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

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Introduction

Prologue

The aim of this thesis is to explore how to move the pedals on harps with a single-action pedal mechanism from 1720 to 1840, taking into consideration the repertoire of the same time-period.² It is problematic to define a topic with a beginning and end date. For the purposes of this study, the date 1720 has been chosen as it refers to the earliest surviving harp with pedals, which is housed at the Kunsthistorisches Museum in Vienna.³ The last harp with a single-action pedal mechanism was built by the Erard firm in Paris in 1839.⁴ Other models of pedal harps, which have a single-action pedal mechanism but were invented after 1840, will not be studied here. This includes Tyrolean “Bradl” harps, late nineteenth-century American single-action pedal harps and the twentieth-century “Dilling Model” harps. Each of these pedal harps have their own instrument-specific repertoire which surpasses the time-frame of this thesis.

²This is the first comprehensive study on harp pedalling technique. <http://www.ams-net.org/ddm>.

³“Kunsthistorisches Museum Wien-Bilddatenbank,” accessed February 6, 2016, <http://bilddatenbank.khm.at/>. This harp is not part of the online databank of instruments of the museum. It is also not part of the online database: “International Directory of Musical Instrument Collections,” accessed February 6, 2016, <http://network.icom.museum/cimcim/resources/international-directory-of-musical-instrument-collections/>. A detailed description can be found in Dagmar Droysen-Reber, *Harfen des Berliner Musikinstrumenten-Museums: Bestandskatalog* (Berlin, 1999), 51-52. The harp is identified as SAM 565. See Abbreviations. A handwritten label marked “Hochbrucker/Donauwörth 1720” accompanies this harp, attributing it to Jacob Hochbrucker. Ludwig Wolf, “Johann Baptist Hochbrucker (1732-1812) und die Harfenmode in Paris,” *Musik in Bayern* 31, no. 2 (1985): 95-114. Jacob Hochbrucker (1673-1763), harp maker from Donauwörth, Germany.

⁴Erard firm, piano and harp manufactures, Sébastien Erard (1752-1831). Robert Adelson et al., eds., *The History of the Erard Piano and Harp in Letters and Documents, 1785-1959*, vol. 2 (Cambridge: Cambridge University Press, 2015), 1. Harp no. 1379, listed in Erard’s harp ledgers as a harp with a “simple mouvement” was manufactured in January 1839 and later sold on October 11, 1839, to Mr Maingoël of Rennes. *Erard: Registre de fabrication, 1835-1886*, http://archivesmusee.citedelamusique.fr/exploitation/Infodoc/digitalcollections/viewerpopup.aspx?seid=E_2009_5_46_P0001, Harpes: n°de série 1246 à 2069-N°inv. E.2009.5.46, élément 14. All harps listed in Erard’s Parisian ledger books which are built after 1839 are double-action pedal harps, as the description “simple movement” is never used again.

Terminology

This thesis discusses a harp with a single row of strings with seven pedals which correspond to the seven notes of the diatonic scale and sometimes one or two additional effect pedals. Today this type of harp is commonly called a single-action pedal harp as each pedal, when moved, alters the vibrating length of one string in every octave by one semitone. The pedals are found at the base of the harp and are operated by the feet producing seven additional pitches to the seven pitches of the “open” strings.⁵ Therefore, each string can produce up to two pitches.

The invention of the first harp with pedals is usually attributed to Jacob Hochbrucker in Germany in 1697, as stated by his son Johann Baptist Hochbrucker⁶ in the preface to his *Recueil d’Ariettes*:

“Ayant souvent entendu à Paris quelqu’un se flatter d’être l’inventeur de la harpe pédale, je crois devoir ici, pour un peu humilier son amour propre, avan-cer, qu’ayant été inconnue, jusqu’en 1697. elle fut dans ce tems là inventée par mon pere né en 1662. et mort en 1763.”⁷

The famous *Encyclopédie* of Denis Diderot entitles a technical drawing of a harp with a single-action pedal mechanism as an *harpe organisée* in his *Recueil de Planches* of 1767.⁸ This drawing, and another three technical drawings of the pedal mechanism, complement the article “Harpe” written by Prince Casimir Michael Oginski⁹ in Diderot’s *Encyclopédie*, volume eight of 1765.¹⁰ Dagmar Droysen-Reber suggests that the article and drawings could already have been prepared by 1763. The author has identified that the text in Oginski’s article and the introduction to Philippe-Jacques Meyer’s *Méthode* of 1763 is in places identical.¹¹ It is the author’s opinion that both texts could date from as early as 1760, when Diderot first heard a pedal harp.¹² The harp article states that the harp is “organisée” when a harp

⁵See Glossary.

⁶Johann Baptist Hochbrucker (1732-1812), harpist and composer.

⁷Johann Baptist Hochbrucker, *Recueil d’Ariettes choisies avec des accompagnements de harpe doigtés et une petite gamme*, op. 2 (Paris, [1761]): “Having often heard in Paris of someone boasting of being the inventor of the pedal harp, I feel I must here, to subdue a little his ego, that it had been unknown until 1697. It was, in that time, invented by my father born in 1662 and died in 1763.”

⁸Denis Diderot and Jean Le Rond d’Alembert, *Recueil de planches, sur les sciences, les arts liberaux, et les arts mécaniques, avec leur explication*, Tome 22, Quatrième livraison, 248 Planches (Paris: Briasson, 1767), LUTHERIE, Seconde suite, Planche XIX.

⁹Prince Casimir Michael Oginski (1728-1800 or 1731-1803), nobleman and harpist.

¹⁰“HARPE,” *Encyclopédie ou Dictionnaire raisonné des Sciences, des Arts et des Métiers* (Paris: Briasson, 1765), 45-46. See Appendix I, section I.4 for article and translation, Plates and text.

¹¹Philippe-Jacques Meyer, *Essai sur la vraie manière de jouer de La Harpe avec une Méthode de L’accorder* (Paris, 1763), 2-4. Philippe-Jacques Meyer (1737-1819), harpist and composer.

¹²Droysen-Reber, *Harfen*, 59; Denis Diderot, *Lettres à Sophie Volland* (Paris: Garnier, 1875), 438-39. Letter of August 2, 1760. “...j’avais été invité, la semaine passée, par le comte Oginski à l’entendre jouer de la harpe; ce qui se fit hier en secret; nous n’étions que Mme d’Épinay, le comte et moi. Je ne connaissais point cet instrument. C’est un des premiers que les hommes ont dû inventer. Rien n’est plus simple que des cordes tendues entre trois morceaux de bois. Le comte enjoué d’une légèreté étonnante. Il ne laisse pas imaginer, par l’extrême facilité qu’il a, qu’il exécute les morceaux les plus difficiles. La harpe me plaît; elle est harmonieuse, forte, gaie dans les dessus, triste et mélancolique dans le bas,

has pedals and when the column of the harp is hollow. A hollow column contains seven pedal rods¹³ which connect the pedals to the mechanism that shortens the vibrating length of each string.

