ au-lieu de Mi♭…En observant généralement cette méthode, on trouvera bien moins de difficultés dans cet instrument."[19]

These instructions may appear on the surface to be an aid to the harpist with respect to the enharmonic alternatives in the works. However, they also indicate the "base" set-up key, as Krumpholtz states to use C♯ as an enharmonic for D♭ and to use D♯ as an enharmonic for E♭. Therefore, the harp is tuned in E-flat major; the harpist has the possibility of playing D♮ and D♯, but not D♭. Every D♭ is then played as C♯.

This same statement is found at the bottom of the catalogue included in the Naderman editions of Krumpholtz's Opp. 11, 13, 14, 15 and 16. It could be assumed then that all of these works are written for a harp set-up in the "base" key of E-flat major, but this is not always the case.[20]

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is not available for consultation. The incipit of this *Concertante* for violin, harp and orchestra is known from Louis Spohr, "Verzeichniß sämtlicher Compositionen von Louis Spohr," after 1822. This incipit is transcribed in Folker Göthel, *Thematisch-bibliographisches Verzeichnis der Werke von Louis Spohr* (Tutzing: Schneider, 1981), 278. Göthel refers to this manuscript catalogue as *Louis Spohr, Eigenhändiges Werkverzeichnis*, EWV. See Abbreviations.

[17] See Martin Wulfhorst, "Louis Spohr's Early Chamber Music (1796-1812): A Contribution to the History of Nineteenth-Century Genres" (PhD Dissertation in Music (Musicology), City University of New York, 1995), 351–58, and this Chapter 5, Table and "base" keys for the harp.

[18] The editions of Cousineau and Momigny do not include these instructions.

[19] Jean-Baptiste Krumpholtz, *Deux Simphonies pour la Harpe Seule ou avec Accompagnement de Violon*, op. 11 (Paris: Momigny, n.d.): "To facilitate the execution in moving the pedals for all music composed for the harp: the author indicates sometimes in his Op. XI that the G♯ replaces the A♭ in order not to release the A which is found in the key signature, or the C♯ replaces the D♭ and the D♯ replaces the E♭… Observing this method in general, one will find fewer problems on this instrument."

[20] See Chapter 5.

The harp as a transposing instrument

The following phrase is found on the first page of the harp part of the *Deuxième Concerto*, Op. 48, by Demar: "il faut accorder le Si♭ de la harpe, avec le La de l'orchestre". This means that the harp is tuned a semitone lower than the orchestra. The harp part is notated in C minor, while the orchestral parts are notated in B minor.[21] The harps built by French luthiers like Cousineau and Naderman were built for a lower pitch.[22]

These indications have nothing to do with the "base" set-up key, but rather a practical solution to accommodate harps at one pitch and other instruments at other pitches at a time when pitch was not standardised.[23] On the frontispiece of Krumpholtz's *Deux Concertos*, Op. 6 (1777), the following advice is given to the harpist:

> "le ton de fa soit à l'unison du mi-majeur, et celui de mi-bémol à l'unison du ton de ré-majeur. C'est pour l'effet des accompagnemens que cela est fait."[24]

The choice of these keys like E major and D major utilise the "open strings" on the violin, whereas flat keys utilise more "open strings" on the harp, minimising the amount of fixed pedals.

Spohr's name is often associated with this practice of composing for the harp as a transposing instrument.[25] He was not the first composer to use this ingenious solution, but he was simply following in a tradition that already existed for several decades before his first experiments in 1805.[26] The tradition continued after Spohr with Théodore Labarre publishing his *Fantaisie*, Op. 101 for harp and orchestra in 1840 for a double-action pedal harp that is "baisser d'un demiton."[27]

4.2 Enharmonics

Section 3.3 deals with how enharmonic solutions are applied to short musical examples that are found in harp treatises and methods. When these alternative notes are necessary or recommended by the composer, they are often written near

[21] "The B♭ of the harp ought to be tuned with the A of the orchestra". A version of this same Concerto for piano and orchestra has all instruments notated in B minor.

[22] Wolf, "Timeline-Pedalharps." When variables including the length and diameters of strings are taken into account, Wolf has calculated that harps up to 1805 were built for a pitch around A=425-430Hz. See section 2.1.2.

[23] Bruce Haynes, *A History of Performing Pitch: The Story of "A"* (Scarecrow Press, 2002), 306–12.

[24] "The key of F is in unison with E major, and that of E-flat is in unison the key of D major. This is done for the sake of the accompaniment."

[25] Wulfhorst, "Louis Spohr's Early Chamber Music (1796-1812)," 201: Spohr "invented" the tuning method in 1806, 350: the tuning method was kept a "secret"; Louis Spohr, *Trio Für Harfe, Violine Und Violoncello, F-Moll*, ed. Folker Göthel, WoO 28 (Merseburger, 1984).

[26] Spohr began experimenting with writing works for violin and a transposing harp around 1805. The first work written in this fashion is a fragment of a sonata movement, WoO 24. See Chapter 5.

[27] Théodore Labarre (1805-1870), harpist and composer. "Lowered by one semitone."

or on the music. In Krumpholtz's later works (Opp. 11, 13, 14, 15 and 16), it is recommended by Krumpholtz or Naderman, the publisher, that each E♭ is played with the D string, using the enharmonic alternative D♯ and the G string is used to play A♭.

The first movement, *Allegro assai*, of Krumpholtz's *Deux Simphonies*, Op. 11, shown in fig. 4.2, shows how enharmonics are used in a piece. The harp is set-up in the "base" key of E-flat major, according to Krumpholtz's instructions in the Naderman edition.[28]

Even without these initial instructions, it would be clear for any harpist that Krumpholtz or the publisher intended this work to be played on a harp set-up in the "base" key of E-flat major, as "D♯" is written several times above the music stave, indicating that D♯ is the enharmonic substitute for the notated E♭ and every notated D♭ in this movement has a "C♯" written above the stave.

The use of enharmonic notes is fundamental in two practical situations when playing the harp.

- The first use is when a pitch does not exist on the harp, so playing an alternative enharmonic note is obligatory. For example, a harp set-up in the "base" key of E-flat major does not have the pitch D♭, so the use of its enharmonic alternative, C♯, is indispensable.
- The second situation is when the notated pitch is difficult to use, due to pedalling constraints. Then the pedal of the enharmonic note is often found to be an easier solution. An example of this is given below in Krumpholtz *Deux Simphonies*, Op. 11, bars 42 and 68, fig. 4.3 and 4.4, later in this chapter.

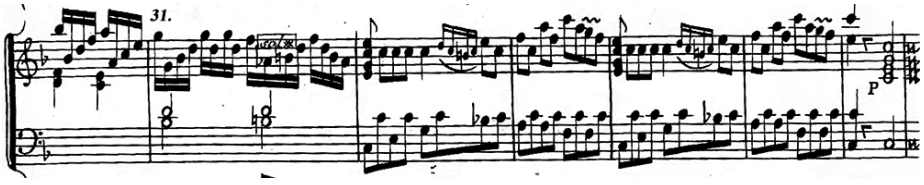

Figure 4.2: Krumpholtz, *Deux Simphonies*, Op. 11, *Allegro assai*, bars 31-36.

This movement is in F major and so the E and A pedals are fixed in the lower notches. Bar 31 is an example of how Krumpholtz approaches pedalling. This bar has an A♭ notated in the music. Without the knowledge of Krumpholtz's instructions on the "base" set-up key of the harp and the enharmonic markings on the score, the harpist would normally unfix the A pedal with the right foot while pressing down the B pedal with the left foot. The B pedal is moved because there is a ♮ sign before the B in the score; there is no additional marking for the pedal. However, Krumpholtz averts the harpist to use G♯, for the A♭ in bar 31.

The chord on the second minim of bar 31 is a diminished seventh chord on B, which resolves to C major in bar 32. When the enharmonic alternative G♯ is used instead of

[28] See section 4.1.

the notated A♭, this chord becomes an augmented sixth chord on B. This is precisely an example which contradicts Backofen's claim that French composers prefer to notate diminished seventh chords as augmented sixth chords, as the latter notation doubles up as the pedal solution.[29] In this situation, the harpist could read the accidental in the score and this accidental is the pedal solution. This would indeed be easier for the harpist, but is not the case in Krumpholtz's music.

The mental processes proposed by Krumpholtz and his contemporaries may seem more complicated than they are. The harpist reads the notation on the music, reads above the note that an enharmonic alternative is advised, and then they find the enharmonic string and pedal, neither which are written in the musical notation. However, it is my opinion that there is a system within this complexity, which in the long run is easier for the harpist. The emphasis is on the musical structure and harmony, and a historical approach to pedalling.[30]

There are several possible reasons for Krumpholtz's extra use of enharmonics, beyond the two practical situations mentioned above. Bar 31 might appear to be a superfluous use of an enharmonic, where a notated A♭ is substituted with a G♯. A harp set-up in the "base" key of E-flat major has both G♯ and A♭ as pitches. One reason for using the G pedal rather the A is that the G pedal is closer to the harpist, so it could be considered less effort to move that pedal rather than the outermost A pedal.

The second reason derives from Krumpholtz's explanation of not releasing "the A which is found in the key signature."[31] This statement could point to an approach to pedalling where if certain pedals are fixed due to the key signature of a piece, these are then left, as much as possible, fixed in the position of the key signature. Any additional accidentals are henceforth made with pedals that are in the upper, unfixed state and are operated by pressing down and releasing because they are not "found in the key signature". The action of pressing down and releasing is a momentary gesture, which moves in harmony with the musical phrase. So whereas the fixed A pedal in the lower notch is an integral part of the key signature, the G pedal is used for the momentary A♭ accidental.

It is as if the two pedals, E and A, that are fixed in the lower notches, become part of a new "base" key and the harpist works from this new setting to add or subtract additional accidentals. Perhaps this approach to pedalling also favours the pressing and releasing pedal movements rather than the motion of unfixing a fixed pedal, which then at a later stage has to be re-fixed to put the harp back into the key signature of the piece.

If a harpist plays bar 31 in this way, the G pedal is pressed down and then released by the middle of bar 32, where there is a G♮ on the second minim. The state of holding down a pedal is an unstable position for the foot; the foot is in tension. The natural action of the foot in this case is to release tension as soon as possible, by

[29] See section 3.3 and footnote 47 for translation of Backofen's text.
[30] See Chapter 5.
[31] See section 4.1.

releasing the pedal.

