

Harpsichord & *fortepiano*

Vol. 27, No. 1 Autumn, 2022

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Musical Instrument Research Catalog
(MIRCAt)

The *Orgelbüchlein* as pedal clavichord music

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The recent arrival of a pedal clavichord in my music room has prompted me to revisit central European Baroque organ music and consider it from a new perspective: that of the string – activated and sustained by the finger through the tangent of the clavichord key – rather than the sounding pipe. From the start, the pedal clavichord had something new and apposite to say about organ music. Among the pieces that gelled instantly were J. S. Bach's Fugue on a theme of Legrenzi BWV 574, especially the conclusion, the monumental Prelude and Fugue in B minor BWV 544 for its stylised dance prelude and mellifluous fugue with violin bariolage, Buxtehude's austere Prelude and Fugue in E minor BWV 142 and sections of Robert Schumann's 6 Fugues on the name BACH, Op.60.

My interest in the pedal clavichord began several decades ago alongside the ambition to persuade a UK educational institution to acquire one (illus.1, 2).¹ Now I have one of my own, only the second, I believe, in the UK, and I am enthralled by it.² Not only are the sounds and physical sensations new, but the experience has also changed my understanding of organ music and organ playing. I suspect and hope it has improved my manual and pedal technique. In improving my balance and coordination, for example, I now play pieces prepared on the clavichord quite differently when transferred to the organ, and with an ear for greater expectation of touch, cantabile playing and especially tone production. The latter point is important, obvious perhaps to an experienced pedal clavichordist, but revolutionary, I imagine, for any organist trying to breathe and play rhythmically. Most significantly, all this has prompted a plethora of questions which, for the purposes of this article, I have reduced to:

1. What is different about playing organ music on the clavichord?
2. What can playing organ music on the clavichord tell us about playing the organ, especially the pedals, and feed back into organ performance?
3. How much of that repertoire might justifiably be clavichord music?

Like me, others have played my pedal clavichord and found themselves pondering their pedal technique anew and questioning accepted boundaries of performance and

repertoire. This article is a result of those discussions: a report and some observations on the practical implications for performance practice. It was suggested by Francis Knights who felt that historically, the foot technique required by a pedal clavichord must have been transferred from there to the organ and not the other way round. An appropriate hypothesis given what I have just written.

Historically, organists are known to have practised on the clavichord and many composers (J. S. Bach, for example) used it as a tool for composition. Pedals were added to domestic keyboard instruments, including clavichords to enable this to happen. The demarcation between organ music and non-organ music (in the case of Bach, for 'organ' or *Clavier*) is often unclear.³ What we consider organ repertoire today may have been conceived in terms of both the clavichord and the organ, perhaps equally, and played interchangeably between the two. How does that change our view of the music today when pedal clavichords are now a rarity? And if this repertoire exists on a spectrum between organ and clavichord, which pieces have greatest affinity to the clavichord?

The occurrence of pedal clavichords from the 15th to the 19th centuries, and the frequent use of the pedalboard in domestic keyboard instruments of the Renaissance and Baroque, is amply demonstrated in detailed surveys by Susi Jeans, Karrin Ford and Joel Speerstra.⁴ The pedal clavichord existed in two forms. In the simpler type, the pedals play the keys of a single, manual clavichord by means of pulldowns or a rollerboard and trackers. The illustration drawn in 1464 in a handwritten compilation of Hugo von Reutlingen's *Flores musicae* shows exactly this type of pedal clavichord.⁵ In the second type, the pedals have their own, independent clavichord (also attached by pulldowns or a rollerboard and trackers). Here the pedal clavichord cannot be played by the hands, and so a further clavichord (or indeed two) must be placed on top of it for the hands to play with the feet. Three pedal clavichords of this type survive. The most complete and most-frequently copied is the unfretted pedal clavichord by Johann David Gerstenberg dated 1760.⁶ Fretted pedal clavichords (i.e., in which two or more successive notes share the same set of strings) are described by Claas Douwes in his *Grondig onderzoek* (Franeker, 1699)



1 Pedal clavichord with manual clavichord above, by Fabio Rigali (2021) and by Peter Bavington (2002) after Johann Heinrich Silbermann



2 Pedal clavichord by Rigali

and Jacob Adlung in the manuscript *Musica mechanica organoedi*, dated 1726 but published posthumously in Berlin in 1768. Unfortunately, no examples survive. Douwes stresses the advantages of his design for ease of tuning and transportation. Adlung offers several actions and designs, and notes that both the clavichord and its pedal 'are very common and well-known'.⁷ Interestingly, he sees the pedal clavichord as an instrument with its own repertoire, distinct from the organ: 'It is good for the pedal [clavichord] to extend up to d since at home one plays things that go up to d more often than on the [church] organ'.⁸