“Cet instrument (Pl. de Luth) est composé de trois parties principales: 1°. d’une caisse A, faite de bois léger et sonore; 2°. d’un montant B, solide quand la harpe est simple, mais creux quand la harpe est organisée... On a remédié à cette imperfection, en ajoutant des pédales à cet instrument; et on dit alors qu’il est organisé.”¹⁴

Diderot defines the word *Organiser* in volume eleven of the *Encyclopédie*, also published in 1765, as:

“ORGANISER, v. act. terme d’Organiste, c’est unir une petite orgue à un clavecin, ou à quelque autre instrument semblable, à une épinette, par exemple, en sorte qu’en abaissant les touches de cet instrument, on fasse jouer l’orgue en même-temps.”¹⁵

The instrument described in the “Organiser” article is the *clavecin organisé* or claviorgan, a keyboard instrument which combines a harpsichord and an organ: an instrument, with both strings and pipes, which has pedals at the base of the instrument to operate the bellows of the organ.¹⁶ *Organiser* was used as a musical term as early as 1694, as in the first edition of *Le Dictionnaire de l’Académie Française*:¹⁷

noble partout, du moins sous les doigts du comte, mais moins pathétique que la mandore; c’est peut-être que le comte Oginski, jeune, badin, folâtre, n’a pas encore le goût des chants tendres et touchants, et malheureusement ce sont les seuls qui m’émeuvent, m’agitent et m’enlèvent à moi-même. Le comte vint à sept heures. Il joua pour nous trois jusqu’à dix.” “...I was invited the week before by the Count Oginski to hear him play the harp; what was done yesterday in secret; we were only Madame d’Épinay, the Count and me. I did not know this instrument. It must have been the first [instrument] that men have invented. Nothing is simpler than strings stretched between three pieces of wood. The Count played with astonishing facility. One cannot imagine, by the extreme ease he demonstrates, that he executes the most difficult pieces. The harp pleases me; it is harmonious, strong, cheerful in top range, sad and melancholy at the bottom, noble everywhere, at least under the fingers of the Count, but less poignant than the mandolin; it may be that the count Oginski, young, playful, high-spirited, does not have the taste of tender and touching songs, and unfortunately they are the only that move me, excite and rouse me. The Count came at seven. He played for us three until ten.”

¹³See Glossary.

¹⁴“HARPE,” 45–46: “This instrument (Pl. de Lute) is composed of three main parts: 1. a box A, made of light and sonorous wood; 2°. a pillar B, solid when the harp is simple but hollow when the harp is like an organ...We remedied this shortcoming by adding pedals to the instrument; and then said that it is mechanised.” The word “simple” in this context refers to any harp without pedals.

¹⁵“ORGANISER,” *Encyclopédie ou Dictionnaire raisonné des Sciences, des Arts et des Métiers* (Paris: Briasson, 1765), 629: “A term used by organists, it unites a little organ to a harpsichord, or to some other similar instrument, to a spinet, for example, so that when the keys of this instrument are lowered, one can play the organ at the same time.”

¹⁶For a musical history of the term see Donald Howard Boalch and Peter Williams, “Claviorgan,” *Grove Music Online* (Oxford University Press), accessed September 17, 2015, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/05920>.

¹⁷*Le Dictionnaire de l’Académie Française* (Paris: Coignard, 1694), 159: “ORGANISE, v. at. Join a small organ to another musical instrument, harpsichord, so that when lowering the keys of this instrument one can play the organ at the same time. *Organise a harpsichord, a spinet.*”

“ORGANISER, v. a. Joindre une petite orgue à un autre instrument de musique, clavecin, en sorte qu’en abaissant les touches de cet instrument on fasse jouer l’orgue en même-temps. *Organiser un clavessin, une espinette.*”

The word *organisée*, when used to describe a harp with pedals, probably originates from this earlier existing keyboard instrument, the *clavecin organisé*. Other eighteenth-century instruments that include the word *organisé* in their name are the *Vielle à roue organisée*, a hurdy-gurdy combined with one or two ranks of organ pipes,¹⁸ and the *fortepiano organisé*, a piano combined with an organ.¹⁹ The *harpe organisée* was naturally not a combination instrument, like the above-mentioned instruments. However, seeing the pedals on the new type of harp reminded Diderot and his contemporaries of an organ.

Encyclopaedias, harp treatises and journals across Europe in the eighteenth century described the new harps in several ways. These included *Bret-Harffe*,²⁰ *Tret-Harffe*²¹ and *Pedal-Harfe* in German, *harpe organisée*²² and *harpe à pédales*²³ in French and “pedal harp” in English. These terms highlighted the new features, namely, the pedals and the use of the feet while playing. In England, the first pedal harps was also referred to as “German-” or “French Pedal Harps”²⁴ as it was considered an imported and exotic foreign instrument and was therefore different from the locally-known Welsh triple-harps and Irish or Scottish medieval wire-strung harps.²⁵

Between 1800 and 1810, Erard patented the double-action pedal harp in Paris and in London.²⁶ This harp has seven pedals with a double-action pedal mechanism which alters the vibrating length of each string by **two** semitones.²⁷ Harps with

¹⁸“Vielle à roue organisée,” accessed March 19, 2016, <http://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0161775/vielle-a-roue-organisee>; Howard Mayer Brown, “Lira Organizzata,” *Grove Music Online*, accessed September 27, 2015, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/16746>.

¹⁹Claude Balbastre (1724-1799), French organist and composer is accredited with the invention of the *fortepiano organisé*. Alan Curtis, Mary Cyr, and Bruce Gustafson, “Balbastre, Claude,” *Grove Music Online*, n.d., <http://www.oxfordmusiconline.com/subscriber/article/grove/music/01843>; “Piano organisé,” accessed March 19, 2016, <http://collectionsdumusee.philharmoniedeparis.fr/doc/MUSEE/0158183/piano-organise>; Johann Sebastian Bach et al., “Recueil de pièces de clavecin et de forte piano organisé par différens auteurs,” accessed June 17, 2016, <http://catalogue.bnf.fr/ark:/12148/cb433602513>.

²⁰Johann Gottfried Walther, *Musikalisches Lexikon*, 1732, 316.

²¹“Wien,” *Neue Zeitungen von gelehrten Sachen*, December 8, 1729, 892. *Tret-Harffe*, as found in this newspaper article is misspelt as *Tret-harffe* in Wolf, “Hochbrucker”: 95, and continues to be misquoted today. See “Konferenz,” *Tage Alter Musik Am Bodensee*, accessed March 22, 2016, <http://alte-musik-am-bodensee.com/konferenz-2/>.

²²“HARPE,” 45–46.

²³Philippe-Jacques Meyer, *Nouvelle méthode pour apprendre à jouer de la Harpe avec la manière de l’accorder*, op. 9 (Paris: Bouin, 1774), 2.

²⁴“The European Magazine and London Review,” 1784, 364; Giacomo Gotifredo Ferrari, *Three Grand Sonatas for the French Pedal Harpe, with an Accompaniment of a Violin & Violoncello*, op. 18 (London: Birchall, 1795).

²⁵See Chapter 1 for survey of historical harps.

²⁶For an in-depth review of Erard’s inventions, patents and harp manufacturing see Adelson et al., *History of the Erard Piano and Harp*, 2:22–32.

²⁷See Chapter 8.

single-action pedal mechanisms continued to be manufactured in the 1840s, so the two types of pedals harps co-existed.²⁸ The new type of harp was referred to as *Erard's pedal harp*, *harpe à double mouvement* or double-action pedal harp while the older pedal harp was referred to as *harpe à simple mouvement*, *harpe ordinaire*, *harpe simple*,²⁹ "single action harp,"³⁰ or "common harp."³¹ As the double-action pedal harp became the standardised pedal harp, the older terms fell out of use.