If, on the other hand, the harpist plays the A♭ in bar 31 as notated, they will unfix the A pedal and then their foot will be without tension and might "forget" to re-fix the A by bar 33, which has an A♮ on the first crochet. The unfixing motion of the foot implies the end of an action, so re-fixing becomes an extra movement afterwards, which is a mechanical movement but not necessarily part of the musical gesture.

There are still other reasons for using a G♯ instead of an A♭ in bar 31. The action of pressing down both the B and G pedals might be considered more organic and simpler, than two opposing movements for the feet which would be pressing the B pedal down with the left foot while releasing the A pedal upwards with the right foot.

A final but, probably the most musically significant reason for several enharmonic choices regards how to stop the vibrations and over-tones of a certain string, especially a note that is not part of an ensuing harmony. If A♭ is plucked in bar 31, that string will continue to resonate and vibrate into the next bar where the harmony changes to C major. An A string plucked as A♭ also activates the sympathetic vibrations of every A♭ on the harp and all their over-tones in the harmonic series, which are not part of a C major harmony. If the G string is used in bar 31 as G♯, to replace the notated A♭, the G string is again plucked on the first beat of bar 32, but now as G♮. The vibrations of the G♯ are forcibly halted by using the same string for two notes. Bars 66 and 79, shown in fig. 4.3, are even better examples of this case. If the A string is first used to sound as A♭, this string will continue to vibrate and enter the harmony of the G major chord in bar 67. If the G string is used to sound as A♭ in bar 66, and then re-plucked in bar 67 as G♮, the vibrations of the first use of the G string are abruptly halted.

Further examples in this first movement show how enharmonics are used for ease of pedalling, which is one of the two primary practical uses of enharmonic notes. Bar 42 (fig. 4.4) and bar 68 (fig. 4.3) contain E♭ and F♯, but the E and F pedals are both situated on the right-hand side of the harp. It is possible to play one after the other, but if the notated E♭ is played as D♯, then each foot can operate one pedal: the right foot moves the F pedal, the left foot moves the D pedal to produce an E♭. If D♯ is used in this bar, it also assists the resulting resonance, as the D♯ vibrations can be stopped in bar 43, when the D string is re-used to play D♮. Another example is bar 188 (not shown in any figure) where the same situation occurs, but this time with G♯ and A♭.

Bar 215, shown in fig. 4.5, contradicts any theory that employs enharmonics for purely over-tone motivations. Krumpholtz recommends the use of the enharmonic G♯ in bar 215, where the A♭ would appear to be the more musical solution. If the A string is firstly used as A♭ and then re-plucked in bar 216 as A♮, it halts the vibrations of the A♭ in the previous bar. Krumpholtz's choice to use the G pedal for A♭ could be due to the fact that the G pedal is closer to the harpist than the A pedal, therefore, it is more convenient to move. Another explanation may be that this bar is a repeat of bar 31, so Krumpholtz suggests the same pedal gesture for both

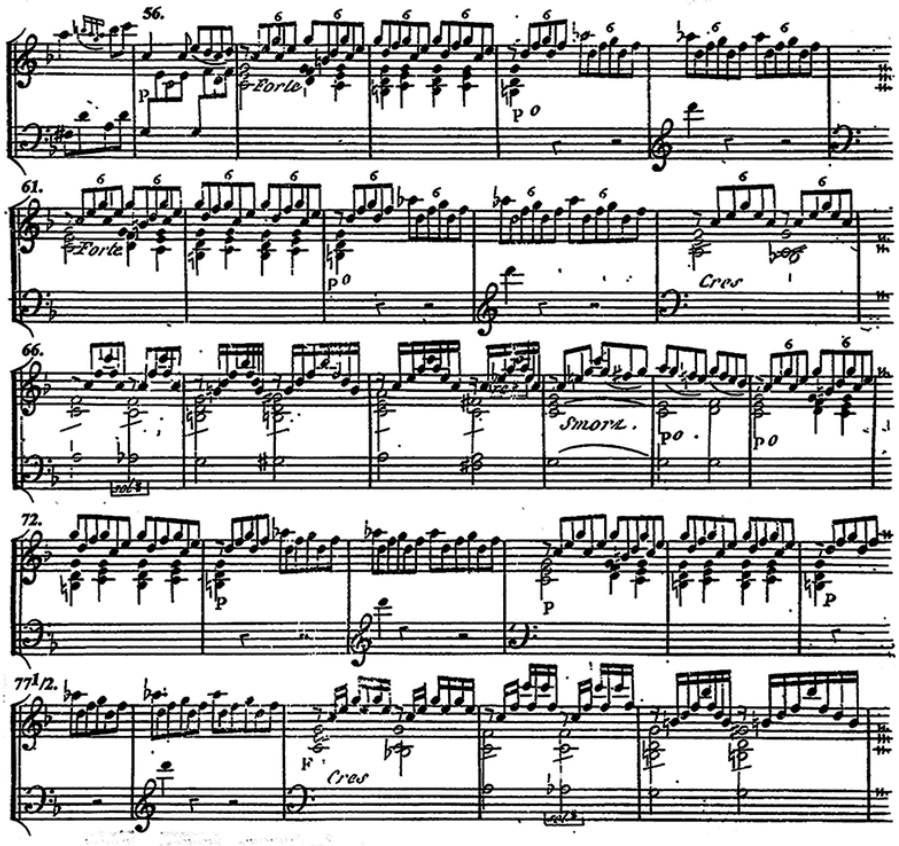

Figure 4.3: Krumpholtz, *Deux Simphonies*, Op. 11, *Allegro assai*, bars 56-81.

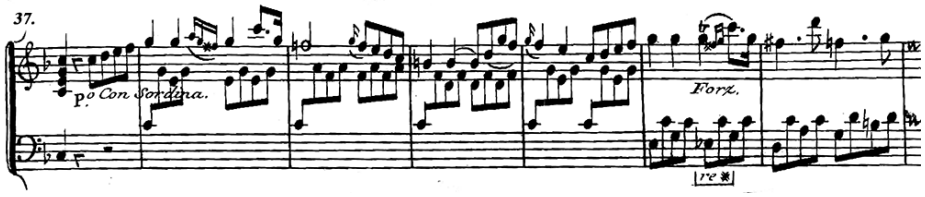

Figure 4.4: Krumpholtz, *Deux Simphonies*, Op. 11, *Allegro assai*, bars 37-43.

bars in order to maintain the same foot movement, even if the harmonic gesture is altered. The harmony in bar 32 moves to C major, whereas the harmony in bar 216 moves to A minor.

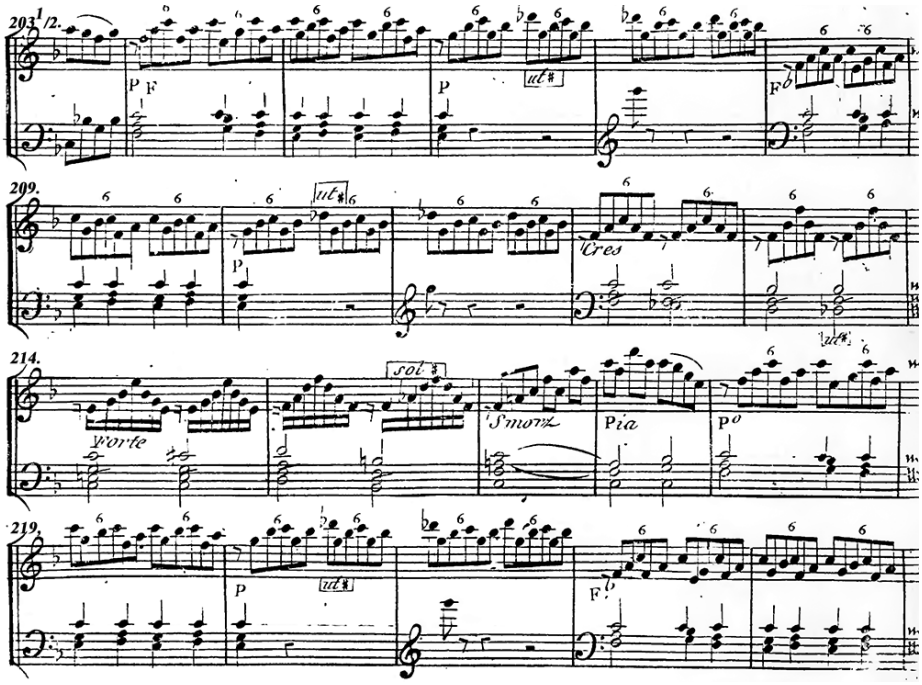

Figure 4.5: Krumpholtz, *Deux Simphonies*, Op. 11, *Allegro assai*, bars 203-23.

The only other notated A♭'s in this movement are found in a motive where A♭ repeatedly pivots with G♮ in bars 59-60, 63-64, 73-74 and 77-78. These A♭'s are not marked to be played with their enharmonic G♯, but could easily be played so. This passage is repeated a tone higher where B♭ pivots with A♮ in bars 107-8 and 111-12, but there is no enharmonic solution for these two notes on a harp set-up in the "base" key of E-flat major. There are also no pedal movements required in these bars as there are no accidentals that are not part of the key signature.

The same passage is again repeated in bars 206-7, 210-11, 220-21 and 223-24, at an interval of a fourth higher with D♭ pivoting with C♮. A harp set-up in E-flat major does not contain D♭, and indeed these passages are marked to be played with their enharmonic alternative C♯.

If Krumpholtz's enharmonic recommendations are part of a coherent published system, where all his enharmonic solutions are written in the score, then bars 59-60, 63-64, 73-74 and 77-78 are played as written, with the notated A♭'s. If, however, there is a systemic approach to combine pedalling with the musical gesture, then the intention could be to use the enharmonic alternative, G♯, the pedal that is closer to the harpist and the pedal that will be used in the intermittent bars 66 and 79,

which are indeed notated with enharmonic alternatives by Krumpholtz. If the G pedal is used to produce the notated A♭, this will result in an articulation that is not possible if the pedal would be excluded from the music.

The harp repertoire is full of enharmonic solutions that are marked in the scores. These markings are the first types of pedal markings. Further examples of enharmonic writing can be found in Naderman's *Trois Sonates*, Op. 5, 1er livre, pages 16 and 19. Marin instructs the harpist at the beginning of his *Sonatina IV*, Op. 16 that "tous le A♭ doivent etre fais avec le G♯" and before *Sonatina V* that "les D♭ doivent se faire avec le C♯."[32] Marin's *Sonatina VI* also begins with a *Prélude pour L'usage des Pedales* with several enharmonic alternatives.