After the invention of the double-action pedal harp by Erard, the older pedal harps were criticised due to the "imperfection of the instrument as to modulation":³²

"The double action harp has very great advantages over the single,...instead of thirteen scales (eight major and five minor,) practicable upon the single action harp, the double action possesses *twenty-seven complete, (fifteen major and twelve minor,)*... The double action harp ... possesses *twenty one sounds* in the octave, instead of *twelve* as keyed instruments."³³

In this statement the double-action pedal harp, which can play in twenty-seven keys and has twenty-one available pitches in an octave, is compared to the thirteen keys possible on the earlier pedal harp and the twelve pitches on the piano. The fourteen possible pitches on the older pedal harp are not even mentioned. However, where a keyboard instrument can theoretically play all twelve notes together, both pedals harps still have only seven strings to the octave, so no more than seven notes can be plucked at the same time.³⁴ Even with all of Erard's mechanical modifications and inventions, the new instrument was not fully exploited in compositions for during the successive decades. The harp repertoire did not advance with the invention of

²⁸The last main makers of harps with a single-action pedal mechanism in Paris include the Naderman family: Jean-Henri (1734-1799), (Jean)-François-Joseph (1781-1835), Henri-Pascal (1782-1846) and the Chaillot family: Antoine (d. circa 1816), Pierre (d.1839), Etienne/Stephan. The *Annuaire général du commerce, de l'industrie, de la magistrature et de l'administration* (Paris: Didot, 1847), 471, lists Etienne Chaillot as a harp builder. Other builders listed are Pierre Erard (1794-1855), who was making solely double-action pedal harps by this time. The Pleyel company is listed but they only constructed double-action pedal harps. Louis Joseph Domeny, Gambaro and Poirot are also listed. Domeny made both types of pedal harps. See Constant Pierre, *Les facteurs d'instruments de musique: les luthiers et la facture instrumentale* (E. Sagot, 1893), 214.

²⁹The term *harpe simple* has been used in several different situations to mean different types of harps. It was used in the eighteenth century to refer to any sort of harp without a pedal mechanism. In the seventeenth century the term "Gemeine Einfacheharff" (fig. 1.2) referred to the Renaissance single-rowed harp, while "Grossdoppel Harffe" referred to some sort of chromatic multi-rowed Baroque harp. See Michael Praetorius, *Syntagma Musicum, tomus secundus: De organographia*, 2nd ed. (Wolfenbüttel, 1619), 56. Michael Praetorius (1571-1621), German composer, theorist and organist. *Harpe simple* is an example of a term that has changed its meaning throughout the course of history but invariably refers to an older outmoded type of harp.

³⁰Pierre Erard, *The Harp in Its Present Improved State Compared with the Original Pedal Harp* (London, 1821), 5.

³¹Nicolas-Charles Bochsa, *A New and Improved Method of Instruction for the Harp* (London: Chappell & Co., 1819), iii.

³²Erard, *The Harp*, 7.

³³*Ibid.*, 15.

³⁴The only harp that can theoretically play twelve notes together is the Spanish Baroque *arpa de dos ordenes*, if we had twelve fingers at our disposition.

a new type of harp and most harp pieces written up to 1840 are still playable on a harp with a single-action pedal mechanism.³⁵ By 1840, double-action pedal harps are clearly the benchmark pedal harps.³⁶

Re-introducing the term *harpe organisée*

Today a harp with a single-action pedal mechanism is referred to as a *harpe à simple mouvement* in French, *Einfachpedalharfe* in German, single-action pedal harp³⁷ in English, “arpa a movimento semplice” in Italian and “arpa de pedal de movimiento simple” in Spanish. These terms post-date the invention of the *harpe organisée* and define it in terms of the later double-action pedal harp.

The author proposes to re-introduce Diderot’s term, *harpe organisée*, when referring to eighteenth- and nineteenth-century harps with a single-action pedal mechanism, as an artistic term when the author performs.³⁸ Before introducing the reasons for using this term, a short timeline of the history of the first types of pedal harps is given below.

Timeline of the pedal harp with a single-action pedal mechanism

- 1697: Jacob Hochbrucker is accredited with the invention of the pedal harp. This is documented by one single source written by his son.³⁹ No instrument or pedal harp music has been identified from this date.
- 1720: Earliest known pedal harp with a handwritten label.⁴⁰
- 1729: Earliest mention of a pedal harp in a concert review.⁴¹
- 1749: First harp performance at the “Concert Spirituel” season in Paris.⁴²
- 1760: March 30: Second harp performance at the “Concert Spirituel” season in

³⁵Further study is necessary to identify when the first work, originally written for harp, was composed that is unplayable on a harp with a single-action pedal mechanism, but this is beyond the scope of this thesis.

³⁶See section 1.4.3 for further information.

³⁷Droysen-Reber, *Harfen*, 291: “single action (pedal-)harp”.

³⁸The word “harp” is used throughout this thesis to refer exclusively to a harp with a single-action pedal mechanism.

³⁹Hochbrucker, *Recueil d’Ariettes*. See this “Introduction”, footnote 8.

⁴⁰Kunsthistorisches Museum Vienna, SAM 565, pedal harp by Hochbrucker. No detailed study of this harp exists to verify the 1720 date. However, another Hochbrucker harp has been dated 1728. See section 2.2.1.1.

⁴¹“Wien,” 892.

⁴²“Mercure de France,” June 1749, 178: Le concert Spirituel, executé au Louvre le jour de la Fête de la Pentecôte, 25 mai, commencé par un Concerto... M. Geopffe, Allemand, a joué de la Harpe, & a été fort applaudi. “The ‘Concert Spirituel’, executed at the Louvre on the day of the Feast of Pentecost, May 25, began with a Concerto... Mr Geopffe, German, played the harp, and was loudly applauded.” Georg Adam Goepfert (c. 1727-c. 1809), German harpist. “Mercure de France.” 178; Dagmar Droysen-Reber, “Der Prototyp ‘Harfe’ in Paris der 1750er und 1760er Jahre. Zu Texten und Kupferstichen in Diderots Encyclopédie,” in *Musikwissenschaft zwischen Kunst, Ästhetik und Experiment: Festschrift Helga de la Motte-Haber zum 60. Geburtstag*, by Reinhard Kopiez (Würzburg: Königshausen & Neumann, 1998): 136. It is usually assumed that he performed on a pedal harp, as reported by his pupil Madame de Genlis. Stéphanie Félicité de Genlis, *Nouvelle méthode pour apprendre à jouer de la harpe en moins de six mois de leçons* (Paris: Duhan, 1802), 2.

Paris. Hochbrucker played in March, May, and a July performance was cancelled. There is no evidence of other harp performances between 1749-1760.⁴³

- 1760: First publications for pedal harp in Paris.⁴⁴
- 1760: Private concert by Prince Casimir Michael Oginski.⁴⁵
- 1760: First pedal harps advertised for sale by Salomon.⁴⁶
- 1811: Erard patented the double-action pedal mechanism.⁴⁷

This timeline shows the important dates around the first productions of single-action pedal harps, performances, players and repertoire. If pedals harps were invented from 1697,⁴⁸ sadly no instrument nor pedal harp repertoire exists from this time. The earliest dated pedal harp (dated 1720) has still not been researched in detail and no repertoire specifically written for a pedal harp even from this time has been identified. Likewise, no original harp music exists from the same time as the first pedal harp performances of the first half of the eighteenth century (1729-1749).⁴⁹ These areas of research, which could link the invention and manufacture of early pedal harps with performances, players and repertoire are still open to research.⁵⁰

Until further research is carried out, the *harpe organisée*, with respect to its production, performances, players and repertoire appears to have flourished in Paris from around 1760.⁵¹ This date coincides with the above-mentioned primary sources including the first luthiers, players and performances, and most importantly, the first published musical sources. The harp explodes onto the musical scene as

⁴³"Mercure de France," July 1760, 207, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10407227_00196.html?contextType=scan&contextSort=score%2Cdescending&contextRows=10&context=harpe; "Mercure de France," June 1760, 236-37, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10407226_00086.html?contextType=scan&contextSort=score%2Cdescending&contextRows=10&context=harpe; "Mercure de France," May 1760, 190.