The *Fantaisie avec Huit variations…sur un Jeune Troubadour* by d'Alvimare, pages 10-11, shown in fig. 4.6, includes an *ossia* version for the harpist, where the enharmonic alternatives are notated on two additional staves. The notated enharmonic notes are the pedal solutions. This example shows that the pedals were strongly allied to the music and directly linked to the musical notation, albeit a notation that is harmonically incorrect or intentionally miswritten on the staves. The pedals and pedal solutions are not considered a mere mechanical feature of the instrument or a non-musical component but rather an inherent part of the musical gesture.

4.3 *Jeu des pédales*

A review of eighteenth- and early nineteenth-century discussions on how to press, release, fix and unfix pedals is found in section 3.4. The first pedal markings consist of the composer or publisher's wish to avert the harpist to necessary or suggested enharmonic substitutes. The second phase in the history of pedal markings are situations where pedals are fixed in order to leave the foot free to move another pedal on the same side of the harp. The foot movement to simply press down and release was the norm, so this exception to the rule (fixing a pedal) was necessary to mark in the music. Examples of moving one pedal at a time and two pedals with two feet are included in section 3.4.

Most pre-1800 scores contain no pedal markings, besides those indicating the enharmonic alternatives. The few markings that are published are very similar to the examples already found in pieces included in the treatises and methods. The following example is a special case, but in general, the harp repertoire offers little additional information regarding single-pedalling and the four basic foot movements-pressing, releasing, fixing and unfixing-to the musical examples found in the treatises and methods in Chapter 3.

The *Duo a quatre mains pour la harpe*, Op. 19 by d'Alvimare, shown in fig. 4.7, is a work dedicated to two sisters playing on one harp, the 1st harpist sits, plays a melody and bass line utilising the middle range of the harp and operates the pedals

[32] "All the A♭'s ought to be made with the G♯." "All the D♭'s ought to be made with the C♯."

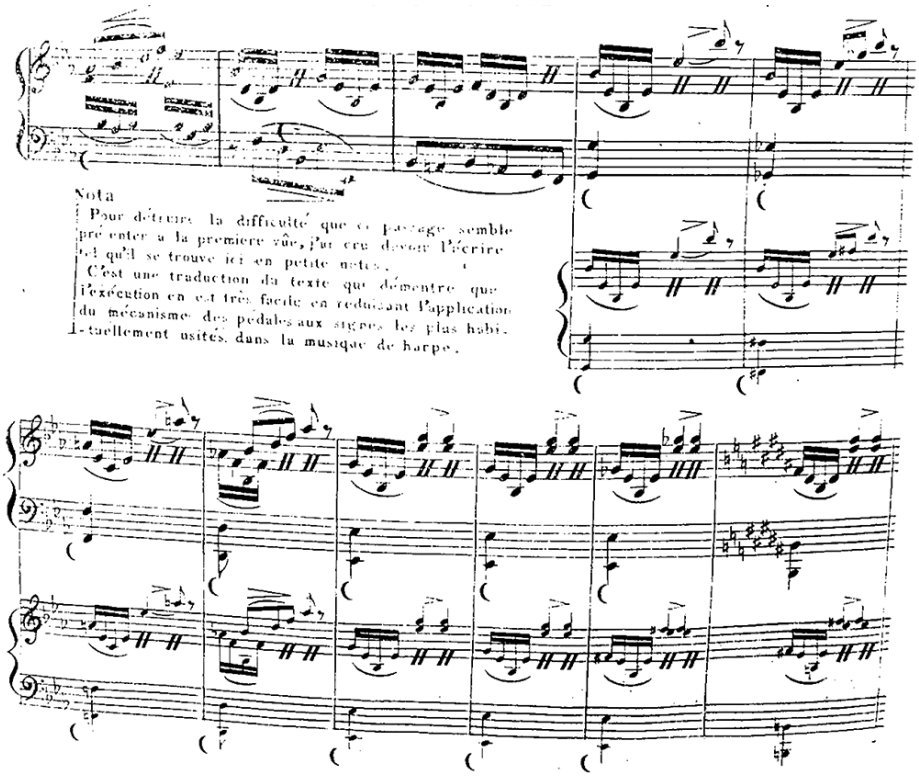

Figure 4.6: D'Alvimare, *Fantaisie avec Huit variations…sur un Jeune Troubadour*, p. 10.

for both harpists. The 2nd harpist stands, plays a melody in the upper octaves and a bass accompaniment in the lowest octaves of the harp.[33] Page seven of d'Alvimare's Op. 19 includes this instruction:

> "Ce Signe est placé pour avertir d'accrocher les pédales pour la facilité de l'exécution."[34]

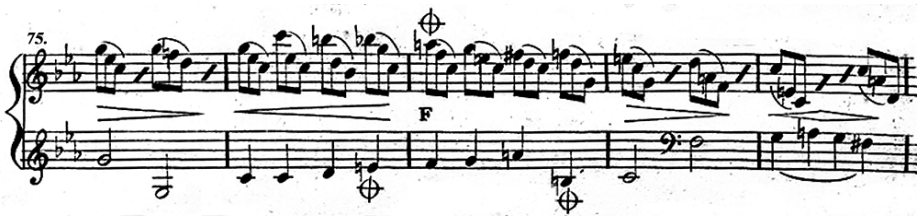

Figure 4.7: D'Alvimare, *Duo a quatre mains pour la harpe*, Op. 19, bars 75-79.

The right foot fixes the E pedal in bar 76 and the A pedal in bar 77, so that the right foot is free to press the F pedal down on the third crochet of bar 77 and then release the F on the fourth beat while the left foot fixes the B pedal. The B pedal is then fixed as the next sixteen bars require a B♮, and this fixing movement is indicated. The movement of the F pedal is not marked, because this pedal is the only one that is not fixed in this passage.

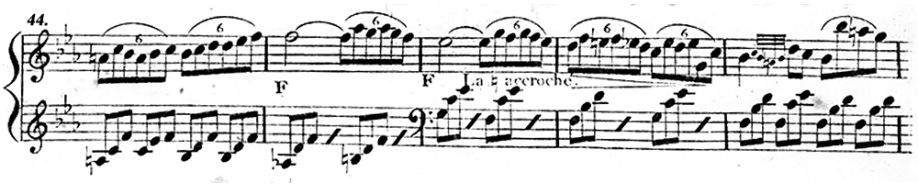

Figure 4.8: D'Alvimare, *Duo a quatre mains pour la harpe*, Op. 19, bars 44-48.

The indication to fix the A pedal in bar 46, shown in fig. 4.8, is to indicate to the 1st harpist to move a pedal for the second player. It is the standing 2nd harpist who actually requires an A♮ in this bar, whereas the sitting 1st harpist only requires an A♮ in bar 48. The pedal is fixed as A♮ is part of the harmony until bar 71, which is a total of 25 bars. A similar harmonic passage is found from bar 27 to bar 45, shown in fig. 4.9, where the piece modulates into B-flat major and an A♮ is required for a total of 18 bars.

There is no instruction in fig. 4.9 to fix a pedal, but it would be normal practice for any harpist to fix the A pedal in bar 27, so that the right foot can press down and release the F pedal in bars 29 and 31 and the E pedal in bars 34 and 36. This is

[33] Marin also wrote a piece for two harpists on one harp: *Duet for two Performers on one harp*, Op. 12. The author only knows of these two pieces written for two harpists playing on one harp.

[34] "This sign is placed to alert to fix the pedals for ease of execution."

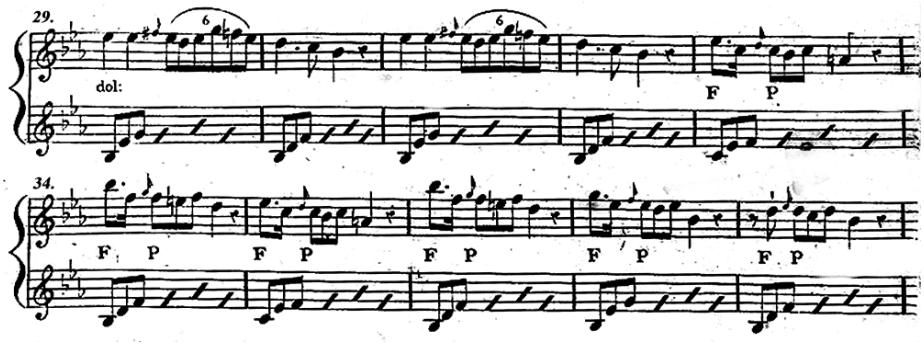

Figure 4.9: D'Alvimare, *Duo a quatre mains pour la harpe*, Op. 19, bars 29-38.

an example of the inconsistency of pedal markings in the printed repertoire. The same foot movements are required in both passages, where the A pedal needs to be fixed, but this is not marked in the score. The E and F are not fixed in this passage, so do not need to be marked.

The final pedal marking in this *Duo* is found in the *Rondo*, page 19, bar 134, fig. 4.10. The indication to press down the E pedal is to indicate to the 1st harpist to move a pedal for the second player. In the previous bar, the 1st harpist requires a C♯ for herself, but this pedal change is not marked. This example shows that most pedal changes were not marked, because the harpist could read the changes from the accidentals notated on the music. Two of the three places where pedal changes are marked in this piece are due to the fact that the 1st harpist moves pedals for the 2nd harpist that are out of context for her. These indications are necessary for the 1st harpist, because the pedal movements in bars 46 and 134 have no musical sense in those precise places for the 1st harpist.

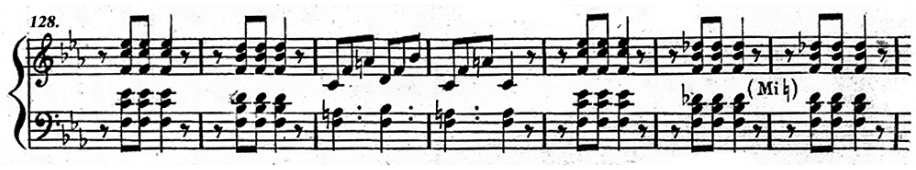

Figure 4.10: D'Alvimare, *Duo a quatre mains pour la harpe*, Op. 19, bars 128-34.