⁴⁴Petilliot, *Recueil d'airs choisis avec accompagnement de guitare et de harpe* (Paris, 1760); "Mercure de France," April 1760, second volume edition, 176-77, http://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10407224_00211.html?contextType=scan&contextSort=score%2Cdescending&contextRows=10&context=harpe: referring to Petilliot: "qu'il n'y a point encore de Musique imprimée pour la harpe", there have not been up to this time any "music published for the harp"; M. Le chevalier d'Herbain, *Recueil d'Ariettes & Chansons avec acc guitare, clavecin, harpe & violon* (Paris, 1760); Simon, *Second Recueil, avec accompagnemens de Guittare & de Harpe* (Paris, 1760).

⁴⁵Diderot, *Lettres à Sophie Volland*, 438-39. Letter of August 2, 1760.

⁴⁶"Mercure de France," 82: "Cette excellente harpe, est faire par le sieur *Salomon*", "this excellent harp was made by Mr Salomon"; 1763 is quoted as the earliest evidence of harp manufacture in Sylvette Milliot, *Documents inédits sur les luthiers parisiens du XVIIIe siècle* (Société française de musicologie, 1970).

⁴⁷"Instruments-Centre Erard Inventaire," accessed March 19, 2016, <http://www.sebastienerard.org/docs/CentreErardInventaireGEP2014.pdf>, D.2009.1.95-96.

⁴⁸Hochbrucker, *Recueil d'Ariettes*. See Introduction, footnote 8.

⁴⁹Stéphanie-Félicité de Genlis, *Nouvelle méthode pour apprendre à jouer de la harpe en moins de 6 mois*, 2nd éd. (Paris: Duhan, n.d.), 2. De Genlis writes that due to the lack of specific harp music, harpists played harpsichord music.

⁵⁰A new research project, led by Dr. Panagiotis Pouloupoulos from March 2016-August 2019, entitled "A Creative Triangle of Mechanics, Acoustics and Aesthetics: The Early Pedal Harp (1780-1830) as a Symbol of Innovative Transformation" is taking place at the Deutsches Museum, Munich. This research will not "investigate so much the performance aspects of the pedal harp, but mostly focus on the organology and history of the instrument between 1780 and 1830". Private email correspondence, June 1, 2016.

⁵¹Droysen-Reber, "Prototyp 'Harfe'": 136. She places the production of harps in Paris as early as 1750 and the present author would hope that, with further research, this earlier date could be justified with primary source material.

stated in the often quoted letter from Charles-Simon Favart to the Count Durazzo on May 1, 1761:

“la harpe est aujourd’hui l’instrument à la mode; toutes nos dames ont la fureur d’en jouer.”⁵²

Diderot’s term, *harpe organisée* is from the exact time as the beginning of the pedal harp’s success in Paris. The term *harpe organisée* was used in two concert reviews of Jean-Baptist Krumpholtz.⁵³ On October 4, 1772, Krumpholtz played in Vienna on a “verfertigen Harfe” and then on a “harpe organisée” in Leipzig in 1776.⁵⁴

Prior to 1760, a harp with pedals was considered a novelty, as earlier harps did not have pedals and the feet had no role in music-making for a harpist. I have also experienced this newness, while re-evaluating how I play the harp. I have played single- and multi-rowed harps of the medieval to the Baroque epochs for over twenty years. From this experience, two fundamental aspects come to the fore when I play. The first is that the pedal action creates more than half of the notes on the harp, making the work of the harpist’s feet highly important. My second observation is how I approach a harp where each string results in two pitches.⁵⁵ I feel that I am using a machine, albeit a fragile machine, where not only my hands but also my feet move harmoniously with a common musical gesture.

The single-action harp is an invention of the Enlightenment, a time of new religious and philosophical liberties, but also musical ones. The advantage of harps with pedals is the fact that both hands are free⁵⁶ to play all the time, rather than the playing practices on earlier single-rowed harps where chromatics were achieved either by re-tuning, stopping the strings at the neck with one hand, or by manually moving hooks.⁵⁷ The new solution was to employ the feet in making the additional notes that are not part of the open strings on the harp. However, my experience is that the pedals have not liberated my hands but rather engaged my feet to make music too. Then, moving pedals becomes like a dance.

The word *organisée* helps me to remember this dance. It assists me as a performer today, to put myself in a historical context when I play music of the late eighteenth century and beginning of the nineteenth century. I am not merely playing a pedal harp, but one with its own technique, repertoire and sound-world.

⁵²Charles-Simon Favart, *Mémoires et correspondance littéraires: dramatiques et anecdotiques, de C. S. Favart*, ed. Henri François Dumolard, vol. 1 (L. Collin, 1808), 147. Charles-Simon Favart (1710-1792), French librettist, playwright, composer and impresario.

⁵³Jean-Baptist Krumpholtz (1747-1790), Bohemian harpist, composer, teacher and instrument innovator.

⁵⁴Blumauer Alois and Johann Christian Herchenhahn, “K.K. allerg. privil. Realzeitung der Wissenschaften und Künste,” 1772, No. 44, 660: “Hr Krumbholz aus Böhme auf einer auf besondere Art in Paris verfertigen Harfe” hören liess “in einem Sonate mit Violin, Bass, und Horn begleitet”. Marie-Françoise Thiernes, “La Harpe à Paris au XVIIIe siècle: Jean Baptiste Krumpholtz, sa personnalité, sa vie, son oeuvre” (Thèse du doctorat, Université du Liège, 1975), Krumpholtz concert in 1776 in Leipzig.

⁵⁵Baroque multi-rowed harps have at least one string and sometimes two strings for several notes in the octave. The Italian Baroque *arpa doppia* actually has twenty-one strings in every octave. See section 1.2.2.

⁵⁶Droysen-Reber, *Harfen*, 11.

⁵⁷See section 1.3.1.

Research question

I purchased a harp built by Jacob Erat of London (no. 345, built around 1795) in 1996.⁵⁸ My pedal technique was one of a modern pedal harpist, based on two underlying principles:

- The heels always remain on the floor while the remaining part of the feet flex to move the pedals up and down.
- A maximum of two pedals can be moved at a time, one pedal by each foot. If the heel remains on the floor, this means the foot is parallel to the harp and pedals. The toe is used to move a pedal. This can only mean moving one pedal at a time with each foot.⁵⁹

When playing virtuosic pieces, I found pedal solutions to perform the repertoire, even though I occasionally found my solutions cumbersome and inorganic. They felt unmusical and involved physical gestures that did not suit the style of the music. Pedal noises were common in my playing, which I thought were due to the fact that a more than 200 year-old harp mechanism was old and worn.