4.3.1 Double- and triple-pedalling

The practice of operating two or more pedals together with one foot is seldom described in the treatises and methods.[35] There are just as few examples, written

[35] See section 3.4.4.

or explained, in musical scores.[36] Five sources have been identified out of over 2,000 pieces already consulted for the harp. There are few sources because multi-pedalling was not necessary in most of the repertoire and because it was probably a technique only used by professionals and virtuoso players like Dorette Spohr, Madame Krumpholtz and d'Alvimare. These performers played their own difficult compositions which would not have been possible for most amateur harpist even to attempt. There also could have been an element of protecting a secret technique, by mystifying both the amateur players who were not aware of these ways of pedalling and the audience who heard rare harmonic modulations from the *virtuoso* harpists.[37]

4.3.1.1 Krumpholtz

Krumpholtz's *Amante abandonnée, Air Parodié sur l'Adagio de Œuvre XIV* for violin, voice, harp or piano and "contrebasse" is an adaption of the first movement of his *6^{me} Sonate*, Op. 14 for solo harp.[38] On page four, the following sentence is found under bar 36:

> "il faut relever la Pédale su Sol a demeure pour pouvoir mettre le pied sure celle du La et du Fa♯ au bien lieu du Sol♭ en même temps ce qui se reïtere dans se morceau tres frequement."[39]

This is the earliest dated written evidence of double-pedalling described in words in a score, shown in fig. 4.11.[40] The G pedal is folded away and then the right foot is placed across the F and A pedals. The F and A pedals are pressed down on the second crochet of bar 36 and then released on the second crochet of bar 38, where both F♮ and A♭ are required. As Krumpholtz writes, the diminished chord on F♯ and hence double-pedalling with the right foot on the F and A pedals can be found in many bars in the piece: bars 40, 42, 48-50, 75, 82 and 86.

The harmony of this piece and the original first movement of the *6^{me} Sonate* are the same, so double-pedalling with the G is pedal folded away, could also be applied to the *Sonate*, even if there are no instructions to do so in any of the publications of this *Sonate*. There are however much fewer *pédale à renforcement* indications[41] in the *Amante abandonée* compared to the *6^{me} Sonate*, perhaps because the left foot is occupied playing Krumpholtz's *Contrebasse* and not with the *pédale à renforcement*.

[36] This is an ongoing research of mine, as the only way to find more sources is to look at every page of music ever written or published for the harp.

[37] See Chapter 6 for contemporary reviews of the performances of Dorette Spohr.

[38] It is the author's opinion that the "contrebasse" in the title is referring to Krumpholtz's invention *Contrebasse ou Clavicorde à marteau*, a pedal board that was placed under the harp and played with the feet. It was one of the inventions that Krumpholtz presented to the *l'Academie Royale de Sciences* in November 1787.

[39] "one should lift up the G Pedal so that remains safe in order to put the foot on the A and the F♯ - which takes the place of the G♭ – together, which is reiterated very often in this piece". Jean-Baptiste Krumpholtz, *L'Amante Abandonée, Air Parodié* (Paris, 1788), 4.

[40] It is the author's opinion that Petrini's *Folies d'Espagne*, see 4.3.1.2, could have been written before Krumpholtz's *Amante abandonée*, as the compositional writing is of an earlier style.

[41] See section 4.5.1.

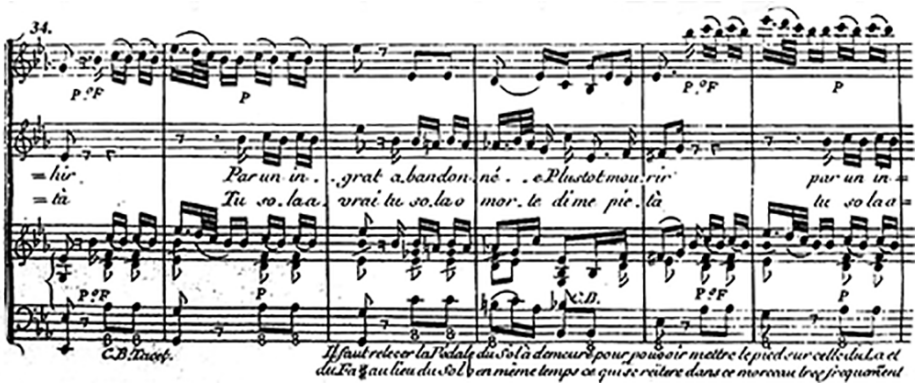

Figure 4.11: Krumpholtz, *Amante abandonnée*, bars 34-39.

4.3.1.2 Petrini

Petrini's *Folies d'Espagne*,[42] Op. 28, no. 11, 6 states:

> "Pour prendre les Pédales du Fa et du La ensembles on baisse en même temps la pédale du Sol".[43]

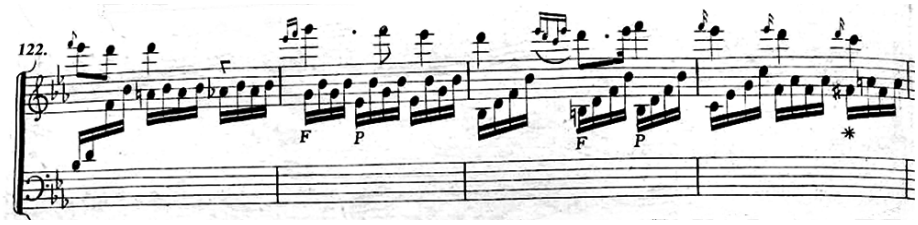

Figure 4.12: Petrini, *Folies d'Espagne*, Op. 28, no. 11, var. 7, bars 122-25.

Figure 4.12 shows bars 122-25. This instruction is marked with an asterisk pointing to bar 125, where the A♭ and F♮ both change to A♮ and F♯ in a semiquaver motion.[44] The two pedals are then released with the F♮ in bar 126. This is not the only occasion

[42] The author performed this work at the Palmensaal, Sanssouci, Potsdam, Germany on June 11, 2016, using double-pedalling techniques as indicated by Petrini, and additional ones by the author. This work has been recorded by the French harpist Sandrine Chaton, *Le Salon de Musique de Marie-Antoinette*, Ambroisie AM179, 2008. Chaton used an Erard harp from 1799, No 7, 41 strings, from the collections of the Musée de la Musique in Paris, pitch: 430 Hz and 1/8 comma temperament. She did not use any double-pedalling techniques in this recording.

[43] Petrini, *Folies d'Espagne*, 6: "to take the F and A pedals together, lower the G pedal at the same time".

[44] I have found no explanation why this instruction is written so late in the music, considering that either double- or triple-pedalling can be used in several passages before bar 125. The piece is a set of variations with a repeating harmonic structure that returns in nearly every variation, so it would make musical sense to use the same foot gesture for harmonically parallel passages.

in this piece where triple-pedalling can be used. The whole piece also works with double-pedalling, as there is no G♯ in the entire piece, so the G pedal could be folded away from the beginning of the piece, as Krumpholtz describes, and then the right foot moves the F and A pedal with ease. Double-pedalling and variations of moving the F and A pedals together and separately (pivoting with the heel and toe), can be found in bars 7-8, 23, 39-41, 107, 141-42 and 173-77. Triple-pedalling, as described by Petrini can only be used in bars 23, 107 and 125. This is due to the fact that if the F, G and A pedals are held down, then the G string will sound as G♯, but G♮ is required in all the bars listed above where double-pedalling is feasible.

4.3.1.3 Naderman

Thêmes favoris de l'Opéra des Bardes by Naderman also includes one single instruction to move two pedals together, namely the G and F pedals in bars 317 and 321, where Naderman writes to "mettez le sol et le fa du même pied."[45] The harmonic progression from bar 317 moves from F major to the augmented sixth chord on F♯ which resolves to a cadence in C major, as shown in fig. 4.13.

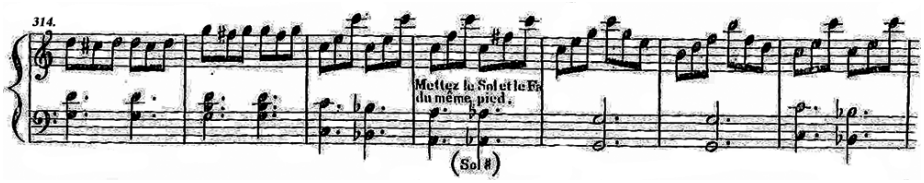

Figure 4.13: Naderman, *Thêmes favoris de l'Opéra des Bardes*, bars 314-20.

This piece is in C major so the B, E and A pedals are fixed in their lower notches from the beginning. This makes double-pedalling across the F and G pedals easy, as the A pedal is on the lower plane, while the F♮ and G♮ are situated on the upper plane. Double-pedalling using the right foot to press down the F and G pedals together is also found on page 14 (bars 419 and 427), and on page 15, bar 486. These bars all contain the same harmonic progression as bars 317-18.

Naderman actively avoids the progression of an F minor chord going directly to the diminished seventh chord on F♯, which is found in the above example of Petrini's *Folies d'Espagne*, Op. 28, no. 11. Double-pedalling with the F and A pedals is never utilised in Naderman's piece, whilst double-pedalling with the F and G pedals is favoured in this work. When Naderman uses the diminished seventh chord on F♯, it is always carefully prepared in order to avoid double-pedalling with the F and A pedals. Figure 4.14 shows the harmonic progression in bars 490-95, which moves from the chord of A-flat major to it's augmented 6^{th} chord (on A with an F♯), followed by the diminished seventh chord on F♯ resolving to G major. This means that the F and A pedal are moved separately, one after another.

[45] Naderman, *Thêmes favoris des Bardes*, 11, bar 317: "put the G and F down with the same foot".

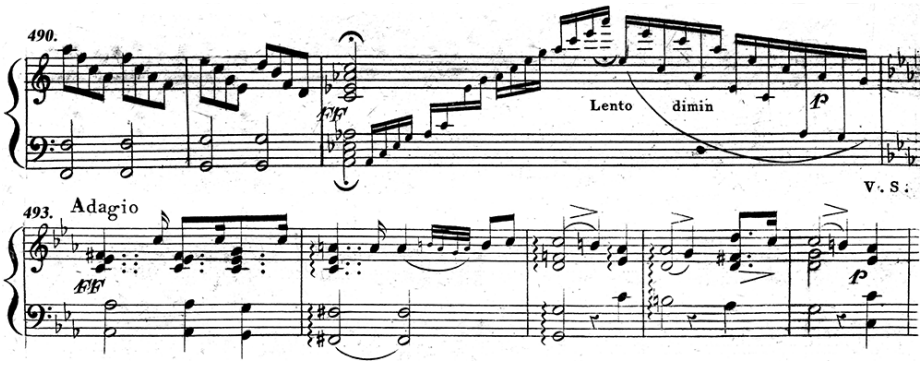

Figure 4.14: Naderman, *Thêmes favoris de l'Opéra des Bardes*, pages 15-16.