I began to learn *Sonate Concertante* Op. 115 for violin and harp by Louis Spohr⁶⁰ in January 2014, but found that I could not technically play the piece, pedalling as I had up to then. This work appeared impossible to play on the only pedal harp that Spohr's wife Dorette Spohr played, namely the single-action harp.⁶¹ I found the following bars impossible to play:

- *Allegro* bars 6-7, 74-90, 217-31, 238-42.
- *Larghetto* bars 5-12.
- *Rondo* bars 294-304.⁶²

The only workable pedal solutions I could find required moving two pedals simultaneously on one side of the harp. The final bars of the first movement *Allegro*, bars 238-43, require moving two pedals on each side of the harp at the same time. Moving two pedals with one foot on one side of the harp means placing the foot across the pedals. The whole foot, both heel and toe, is involved in moving the

⁵⁸Jacob Erat (1768-1821), English harp maker and composer.

⁵⁹Yolanda Kondonassis, *On Playing the Harp* (New York: Carl Fischer, 2006), 22-23, Chapter on "Pedal Technique": "Your heels should always rest on the ground."

⁶⁰Louis Spohr, *Sonate Concertante*, op. 115 (Hamburg: Schubert, 1841). Louis Spohr (1784-1859), German violinist, composer and conductor. An autograph copy of the violin part is in D-Ksp, the harp part (Ms 42) at D-LEmh.

⁶¹Dorette Scheidler (1787-1834), German harpist. Dorette and Louis Spohr married on February 2, 1806. She played a harp built in Strasbourg, which could have been built by the eighteenth-century Storck family of instrument builders. See Pierre, *Les facteurs d'instruments de musique*, 373-74; René Vannes, "Storck," *Dictionnaire universel des luthiers* (Bruxelles: Les Amis de la Musique, 1972), 346-47; Adelson et al., *History of the Erard Piano and Harp*, 2:166. Between June 1806 and October 1807 she bought a Naderman harp from Paris. See Louis Spohr, *Lebenserinnerungen*, ed. Folker Göthel, 2 vols. (Tutzing: H. Schneider, 1968), 97, 102. This was also noted in a concert review in AMZ, July 3, 1816: 458. While on tour in England in 1820, she was offered a double-action pedal harp for her use by Erard. See Chapter 6.

⁶²See section 5.4.2 for the musical examples and full analysis of these extracts.

pedals, implying that the foot off the ground. This goes against the two principles of modern pedal technique as described above.

My questions included: How did Dorette Spohr pedal? How did I manage up to 2014 without a seemingly fundamental part of her technique? How had anyone else played Op. 115 from Dorette Spohr's time to the present day? Did this way of pedalling have anything to do with the fact that pedal markings are extremely rare in harp scores? If my feet are off the floor, what consequences does this have to my sitting and playing position?

At that point, I realised that I needed to completely re-evaluate my way of pedalling. I began looking for any literature on the subject and after much research, I found only three twentieth-century sources that discuss the practice of moving more than one pedal with one foot at a time since 1833:⁶³ two PhD theses and one book.⁶⁴

Reviewing modern literature

Rebollo Pratt, (1976)

Rosalie Rebollo Pratt's thesis on Krumpholtz is a forward-looking thesis, with research questions that have still not been challenged after forty years.⁶⁵ She states that:

"Since the older construction [of harp] provided for a much closer spacing of pedals, it was possible and quite useful for the performer to move two pedals simultaneously with one foot."⁶⁶

She gives examples of pedal *glissandi*⁶⁷ in works by Krumpholtz⁶⁸ and in Mozart, enharmonic writing and double-pedalling with the F and G pedals.⁶⁹ She includes an in-depth structural and harmonic analysis of Krumpholtz's *Préludes*, Op. 2, nos. 1, 3, 6 and 10, but identifies no double-pedalling or pedal *glissandi* in these pieces.⁷⁰

Barthel, (1994)

⁶³François-Joseph Naderman, *École de la harpe, dictionnaire de transitions pour s'exercer dans l'art de préluder et d'improviser tant sur la harpe que sur le piano et à l'usage des jeunes compositeurs de tout genre adopté par le conservatoire de musique*, op. 95 (Paris: Naderman, 1833), 92.

⁶⁴Rosalie Rebollo Pratt, "Johann Baptist Krumpholtz: His Harp Compositions and Pedagogy, Implication for the Twentieth-Century Harpist" (Doctor in Education, Columbia University Teachers College, 1976), 56-57; Laure Barthel, "La harpe de Rousseau à Boieldieu" (Thèse de doctorat, Université de Lyon 2, 1994); Mike Parker, *Child of Pure Harmony: A Source Book for the Single-Action Harp* (London: Lulu, 2005).

⁶⁵Rebollo Pratt, "Krumpholtz." Rebollo Pratt identifies numerous passages from Krumpholtz's compositions that are similar to passages in Mozart's *Concertante a La Harpe, e Flauto*, K.299. Wolfgang Amadeus Mozart (1756-1791), Austrian composer and pianist.

⁶⁶*Ibid.*, 47.

⁶⁷See Glossary.

⁶⁸See section 4.4.

⁶⁹See section 5.1.

⁷⁰See sections 5.1 and 5.2 for pedal solutions for Op. 2.

Barthel's thesis on the harp from the time of Rousseau to Boieldieu of over one thousand pages, touches on most aspects of the history of the harp in the eighteenth century including instruments, luthiers, players, playing techniques and an extended catalogue of over five hundred works for solo harp, harp duo and concertos for harp with orchestra.⁷¹ It is the most detailed contemporary source of information on the harp in the eighteenth century, which was later published in a truncated form.⁷² The catalogue of works for harp contains biographical details on composers, general information about each score, short incipits for many works and annotations regarding any special features or rare harp techniques found in the scores. These include indications in the score of cross-hand technique, harmonics, enharmonic solutions, the use of the *pédale à renforcement* and *sourdine* pedals, pedal *glissandi* and any instructions about how to move pedals. Among these five hundred works, Barthel describes and comments on three works for solo harp where the composer-performer gives directions to move more than one pedal with one foot.

The first piece that appears in Barthel's catalogue with some unusual pedalling descriptions is Pierre d'Alvimare's *Sonate III*, Op. 18, in F minor.⁷³ After a four-bar incipit of the first sonata of Op. 18, Barthel transcribes one of the three pedal instructions written in the score.⁷⁴

Barthel then comments on d'Alvimare's instructions:

"le fait d'actionner 3 pédales d'un coup permet en effet de passer de 4 bémols à 4 dièses très rapidement mais c'est une manoeuvre délicate qui nécessite des chaussures adaptées et de l'entraînement car elle risque d'être bruyante et d'endommager la mécanique si le pied glisse."⁷⁵

Barthel refers the reader to a photograph at the end of her Glossary. This photograph shows a left foot across the C and B pedals on a modern double-action pedal harp. Underneath the photograph Barthel writes:

"2 pédales à la fois: Cette manoeuvre est périlleuse pour la mécanique. Demander au harpiste d'enclencher trois pédales d'un coup me semble exagère et inadapté à nos instruments modernes. Sur les harpes à simple mouvement du XVIIIème siècle cela était peut-être réalisable."⁷⁶

⁷¹Barthel, "La harpe," Catalogue des Auteurs et des Œuvres: 1760-1828. This catalogue lists about 515 works for harp.