4.3.1.4 Dauprat

The *Air Écossais Varié pour Cor et Harpe (ou Piano)*, Op. 22 by Louis-François Dauprat[46] includes the brief instruction on page 3, bar 28, "les 2 Ped:" ("the two pedals"). The *Air Écossais* is most probably conceived for a harp set-up in the "base" key of E-flat major.[47] There is no G♯ in the entire piece, so the G pedal can be folded away, as Krumpholtz recommends, in order to leave the right foot move the F and A pedal together with ease.

Bar 28 contains a G♭ on the second crochet beat of the bar, as shown in fig. 4.15. This is played with its enharmonic alternative, F♯, where the heel or toe press the F pedal down and release on the third crochet, where an F♮ is required. The A and F pedals are then pressed down together for the fourth crochet of bar 28, as A♮ and F♯ are required in the descending *arpeggio*. Both pedals are then released at the beginning of bar 29.

This piece contains several other phrases where double-pedalling with the F and A pedals can be applied, including one just before the written instruction in bar 28. Bar 25 has a G♭ on the first crochet beat of the bar. This is played with its enharmonic alternative, F♯, where either the right heel or toe presses the F pedal down and releases it for the F♮ on the fourth quaver of the bar. On the fourth crochet the F and A pedals are pressed down again. The right heel is released for the last F♮ of the bar and the toe fixes, or simply holds down, the A pedal until the beginning of bar 27.

If the harp is set-up in the "base" key of E-flat major, then it does not include the pitch D♭. This means that all D♭'s in the piece are played with the enharmonic

[46] Louis-François Dauprat (1781-1868), French horn player, harpist, teacher and composer. I would like to thank the Australian harpist Hannah Lane for identifying this source and for sharing it with me. Anneke Scott and Hannah Lane performed this work at the Early Music Studio, Melbourne Australia on May 7, 2016.

[47] It could also be played in the "base" set-up key of A-flat major, but this does not concern the discussion of double-pedalling with the right foot.

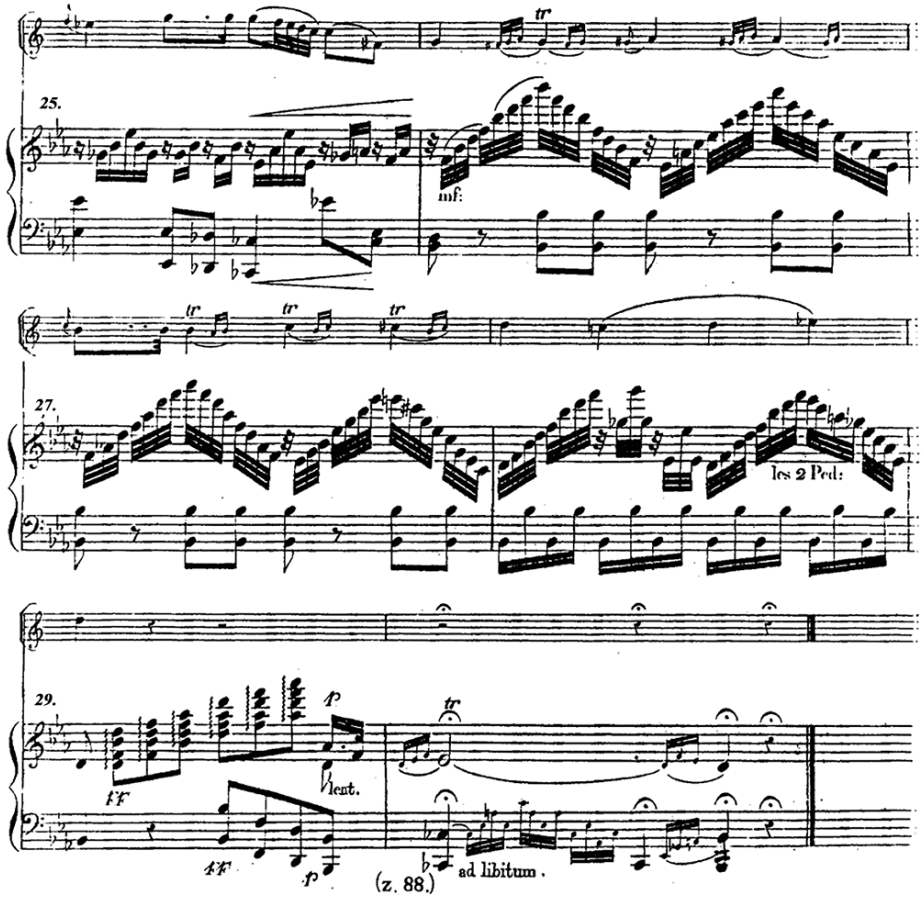

Figure 4.15: Dauprat, *Air Écossais Varié pour Cor et Harpe (ou Piano)*, Op. 22, bars 25-30.

alternative of C♯. Bar 25 then also includes a double-pedal movement for the left foot, where the C and B (producing the notated C♭) pedals are pressed down together on the fourth quaver and released at the beginning of bar 26.

If the harp is set-up in the "base" key of A-flat major, this bar does not contain double-pedalling for the left foot. The D♭ and B♮ (notated C♭) would require two single pedal movements.

Bar 30 has an F♮ in the right hand and an F♯ in the left hand, both on the third beat. This final *cadenza* bar of this *Introduction, Adagio* is in free time, so a musical solution would be to first play the left hand diminished chord with an F♯ and then play the resolution with the F♮ in the right hand just before the B♭ octave in the bass.

Other examples of F and A double-pedalling can be found in bars 69, 74, 90, 92, 103, 104, 124, 134. In bar 137 the F and A pedals are pressed down together and then the F pedal is released on the first beat of bar 138 while the A pedal is held down until the end of the bar.

4.3.1.5 D'Alvimare

The fifth written source of multi-pedalling in a musical score is d'Alvimare's *Sonate III*, Op. 18, in F minor [c. 1802], shown in fig. 4.16. [The author performed this work at the Palmensaal, Sanssouci, Potsdam, Germany on June 11, 2016, using multi-pedalling techniques as indicated by D'Alvimare, and additional ones by the author.] On page 40 of the first movement, *Agitato con moto*, bars 84-95 are written out a second time on the lower part of the page, showing the pedal solutions as an enharmonic *ossia* part.[48] The following instructions are found:

> "(N^{ta}): Pour faciliter l'exécution de ce passage qui au premier apperçu, semble offrir une grande difficulté, nous avons jugé utile d'en tracer le mécanisme d'une manière qui en démontrât la simplicité."

Between the staves in bar 89, this is written:

> "sur le 1re note de cette mesure, il faut accrocher le MI, appuyer les 3 pédales adroite avec le même pied, et en faire de suite autant avec le pied gauche pour les 3 pédales de ce côte."

Between the staves of bar 92, this is written:

> "sur la 1re notte de cette mesure, quittés les 3 pédales adroite ensuite décrochés le Mi."

And finally, in bar 93:

> "sur la 1re notte de cette mesure, quittés les 3 pédales a gauche."[49]

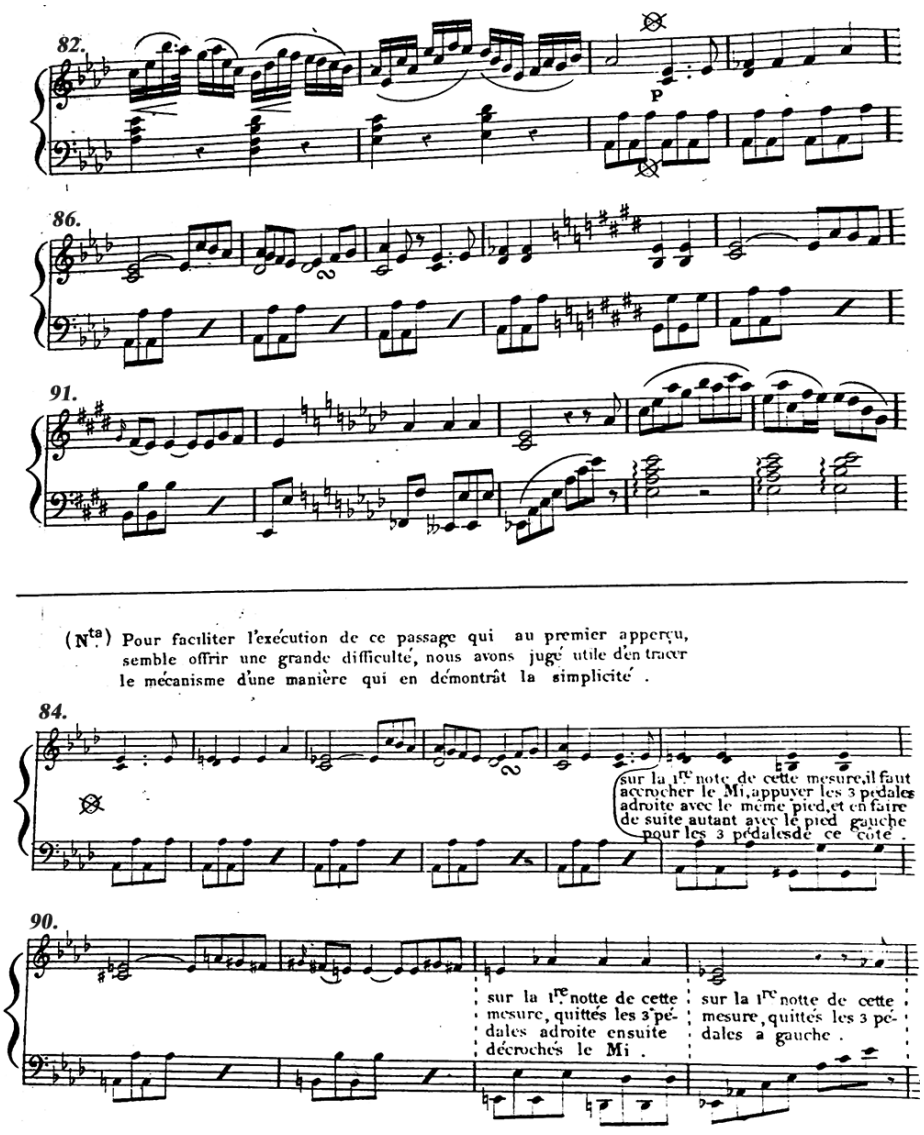

Figure 4.16: D'Alvimare, *Sonate III*, Op. 18, bars 82-95.

This passage is a unique example of modulating from A-flat major to E major in three foot movements by holding down six pedals at once. When the harp is set-up in the "base" key of A-flat major, it can only modulate up to A major when all the pedals are lowered. D'Alvimare modulates to E major but avoids D♯, which is not possible on the harp when set-up in A-flat major. The only possibility to play D♯ would be to use the E string as E♭. This would mean eliminating the tonic of the new key.

Triple-pedalling with the left foot may appear gratuitous in these bars. The C♯ in bar 90 could be played as D♭. The D pedal on the left side of the harp is not required until bar 92. Bars 89-92 could be solved with single-pedalling for the left foot, while the right foot presses down three pedals:
- The left foot presses down the B pedal in bar 89 and releases it at the beginning of bar 92.
- The C♯ in bar 90 is played as D♭.
- The D pedal is pressed down on the second minim of bar 92 and released during bar 93.

However, the sextuple pedal movement is precisely one that embraces the sheer musical gesture of pedalling. For a professional harpist, it was just easier to move as many pedals as possible, rather separate the movements. This leads to absolutely less noise. Secondly the whole harp moves into the new modulation, not just a portion of the harp. Following the harmonic development of a section (bars 88-92), the harpist transforms the harp from A-flat major into E major, in three moves (single-pedalling E, triple-pedalling in the right foot and triple-pedalling in the left). Further research of d'Alvimare's works may reveal that he used this modulation more than once in his compositions.[50]

4.4 Pedal *glissandi*

Section 3.5 reviewed pedal *glissandi* in the treatises and methods for the harp. The technique is a simple one, but it is a musical gesture that can be used to great effect, providing changes in sound and articulation. It is a pedal movement where the feet actually produce the sound or as Krumpholtz describes it, the notes are produced by the "mouvement de la pedal". The feet and their dextrous movements become a third and fourth hand, becoming as important as the hands that pluck the strings.

[48] See section 4.2 for another *ossia* part which shows the pedal solutions: *Fantaisie avec Huit variations…sur un Jeune Troubadour* by d'Alvimare.

[49] Pierre D'Alvimare, *Three Grand Sonatas for the Harp*, op. 18 (London: Birchall, c. 1802), 40. "N.B. The following explanation will greatly facilitate the execution of this passage". Indicated with an arrow: "At the 1st Note of this bar, fasten the E pedal and press down the three right pedals, with the same foot; afterwards press down the three left pedals, in the same manner". "At the 1st Note of this bar, raise the three right pedals, and unfasten the E". "At the 1st Note of this bar, raise the three left pedals". English version taken from the London edition. Barthel transcribed only one of the three pedal instructions written in the score. Barthel, "La harpe.", 224.

[50] An analysis of the complete works by d'Alvimare is beyond the scope of this thesis.

Krumpholtz's *Tempo di Minuetto* (fig. 4.17), which was first published as a separate piece at the end of Krumpholtz's Opp. 14 and 15 is one of the earliest examples of pedal *glissandi* explained in a score.[51] The pedal *glissandi* are marked with a slur sign, to show that the first note is plucked and the second note is produced by pressing down or releasing a pedal. Krumpholtz writes:

> "Ces trois nottes oy ne doivent etre produit que par le mouvement de la pedal pour exprimer les liaisons ainsi que celles ou l'on trouvera pour signe: p.d."[52]

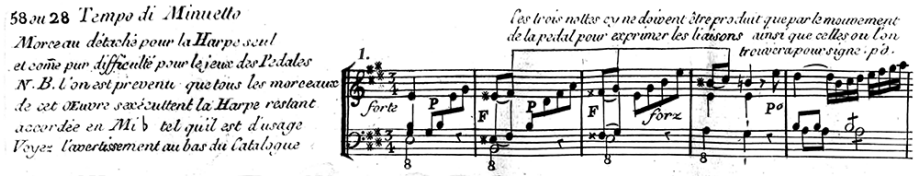

Figure 4.17: Krumpholtz, *Tempo di Minuetto*, bars 1-5.

The E♯ in bar 2 is played with its enharmonic alternative, F♮, and then the F pedal is pressed down to create the sound of F♯ on the second quaver of the bar. The F, G and C pedal are used to make pedal *glissandi* in bars 3, 4, 14-16 and 42-44.

Krumpholtz uses the term *liaisons* (elisions), whereas Petrini refers to pedal *glissandi* as *semi-tons filés*. Petrini's *Sonate pour servir d'Etude des Pédales et semi-tons filés*, Op. 39 includes pedal *glissandi* on the E, F, G, C and B pedals. Marin often uses a long dash above the notes that are plucked and the notes that are produced by moving the pedals. In his *Six Progressive Sonatinas* Op.16 (fig. 4.18), he also writes "par la vibration" above the notes "played" by the pedals.[53]

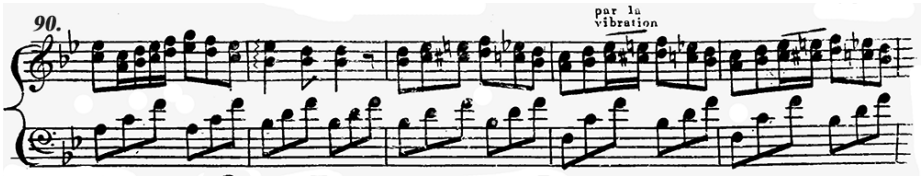

Figure 4.18: Marin *Sonatina III*, Op. 16, *Presto*, bars 92-93.

The term *son filé* (metallic sound) is used by Cousineau to describe pedal *glissandi*.

> "Observation pour les nouvelles harpes a sons files. Toutes les fois que l'on trouvera, dans un morceau une note après la quelle il y aura un ♯

[51] This piece was also published as part of Krumpholtz's *Principes* after 1790, and is discussed in section 3.5.

[52] Jean-Baptiste Krumpholtz, *Collection de Pieces de différens Genres distribuées en Six Sonates*, Op. 13 and 14 (Paris: Naderman, 1787), 58: "These three notes should be produced solely by the movement of the pedal to express the slurs and can be found with the sign: p.d."

[53] I would like to thank Mike Parker for having pointed out this example to me.

> ou un ♭ avec une liaison. C'est en mettant ou ôtant la pédale que l'on fera entendre la note haussée ou baissée d'un demi-ton ce qui produira un son filé."[54]

The word *filé* in this context refers to a metallic sound and when the pedal *glissandi* are used on the bass metal strings of a harp, the pedal movement not only changes the pitch but also produces a metallic sound. In modern harp technique, this is referred to as "pedal slides", as defined by Carlos Salzedo, where the change of pitch and the metallic vibrations of the bass strings are part of the desired effect.[55] The term *son filé* meant different things, according to the author and context.[56]

Table 4.2 contains a selection of pieces where pedal *glissandi* are indicated in the score with words or signs:

Table 4.2: Pieces with pedal *glissandi* marked and explained.

Composer	Title	Pedals used to produce *glissandi*
Krumpholtz	*Tempo di Minuetto*, part of Opp. 13 & 14	F, G, C.
Krumpholtz	*Sonate II*, Op. 13	B, E.
Petrini	*Sonate*, Op. 39	E, F, G, C, B.
D'Alvimare	*Apparition en forme Scène*	B.
D'Alvimare	*Fandango, Air favori tiré du Ballet*, Var. 5	B.
D'Alvimare	*Sonata*, no. 3, Op. 1	E, F, G, B.
Marin	*Petit Airs*, Op. 18, *Air Irlandais*	E, F, G, B, C.
Marin	*Six Petit Airs Variés*, Op. 13, *Air Savoyard*, Var. 1	B, C.
Marin	*Sonatina III*, Op. 16	C, E.
Marin	*Sonatina V*, Op. 16	C.
Marin	*Sonate I*, Op. 15	C, B, G.[57]

[54] *Cinqième pot-pourri*, Paris, Cousineau: "Observation for new harps with *sons files*. Whenever one finds in a piece, a note after which there will be a ♯ or ♭ with a slur. When one fixes or unfixes the pedal, one hears a higher or lower note by a semitone which will produce a son filé." Quoted from Barthel, "La harpe," 388.

[55] Carlos Salzedo (1885-1961), American harpist and composer of French birth; Carlos Salzedo, *L'Etude Moderne de La Harpe/ Modern Study of the Harp* (New York: G. Schirmer, 1921), 15.

[56] Cousineau, *Méthode*, 1803, 63–64. This reference is to the mechanism of the "harpe à chevilles méchanique" and not a playing technique. Genlis, *Nouvelle méthode*, 1802, 14; De Genlis describes the sound of Krumpholtz's *pédale à renforcement* as producing a "son filé". She adds in the second edition of her *Méthode* that Casimir Baecker produces the best "sons filés" using a bow on the harp. Casimir Baecker (1790- after 1863), harpist and composer of German birth. Genlis, *Nouvelle méthode*, n.d., 28. For Casimir Baecker's bowed harp see Robert Adelson, "La harpe virile: Mme de Genlis et la carrière manqué de Casimir Baecker," in *Madame de Genlis: littérature et education*, ed. François Bessire and Martine Reid (Rouen and Le Havre: Publications des Universités de Rouen et du Havre, 2008); Robert Adelson, "The Bowed Harp: Pioneering Use of Extended Techniques in the Late Eighteenth and Early Nineteenth Centuries," in *Unisonus: Musikintrumente Erforschen, Bewahren, Sammeln*, ed. Beatrix Darmstädter and Ina Hoheisel (Vienna: Praesens, 2014): 139-53.

[57] Pasetti, *L'Arpa*, 133, 135. Pasetti writes that this is one of the earliest examples of pedal *glissandi*, attributing a publication date of 1800 to Op. 15. The Krumpholtz examples date from at least thirteen years earlier.

4.5 Additional pedals

This section includes examples of pedal movements that alter the timbre of the sound but not the pitch of a note, which are included as written explanations or symbols in harp pieces.