⁷²Laure Barthel, *Au cœur de la harpe au XVIIIème siècle* (France: Garnier-François, 2005).

⁷³(Martin)-Pierre d'Alvimare (1772-1839), harpist and composer. Pierre D'Alvimare, *Trois Grandes Sonates pour la harpe*, op. 18 (Paris: Erard, c. 1802), 40. Barthel spells this composer's surname as Alvimare. On many of his musical scores his name is written as Dalvimare.

⁷⁴See section 4.3.1.5.

⁷⁵Barthel, "La harpe," 224: Her commentary states that "the fact of moving 3 pedals at once makes it possible to go from 4 to 4 sharps flats very quickly but it is a difficult manoeuvre requiring suitable footwear and training as it might make noise and damage the mechanism if the foot slips".

⁷⁶*Ibid.*, Annex A: Glossaire, 3bis photographies annoncées dans le Catalogue des auteurs et des Œuvres. Pages after 193 unnumbered. Photographie no. 26 is found one page after 193: "2 pedals at a time: This manoeuvre is perilous for the mechanism. To ask any harpist to press three pedals in one go seems exaggerated to me and inappropriate for our modern instruments. On harps with à simple mouvement of the eighteenth century it was perhaps feasible."

The second work which requires double-peddalling and is contained in Barthel's catalogue is Naderman's *Thèmes favoris de l'Opéra des Bardes*. Naderman asks the harpist to press the F and G pedal together with the right foot:

"mettez le sol et le fa du meme pied."⁷⁷

Barthel adds a brief comment to this pedal action, describing it as "une indication surprenante" and adding that "cette difficulté technique n'est donc pas une invention des compositeurs du XXème siècle!"⁷⁸

The final piece included in the catalogue where some special way of pedalling is described is François Petrini's *Folies d'Espagne* Op. 28.⁷⁹ Petrini writes in the score:

"Pour prendre les Pédales du Fa et du La ensembles on baisse en même temps la pédale du Sol".⁸⁰

Following Petrini's instructions, Barthel then comments upon them:

"une indication surprenante de la part d'un harpiste pour la variation 8... Cette manoeuvre est en effet très acrobatique et comporte deux risques: faire du bruit pendant l'exécution et abimer la mécanique si le pied glisse et lâché brutalement les 3 pédales sans les avoir accrochées! Les mécaniques des harpes XVIIIème plus légères, plus souples permettaient peut-être de telles prouesses mais cela devait nécessiter des harpistes aux mollets musclés pour ne pas déstabiliser le jeu."⁸¹

Historical research and the state of knowledge has advanced considerably since Barthel carried out her research. Her critiques of multi-peddalling confuse the reader as she does not specify the type of harp that she is discussing. It can be assumed that her comments pertain to a modern double-action pedal harp, as she illustrates double-peddalling on a modern harp.

In her discussion of d'Alvimare's instructions in his Op. 18, she claims that multi-peddalling on a modern double-action pedal harp is:

- difficult.
- requires suitable footwear. Multi-peddalling indeed requires footwear that existed at the same time of the harp.

⁷⁷François Joseph Naderman, *Thèmes favoris de l'Opéra des Bardes* (Paris: Imbault, 1805), 11: "Press the G and F with the same foot."

⁷⁸Barthel, "La harpe," 618: "A startling indication". "This difficult technique is therefore not an invention of twentieth-century composers!"

⁷⁹François Petrini (1744-1819), harpist and composer.

⁸⁰François Petrini, *Les Folies d'Espagne, avec 12 variations pour la harpe*, op. 28, no. 11 (Paris: Naderman, n.d.): "To take the F and A pedals together, lower the G pedal at the same time".

⁸¹Barthel, "La harpe," 663: "A startling indication for the harpist in the variation eight... This manoeuvre is actually very acrobatic and includes two risks: making noise while doing this manoeuvre and damaging the mechanism if the foot slips and three pedals are suddenly released without being fixed. The mechanism of the eighteenth-century harps is lighter, more flexible perhaps to allow such feats but it would have required the harpists to have muscles of calves in order not to de-stabilise the foot action."

- requires training.
- possibly might make noise.
- may damage the mechanism.

Further, to this, she criticises multi-pedalling in general on any pedal harp as:

- Damaging the pedal mechanism, especially if a foot slips when the pedals are not fixed in the lower notches.⁸²
- Moving more than one pedal at a time with one foot will make noise.
- These techniques are physically challenging and one would need to acquire great muscle strength to carry them out.⁸³

The author proposes to show that if more than one pedal is moved at a time on any pedal harp this results in fewer pedal moves in general. A consequence of moving more than one pedal at a time means that the movements are slow and gentle, and there is less noise audible from the mechanism due to this slowness in feet movements. When learned, moving two or more pedals together with one foot is effortless for the feet and legs. There is never a risk of feet slipping off pedals, because the whole weight of the foot is on the pedals.

Parker (2005)

Child of Pure Harmony by Mike Parker is the only book since the early decades of the nineteenth century which dedicates sections to pedalling on the harp.⁸⁴ Parker's book is described as a source-book and he deals with every aspect of playing the harp in a concise and easy-to-read way. Each subject that he touches on could be a full research topic and indeed my own topic is inspired by a few pages of his book. On pages 52-54, Parker lays out the essential aspects of pedalling. He commences by saying that no harp method "offers information as how the pedal is actually moved". I have however found several descriptions that are quite detailed.⁸⁵ Parker explains that the pedals need to be operated with the heel off the floor and points out the advantages of low-heeled shoes that were fashionable at the time. He supports his pedal theory with an example of a portrait which shows a harpist in the act of pedalling.⁸⁶

⁸²See Glossary for "pedal notches".

⁸³Harp scholar Robert Adelson interprets Barthel's comments on multi-pedalling differently. According to him, Barthel clearly states that the potential problems with double pedalling on a modern harp (noise, damaging the mechanism, difficulty, etc.) would likely have been absent on a single-action harp of the eighteenth-century. As a result, he sees her text as forward looking, as it was published in 1994 when few harpists had experimented with playing single-action instruments. Email correspondence Prof. Adelson, September 2, 2016.

⁸⁴Parker, *Child of Pure Harmony*, 52-54, 56-59, 62-63. Naderman, *École*, 92 is the last publication of the nineteenth century to discuss single-action harp pedal technique in detail. Mike Parker, English harpist, instrument maker and researcher. I would like to thank Mike for all his time that he has graciously shared with me to discuss harp matters over the years.

⁸⁵Methodes that discuss how to place the feet and move the pedals include: Genlis, *Nouvelle méthode*, 1802, 18; Jacques-Georges Cousineau, *Méthode de Harpe contenant les leçons graduées pour les deux mains avec 15 préludes, dont six composés par M. Ragué et un recueil d'airs nouveaux arrangés pour la harpe*, op. 14, 2nd ed. (Paris: Cousineau, 1803), 14; Theresia Demar, *Méthode de harpe divisée en 3 parties*, op. 21, 1ere suite (Paris, c. 1800), 12; Bochsa, *New and Improved Method*, 35.

⁸⁶See Chapter 7 for shoes and pedalling.

Parker defines what he calls “double pedalling” as:

“..to engage two pedals simultaneously with the same foot”.⁸⁷

He then illustrates it with some musical examples. Jean-Baptist Krumpholtz’s sonata, Op. 13 no. 1 is used to illustrate double-pedalling with the left foot where the C and B pedals are moved together.⁸⁸

Parker writes:



Figure 1: Krumpholtz, Sonata no. 1, Op. 13, bars

“As the single-action harp was most generally tuned in E flat, there is no D flat available and the right foot is occupied making the B flat (*sic*). The modulation can be made easily if one places the foot on the blades of the C and B pedals and moves them simultaneously, to create the B flat-to-natural shift and an enharmonic D flat with the C sharp.”⁸⁹

I agree with Parker’s solution, but not with his rationale for bars 39-40. His first claim that the harp was usually tuned in the “base” set-up key⁹⁰ of E-flat major is not completely correct. I will show later in section 4.1 that even if the majority of published works for harp, which include *Ariettes* and simple sonatas, were conceived for a harp set-up in the “base” key of E-flat major, many virtuosic pieces were written for a harp tuned in the “base” set-up key of A-flat major. This includes works by Krumpholtz. For this musical example, whether the harp is set-up in the key of E-flat or A-flat major, it does not affect the most plausible pedal solution.

This two movement sonata, *Allegretto* and *Romance*, is in the key of B-flat major. The only accidentals required in the entire piece are B $\flat$, E $\flat$ and D $\flat$ (once in bar 39), B $\sharp$, E $\sharp$ and C $\sharp$. In bar 39, the first half of the bar is the first inversion of a B-flat major chord, the second dotted crochet is an augmented sixth on D $\flat$ going to C, the dominant of the next key, F major. This chord requires the B $\flat$ to be raised by a semitone and the D to be lowered by a semitone. Glancing at the piece initially, it would appear that one requires a D $\flat$, implying a harp tuned in four flats as a “base” set-up key.

An alternative situation is when the harp is set-up in the “base” key of A-flat major, so the A and D pedals are pressed down and fixed before commencing the piece.

⁸⁷Parker, *Child of Pure Harmony*, 53. Double-pedalling cannot be found in the book’s index, but “pedalling” and “multiple-pedalling” are part of the index.

⁸⁸Jean-Baptiste Krumpholtz, *Principes pour la harpe*, ed. J. M. Plane (Paris, 1809), 50, bar 39.

⁸⁹Parker, *Child of Pure Harmony*, 53.

⁹⁰See Glossary.

By the beginning of the line shown in fig. 1, the E pedal is lowered and fixed, as the movement has moved into the dominant key of F major. Bar 39 appears to indicate that the harpist must press down the B pedal from the upper position to the lower position: B $\flat$ to B $\sharp$, while the D pedal must be unfixed and released upwards: D $\sharp$ to D $\flat$. However, the D and B pedals are on the same side of the harp, namely the left-hand side of the pedal box. One pedal cannot be lowered, while another is released at the same time, with one foot. Lowering one pedal and releasing the other pedal is feasible if neither are fixed initially. In a situation like that, a pivoting motion between the toe and heel could be used.⁹¹ However, the situation here would entail releasing the D pedal before bar 39, lowering it, and then holding it down with the foot without fixing it. This is certainly a solution, but it involves an extra pedal movement that includes planning and preparing a pedal movement that is not part of the harmony or the musical phrase. It is my personal experience that most pedal movements can be done with ease and are most often an inherent part of the musical gesture. This solution is cumbersome and unmusical.

When the pedal motion implies the releasing of one pedal that has been fixed, while lowering another non-adjacent pedal is not a viable solution, it only remains to perform bar 39 using an enharmonic note (C $\sharp$) for the D $\flat$. Playing enharmonic solutions was and is still today an integral part of harp playing. Krumpholtz includes a list of enharmonic solutions in his *Principes*.⁹²

Further, to this Krumpholtz example, Parker names both Neville Butler Challoner⁹³ and Johann Georg Heinrich Backofen⁹⁴ as those who proposed to fold away the G pedal against the resonance box of the harp in order to operate the F and A pedals on the right side of the harp with one foot. Where Parker writes about “lifting” a pedal, he intends folding the pedal away to the position when the harp is transported so that the pedals are not jutting out. He finally cites Robert Nicholas Charles Bochsa’s advice to engage the F, G and A pedals together and to simply ignore any G resonance that results from the pressing down of the G pedal with the two neighbouring pedals.⁹⁵

In his succinct style, Parker also discusses additional pedals on the harp including Krumpholtz’s *pédale à renforcement* and *sourdine* pedal, pedal *glissandi*. The mechanical features of these inventions will be discussed in section 2.3.

⁹¹See section 5.3.4.8.

⁹²Krumpholtz, *Principes*, 14.

⁹³Neville Butler Challoner, *A New Preceptor for the Harp*, op. 16 (London: Skillern, 1816), 22–23. Neville Butler Challoner (1784–after 1835), English harpist, composer, tenor, conductor and music seller.

⁹⁴Johann Georg Heinrich Backofen, *Anleitung zum Harfenspiel* (Leipzig: Breitkopf und Härtel, 1801), 49–51. Johann Georg Heinrich Backofen (1768–1839), German harpist, clarinetist and basset-horn player and composer.

⁹⁵Nicolas-Charles Bochsa, *Nouvelle méthode de harpe en deux parties*, op. 60 (Paris: Duhan, 1813), 21. Robert Nicholas Charles Bochsa (1789–1856), French harpist and composer.

Definitions

My definition of the double-pedal technique or double-pedalling is the act of moving two adjacent pedals or two non-adjacent pedals on one side of the harp using one foot. This is achieved by placing the foot perpendicular to the harp, across the pedals. The pedals can be pressed down together or separately by pivoting the foot. The heel moves an inner pedal and the toe moves an outer pedal. When the pedals are not adjacent to each other, double-pedalling is achieved by folding away a pedal, usually the C pedal on the left side or the F or G pedal on the right side of the base of the harp. The remaining D and B pedals on the left-hand side of the harp and the F and A pedals on the right can be then operated with one foot. See fig. 2, 3, 5.15, 5.16.

Alternatively, triple-pedal technique or triple-pedalling occurs when three pedals are pressed down together with one foot. This is usually carried out on the right-hand side of the harp, using the F, G and A pedals, but can also be performed with the D, C, and B pedals on the left-hand side of the harp. The term multi-pedalling refers to all the above ways of pedalling, without specifying one in particular.⁹⁶

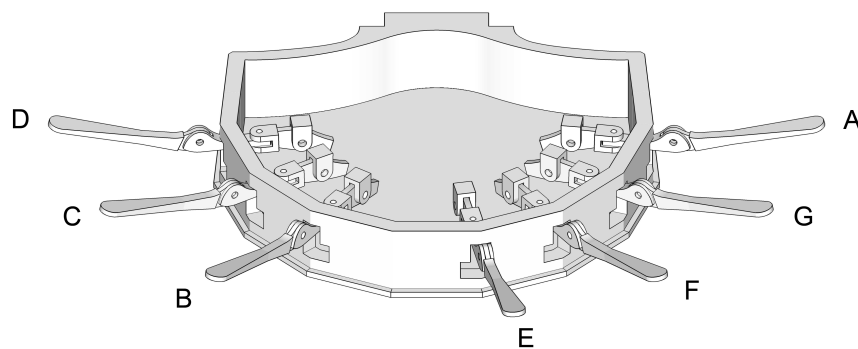


Figure 2: The positions of the pedals in the upper position.