4.5.1 Krumpholtz's *pédale à renforcement* and *sourdine* pedal

Krumpholtz in collaboration with Naderman invented the *pèdal à reforcement* and the *sourdine* pedal which alter the dynamics and timbre of sound on the harp.[58] He also proposed a series of symbols to represent the possible ways of using these pedals.[59] Besides *6^{me} Sonate*, Op. 14, of which the first movement is found in Krumpholtz's *Principes* but entitled there *Étude pour le renforcement*, there are only four other published works by Krumpholtz with indications in the music to show when and how to use these eighth and ninth pedals.[60] The *pédale à renforcement* and the *sourdine* pedal were made public in 1787 and by this time, Krumpholtz had composed and published most of his works up to Opp. 1-13.[61] The sonatas in Opp. 14, 15 and 17 are in a later free *Fantasia* style. The classical sonata forms of Op. 16 are clearly from an earlier period of his life even though the publication date is around 1789. The style of Op. 17 is similar to Op. 15, but does not include any markings for the *pédale à renforcement* and the *sourdine* pedal, so this could suggest that it pre-dates Op. 14. Krumpholtz's Op. 18 is a re-print of Op. 13. Opp. 14 and 15 are probably the last compositions by Krumpholtz, due to the style of the pieces and the explicit markings for the *pédale à renforcement* and the *sourdine* pedal.

The Naderman edition of Op. 14 includes three folios, which provide technical and practical information about all of Krumpholtz's inventions.[62] The first folio ("Planche 40 ou 10") describes the *sourdine* pedal, the second folio contains technical drawings of how to construct this ninth pedal and the final folio contains drawings of the shutters, the soundbox for the harp, the *Contrebasse ou Clavicorde à marteau*, a list of signs and symbols for the *pédale à renforcement* and an extract from the public presentation of all of these inventions at the *l'Academie Royale de Sciences* in November 1787. Krumpholtz calls the eighth pedal which operates the shutters at the back of the soundbox, a pedal "*à renforcement, à Sons prolongès, à Sons ondés*".

[58] See section 2.2. See Glossary.

[59] See section 3.6.1 for the table of symbols.

[60] These are Op. 14, *Amante Abandonée* and Op. 15.

[61] Krumpholtz's early works, from *Six Sonates*, Op. 2, are densely marked with sudden *forte* and *piano* dynamics, which often occur over only one or two notes, leading me to propose that at least the *pèdal à reforcement*, if not the *sourdine* pedal, or some sort of expressive pedal already existed on Krumpholtz's harp from 1777. Krumpholtz arrived in Paris on February 14, 1777, and could be the date of his first publications. Some publications could date from even earlier. Krumpholtz, *Principes*, 4.

[62] Dugot, "Sonorités inouïes," 108–9. Dugot transcribes the two folios.

6^{me} Sonate, Op. 14 by Krumpholtz

This sonata is in three movements, *Adagio* and *Allegro molto* and *All^{o} Rondeau*. There are five symbols which represent the different ways to use the *pédale à renforcement*. Three of these are included in the music of the *Étude pour le renforcement* (part of Krumpholtz's *Principes*), indicating symbols for pressing and releasing the pedal quickly, fixing the pedal so that the shutters are in a fully open position (the sign "R") and pressing and releasing the pedal successively to produce an undulating sound ("W"). Krumpholtz also uses the normal musical symbols for *crescendo* and *diminuendo* (<, >) to indicate that the pedal should be pressed down gradually and released gradually. These two symbols are not found in any works, so the assumption would be that the normal dynamic markings for *crescendo* and *diminuendo* that are found in the music signify to open and close the shutters gradually.

There are three abbreviations to show how to use Krumpholtz's *sourdine* pedal. The first abbreviation indicates to apply (press down) the *sourdine* (aS.), the second to release it (SS.), and the final abbreviation ($.) indicates how to apply the *sourdine* and release it quickly so that it creates an echo sound produced solely from the vibrations of a previous chord. Table 4.3 lists all the pedal symbols found in Krumpholtz's *6^{me} Sonate*, Op. 14.

Table 4.3: Krumpholtz, *6^{me} Sonate*, Op. 14: symbols found in music for the *pédale à renforcement* and the *sourdine* pedal.

Effects	*Adagio*	*Allegro molto*	*All^{o} Rondeau*
Renforcement (<)	3,7,22,47, 57,59,61, 81	12,17,48,62.	
Tenir ouvertes (R)	23,57,59, 62, 82	1,12,18,49,63	32.
Refermer par dégrés (>)	4,8,23,48, 58,60,62, 82	13,23,51,67	36.
Renforcer, diminuer (V)	1-2, 5-6, 9-19, 25-8, 34-6, 48-9, 51-6, 63-7, 69-76, 78-79, 82-83, 85	41-2,45-6,55-6, 59-60	13-14, 29-30, 39-41, 43-45, 47-49, 51.
Onduler le son (W)	26,28,30-2, 34-6, 38,40,42, 44-7, 50,68,70, 72,74-81,86		
Sourdine on (aS.)		7,23,53,57	1-16.
Sourdine off (SS.)		8,31,55,59	17.

Effects	*Adagio*	*Allegro molto*	*All^{o} Rondeau*
Sourdine as echo effect	24, 50, 68	23.	

When the *pédale à renforcement* and the *sourdine* pedal are used, the left foot is unable to move the D, C and B pedals at the same time. In fact the first movement, *Adagio*, (fig. 4.19.), hardly uses the left foot, whereas the right foot moves the F and A pedals nine times together.[63]

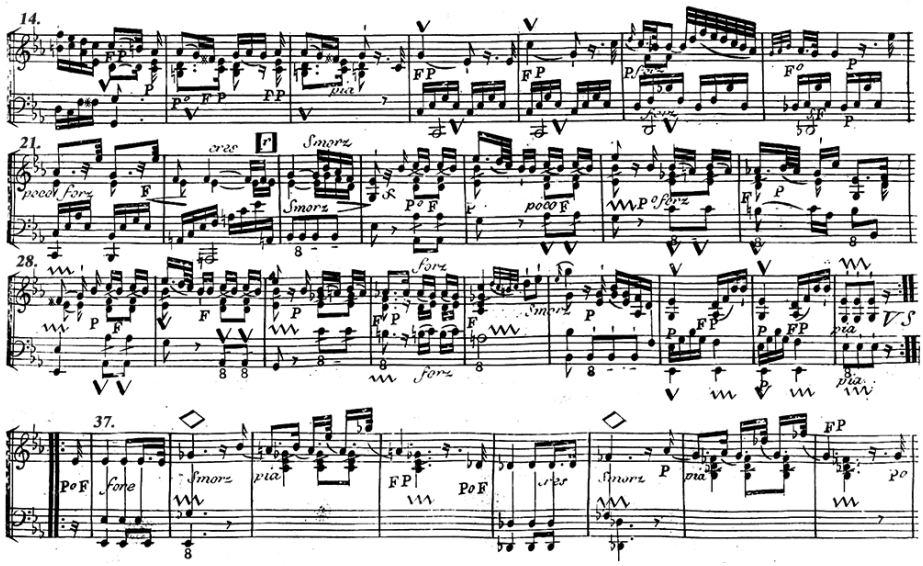

Figure 4.19: Krumpholtz, *6^{me} Sonate*, Op. 14, bars 14-44.

The *Adagio* is in C minor and the B pedal is fixed from the beginning of the movement. It is released at the beginning of bar 19 and then the *pédale à renforcement* is immediately pressed and released afterwards. Bar 20 contains a D♭, which is played as C♯ and is then released in bar 21. Neither of these bars contain *pédale à renforcement* signs, as the left foot is occupied in moving the B and C pedals. The *pédale à renforcement* signs in bars 27 and 31 may appear impossible to play, as both feet are moving other pedals: the right foot is releasing the F and A pedals and the left foot is pressing the B pedal down. The motion of undulating in these bars is done with the right foot on the *pédale à renforcement* slightly after the beat, when the right foot has released the F and A pedals.

The bars 38 and 42 both contain a diamond-shaped sign (<>) over the first beat and the undulating sign (“W”) above the bass clef. In the version of this movement in Krumpholtz’s *Principes*, this diamond-shaped sign is not present. On

[63] The harmony of this music is analysed in section 4.3.1.

the other hand, a third version of this music, namely the *Amante abandonnée, Air Parodié sur l'Adagio de Œuvre XIV*, contains the diamond-shaped signs but not the undulating signs. One of these signs is superfluous, if the diamond-shaped sign (<>) signifies a rapid *crescendo* and *diminuendo*. It is impossible to produce two effects simultaneously with one *pédale à renforcement*. It is my opinion that these signs double up on each other and the performer today implements one of these effects, probably the undulating effect would be most effective.

The other two movements contain far fewer *pédale à renforcement* movements, but the *sourdine* pedal is used throughout to create a muted and an echo effect. The pedal movements for these effects never conflict with the pedal movements which alter the resonating string length.

***Amante abandonnée* by Krumpholtz**

The *Amante abandonnée* is the second source with *pédale à renforcement* markings in Krumpholtz's published works. This version only contains the two diamond signs and no other *pédale à renforcement* markings. This could be due to the fact that the left foot is operating Krumpholtz's *Contrebasse ou Clavicorde à marteau*, so the *pédale à renforcement* and the *sourdine* pedal are defunct in this version.[64]

***Deux Sonates*, Op. 15 by Krumpholtz**

The final collection by Krumpholtz with eight and ninth pedal markings is the two sonatas of Op. 15. The signs are given at the top of page 2 and each sign for the *pédale à renforcement* is employed. There are no markings for the *sourdine* pedal. No other composer to my knowledge uses Krumpholtz's *sourdine* markings in their music besides the short pieces in the *Méthode* by Madame Merelle.[65]

***Deux Simphonies*, Op. 11 by Krumpholtz**

The Naderman edition of Op. 11 advertises the *sourdine* pedal on the frontispiece of Krumpholtz's *Deux Simphonies*, stating:

> "Ces Symphonies sone Composées tant pour les Harpes à 7 Pédales connues jusqu'à ce jour, que pour celles à Sourdines, nouvelle invention du S$^{r.}$ Naderman."[66]

No symbols are used, but from the first page, "*con Sordina*" and "*Senza Sordina*" are found in bars 37 and 44.[67] Indications for the *sourdine* pedal are not included in the Cousineau, Momigny or Chappell editions of Op. 11.

D'Alvimare, Bochsa and Marin

[64] See Chapter 5.

[65] Merelle, *New and Complete Instructions*, 23–48.