Research methodology

After consulting the modern literature, my research into all aspects of pedalling on the harp extended across five historical areas of research: treatises and methods, musical sources where a special solution is included in the score. The most exciting part entailed discovering double- and triple-pedalling where is not specified in words but is implied by the music itself, like in Spohr's Op. 115.

⁹⁶See Glossary.

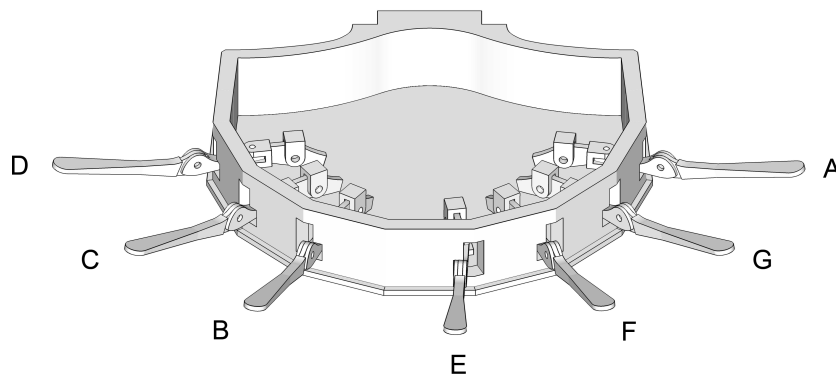


Figure 3: The positions of the pedals in the lower position.

Further, to this, I explored the relationship between shoes and pedalling, using historical sources and images (portraits and illustrations) of harpists. Finally, I sought out any other possible historical sources that may point to any intricate pedalling techniques. I used newspaper accounts of concerts, journals and literary descriptions.

The aim of my research was to identify if multi-pedalling had been a normal way to pedal for a virtuoso harpist in the eighteenth century. If so, I wished to incorporate this technique into my playing and to disseminate this to other harpists.

I was also curious about its eventual demise, which I initially placed at the time of the introduction of Erard's double-action pedal harp in 1811 and the gradual disuse of the single-action harp. However, to my own surprise, I found that quite the opposite was true. Double-pedalling continued to be part of playing the harp and can be found in written sources as late as 1946.⁹⁷ Multi-pedalling is an integral part of many performing harpists today, notably jazz harpists.⁹⁸

Overview of Chapters

Chapter 1 gives a general overview of the types of European harps that existed before, during and just after the single-action harp. The history of harps is a complicated one, as harps come in many sizes and systems.

The single-action harp had a long developmental period of nearly sixty years from its apparent invention in 1697 until the 1760's when the first instruments were built in Paris. Chapter 2 is dedicated to the history of the instruments and

⁹⁷Henriette Renié, *Méthode complète de harpe* (Paris: Leduc, 1946), 81.

⁹⁸See Chapter 8.

the various mechanical systems of the single-action harp. When seven pedals became the standard number of pedals, Krumpholtz worked with Naderman adding two additional pedals, the *pédale à renforcement* and the *sourdine* pedal, and collaborated with Erard to construct the *Contrebasse ou Clavicorde à marteau*. Cousineau invented a unique fourteen-pedal harp which has been recently re-discovered and studied.⁹⁹ This instrument and any other additional pedals shall also be described.

The historical sources are reviewed in the following four chapters. Many of these primary sources are discussed for the first time in modern times, so each type of pedal move and technique is analysed separately, according to the type of historical source. Chapter 3 identifies all known harp treatises and discusses the information found in these sources with regard to pedalling. I have identified nearly over one hundred treatises, methods and study books of the eighteenth century and early nineteenth century. These equip us with a terminology for pedalling and include valuable musical examples. The principal techniques are pressing a pedal down and releasing it, fixing a pedal, double- and triple-pedalling, pedal *glissandi* and the use of the *pédale à renforcement* and the *sourdine* pedal. Pedal markings shall also be discussed.

In 1996, I began to compile a database of works for harps. This consists of scores that I have consulted in libraries and private collections worldwide. I have examined over two thousand works for harps with respect to over thirty criteria which include paper, watermarks, publishers, prices of scores, dedications, tonalities of works and any technical aspects found in the score. From this catalogue and Barthel's catalogue,¹⁰⁰ I have extracted the information which concerns any facet of pedalling found in harp scores. Chapter 4 contains my findings up to now.¹⁰¹

Chapter 5 looks at the second group of musical scores, where no multi-pedalling is written in the score, but special pedalling techniques are implied when a harpist plays the harp literature. Since I began to completely re-learn my pedal technique in 2014, I now use multi-pedalling and pedal *glissandi* incessantly. I see the possibilities of using it throughout the whole harp repertoire. I have taken music by Krumpholtz and Spohr as case-studies for this thesis, showing that multi-pedalling and pedal *glissandi* are an integral part of their music. The pedal solutions and moves for Krumpholtz's Op. 2 are found at the end of Chapter 5.

I was confronted with my initial pedal dilemma with Spohr's music, so I wished to re-evaluate all his music for harp. Even after two years of research, I still have found no other harp pieces that require as much double-pedalling as Spohr's Op. 115. Chapter 6 reviews what is known about Dorette Spohr's musical life and pedal techniques. This chapter also includes a complete pedal analysis of all of Spohr's works for harp, with a special emphasis on Opp. 115 and 35. The *Fantaisie pour harpe*, Op. 35, is one of the few single-action harp pieces that is still part of the

⁹⁹See Chapter 2.

¹⁰⁰Barthel, "La harpe."

¹⁰¹This is an ongoing area of research, because such indications can only be found by consulting every extent harp score.

modern harp repertoire. This analysis shows the pedalling possibilities and how they are such a vital part of the musical gesture and possible intentions of the composer. Most of the historical pedal techniques found in Op. 35 can still be used on a modern pedal harp.

When a harpist plays two or more pedals together on one side of the harp, the first question is what shoes to wear. In the first few months of re-learning my pedal technique, I performed without shoes. I began to research shoes, what a professional harpist might have worn to enable them to pedal in this virtuoso fashion. As often happens, the harps and the shoes of the same epoch go hand in hand. I have analysed nearly 250 representations (portraits, drawings and illustrations) of harpists and their harps during the last decades of the eighteenth century and first few decades of the nineteenth century. Chapter 7 is a result of this research, where I have singled out six images that may display a harpist in the act of pedalling.

Chapter 8 looks at the implications of multi-pedalling on other types of pedal harps. I will show how the single-action harp and Erard's double-action pedal harp have two separate ways to pedal, but where actually double-pedalling continued as a living technique.

Appendix I contains the primary sources for the single-action harp. This includes harp methods, treatises on *basso continuo*, accompanying, composing and improvising preludes, study and exercise books and finally tuning methods, in Tables I.1-I.4. Sections I.2 and I.3 give the musical sources for multi-pedalling. The "harp" article in Diderot's *Encyclopédie* is found in Appendix I.4 and is translated into English for the first time.

As this is a thesis based upon research in and through musical practice, I propose my own modern method on how to pedal which is included in Appendix III. I use this when teaching historical pedal techniques to my students. Appendix II gives a complete list of the pedal moves available to a harpist on the single-action harp, inspired by historical sources and my own experiences.

This dissertation is accompanied by a CD of Opp. 113, 114, 35, 36 and WoO 27 by Louis Spohr. I also include a DVD of a live performance of Krumpholtz's Concerto no. 6, Op. 9 and Bochsa's *Fantaisie Brillante avec introduction et finale sur la dernière Walse de C. M. de Weber*, Op. 302.