[66] "These symphonies are made for both the harp with 7 Pedals known to date, and for those with mutes, a new invention of S $^{r.}$ Naderman."

[67] See fig. 4.4. for bar 44 "without mute". Krumpholtz, *Principes*, 19. The ornament in bar 38 is not included in the discussion of ornaments in Krumpholtz's *Principes*, but is similar to the practical solution for his "Brisés en montant".

In several pieces by d'Alvimare, signs for the *pédale à renforcement* are found at the beginning of the piece. He calls it the *soupape* pedal, as do Bochsa and Casimir Baecker. D'Alvimare employs five different signs, but the effects are the same as those by Krumpholtz. The undulating effect is called "agiter", to agitate. Two movements of the *pédale à renforcement*, opening and closing (without specifying how quick or slow to move the pedal), and the undulating effect were used by several composers. Bochsa questioned the usefulness of Krumpholtz's *pédale à renforcement*, but still the indications for the *soupape* pedal are included in at least three of his published works.[68] The indications are not necessarily original markings by Bochsa, as he disapproved of the *soupape* pedal. They could have been added by Bochsa's publisher Duhan.[69]

Table 4.4 includes some examples of composers, besides Krumpholtz, who included markings for the *pédale à renforcement*.

Table 4.4: Compositions which include markings for the *soupape* pedal, not by Krumpholtz.

COMPOSER	TITLE
D'Alvimare	*Fantaisie avec Huit variations pour la Harpe sur un Jeune Troubadour*.
D'Alvimare	*Thême avec huit variations et un final Morceau favori*.
D'Alvimare	*Fantasie sur la Romance Charmant Ruisseau…de Domnich avec six variations*.
Bochsa	*Les Adieux, Fantaisie Guerrière sur l'air favori*.
Bochsa	*Gavotte d'armide variée…avec une Introduction ou Prélude*.
Bochsa	*Fantaisie sur plusiers Thêmes suivie de variations sur le joli Duo*.
Marin	*Sonatina I*, Op. 16.

[68] See section 3.6.1.

[69] Madame Duhan, (active 1780-1823), Parisian music publisher.

Casimir Baecker

Casimir Baecker employed his own two symbols for the pedal action of the *soupape*. These symbols are found in his *Rondeau…* which are:[70]

> "Signes pour ouvrir et fermer la soupape. pour ouvrir (Θ). pour fermer (Ж)."

The *Rondeau*, (fig. 4.20), begins with the *soupape* pedal in the upper position, where the shutters are closed. The pedal is released after playing the *arpeggio* on the second minim of bar 1 and then it is printed to release the pedal on the second crochet of bar 2. This is probably a printing error, as it would make more sense to release the *soupape* on the first crochet of bar 2, where the dynamic is *piano*. The *soupape* is written in the correct place in the bar in bars 1, 3-8. When the *arpeggio* is played, the opening of the *soupape* gives the effect of a *crescendo* before the natural *diminuendo* of the vibrating strings on the harp. The dynamic markings, *forte* and *piano*, do not directly correspond to an opening and closing of the *soupape* pedal, which either points to printing mistakes or that this pedal was utilised for a change in timbre, rather a specific change in volume on the harp. See fig. 4.21.[71]

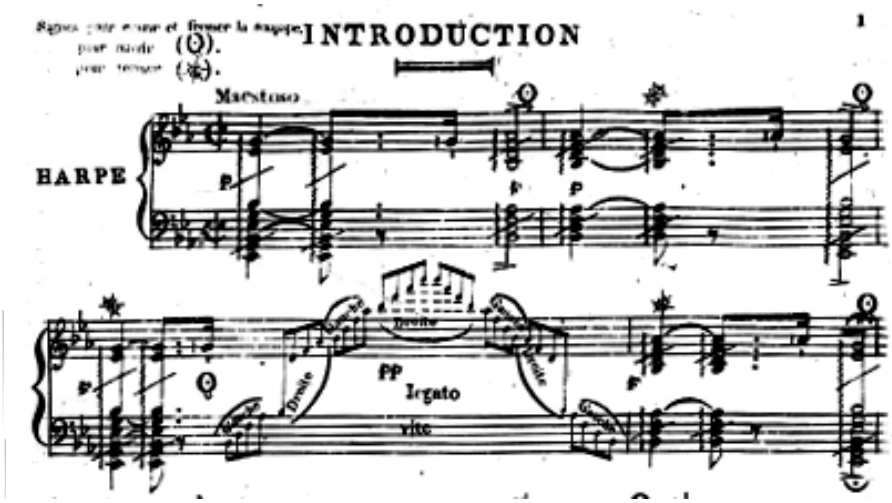

Figure 4.20: Baecker, *Rondeau*, 1

Alternatively, the *soupape* is used to change timbre on the harp. The *Rondo* (page 4) begins with the *soupape* closed in the upper position. When the theme is repeated for the second time with a lower bass accompaniment, the *soupape* is opened, but no dynamic marking is added to the score.

[70] Casimir Baecker, *Rondeau pour la Harpe*, op. 2 (Paris, 1807). The final *cadenza* of this work (pages 17-18), is also published in Genlis, *Nouvelle méthode*, 1802, 34: "Cadence de Casimir".

[71] See section 3.6.1 and Beat Wolf's comments on the *soupape* pedal.

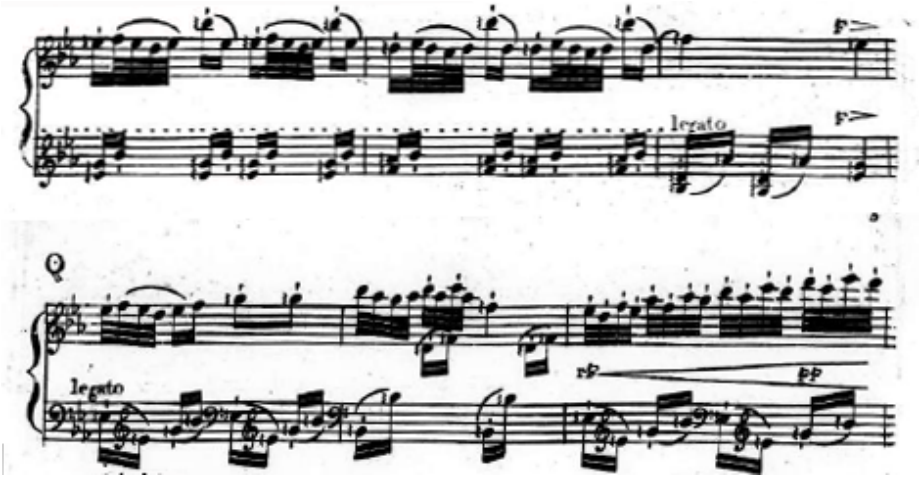

Figure 4.21: Baecker, *Rondeau*, 1

4.5.2 Cousineau's *sourdine/echo* pedal

At least two pieces by Cousineau contain markings for Cousineau's *sourdine* pedal.[72] The first piece is *Recueil d'Airs variée, contenant un Air de la Caravane*. In the fourth variation of *Charmante Gabrielle*, Cousineau describes the pedal action for the echo effect:

> "Pour chaque accord on appuie le pied sur la pédale de l'echo, et on relève le pied après l'accord ce quie répète le son sans l'articuler avec les doigts."[73]

The echo effect means that each chord will sound twice, once plucked and the second time an echo sound is produced by the releasing movement of the echo pedal.

Another piece by Cousineau which utilises the echo pedal is his *Septième Pot-pourri* (fig. 4.22).[74] Bar 65 is marked to play "*avec sourdine*", so the *sourdine* pedal is pressed down here. Each crochet chord in bar 67 is marked with an echo indication: the pedal is released after the chord has been played, producing a repeated echo sound from the vibrating strings. The section continues like this until bar 89. It is not clear from the score if the other bars in this passage should be played with the *sourdine* pedal pressed down or off. From a musical perspective, the whole passage is probably intended to be played with the *sourdine* pedal pressed down, producing an overall *piano* dynamic. This passage is a repeat of the previous twenty-four bars and the use of the *sourdine/echo* pedal for this passage would add variety to the

[72] See section 3.6.2. for an explanation of Cousineau's *sourdine* pedal.

[73] "For each chord one presses the foot on the echo pedal, and releases the foot after the chord which can be repeated without articulating with the fingers".

[74] Also listed in Barthel, "La harpe," 390–91.

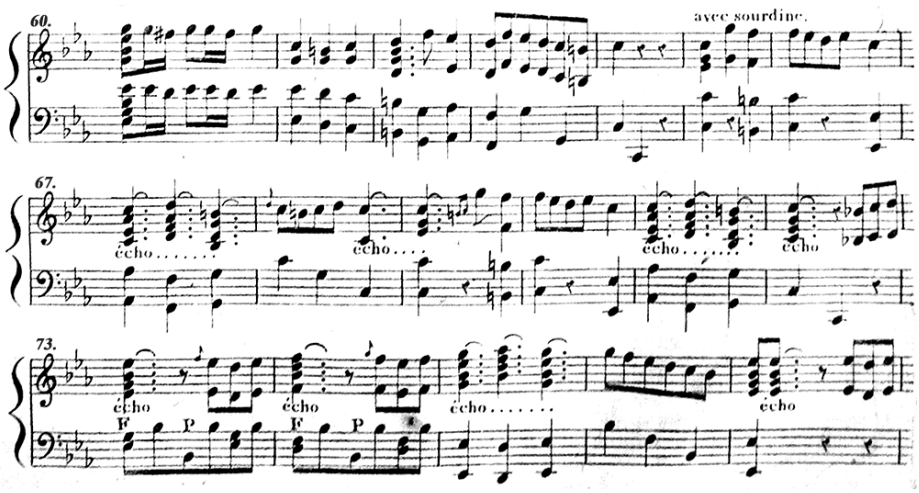

Figure 4.22: Cousineau, *Septième Pot-pourri*, bars 60-76.

repeated section. The Cousineau *sourdine* pedal can be used in two situations, either it is pressed down to produce a softer, muted sound, or it can be used to produce an echo effect as described above.

Conclusions

This chapter shows examples of how to use up to nine pedals on the harp in musical examples, where the composer or publisher included a written explanation or symbols in order to show the harpist what to do. Each pedal move, from enharmonics, single-, double-pedalling, to multi-pedalling involving up to six pedals at a time, can all be found in the harp repertoire. These examples can be reproduced on a harp by following the instructions of the eighteenth- and nineteenth-century composers and their publications.