My pedal clavichord is of the second type and fretted. This has advantages for speed, ease and reliability of tuning. It was made by Fabio Rigali in his workshop in Gargazon, Südtirol, Italy in 2021. The clavichord sits on a wooden stand with the pedalboard below. The instrument has three strings per note, two at unison pitch and the third sounding an octave lower: 8', 8', 16'. The 8' strings are plain brass and the 16' overwound. The 16' can be brought on and off by means of a stop which mutes and unmutes the 16' strings. The compass is CC–d. The bottom three notes are unfretted, and the remaining notes fretted with eight double frets and two triple frets: EE-flat/EE, FF/FF-sharp, GG/GG-sharp, AA/BB-flat, C/C-sharp, E-flat/E, F/F-sharp, G/G-sharp, A/B-flat/B, c/c-sharp/d. The end of each pedal is connected directly to the key by twine running through a hole in the bottom of the clavichord case. The tension of the twine, and hence the speed of response of the touch, is adjusted by a small peg in the far end of the key from the tangent.

The frets have been set to give a mild unequal temperament (modified 1/8th-comma) suited to 18th-century music. The instrument is currently tuned at A415, very easy to tune and keeps its tuning well. The 8' strings rarely go out of tune while the overwound 16' strings, like a pedal fagott, need more frequent attention but take just a few moments to tune. The fretting is seldom a problem for the player though the top six notes in particular need to be played cleanly to avoid blocking or chucking (where more than one tangent accidentally strikes the same course of strings). Having BB and E free (unfretted) rather than AA and D (as here) might have some advantages for the player and also perhaps improve the sound of those notes with the diatonic notes around them. Its partner manual clavichord shown in the photographs is an unfretted Clavichord after Johann Heinrich Silbermann made by Peter Bavington in 2002.

The process of learning to play the pedal clavichord was slow at first but quickly gained momentum. I began with

exercises and pedal solos for the feet alone derived from J. S. Bach, Johann Gottfried Mützel,⁹ and modern material by Finn Viderø, Sandra Soderlund and Joel Speerstra.¹⁰ The pedalboard is based on North German originals, straight and flat, and the keys fairly widely spaced with high accidentals. Its position in relation to the keyboard is similar to an historical organ and much further forward in relation to the manual keys than a 20th-century organ. This limits the movements of the player and necessitates a good balance on the stool. No longer can one lean on the pedal keys to shift position. If one tries to do so the pitch of the note will go wildly sharp.

The basic pedal technique requires all the joints and muscles between toe and hip to act in relaxed but firm cooperation, as if they were hands and arms, without any single part dominating or compensating for the reticence or weakness of another. When it works, a good sound is produced with the foot and leg sustaining the tone of the vibrating strings without blocking or chucking. In essence, the motion involves the whole leg not just the foot. This is contrary to certain tenets of orthodox modern organ pedalling where ankle movement tends to predominate. Much has already been written about these contrasting techniques and is available elsewhere.¹¹ It goes without saying, it is easier to describe than it is to do.

From basic pedal exercises I progressed to the co-ordination of the hands and feet in real music, the 'Eight Short Preludes and Fugues' BWV 553–560, for example, and exercises by Jacques van Oortmerssen.¹² I found the *Orgelbüchlein* (Little Organ Book) BWV 599–644 particularly useful for pedal touch and balance. And as my fluency increased, the music seemed more and more fitted to the clavichord: I missed the organ less and less. Finally, I got stuck into some large-scale pieces such as the Preludes and Fugues in F minor BWV 534, E^b major BWV 552 and in B minor BWV 544.

Why not straight go into the fiendishly difficult six Trio Sonatas BWV 525–530? For several reasons. I have preferred to stay with one manual, and the trios, although designated *à 2 Clav: et Pedal*, can be played on a single manual with one hand transposed by an octave.¹³ Arrangements with three instruments (such as the Gerstenberg pedal clavichord) were probably the exception rather than the rule. Ideally such schemes require all three clavichords to be the same type and design so that they move together in pitch and tune as humidity and temperature changes. The commissioning of three clavichords, one very large indeed, all at the same time and from the same maker, must have been exceptional at the time and something for wealthy dilettantes and nobility

rather than the typical organist. The latter probably used a one-manual and pedal combination, with or without independent pedal clavichord, and perhaps without 16', and made by different makers (or by themselves) to save both space and expense.¹⁴ So for me, the core of what the pedal clavichord has to offer is found through the norms of the organ repertoire rather than its outliers. It is easy to forget that the clavichord was a very common instrument in Bach's day and perhaps our enthusiasm for his six trio sonatas which has understandably driven the revival of the pedal clavichord in recent times has left other genres and configurations underexplored.

I found the *Orgelbüchlein* a satisfying and idiomatic repertoire for the pedal clavichord. This is perhaps surprising since Bach's incomplete set of 46 chorale preludes is definitely organ music. The title page reveals its intention to instruct an 'inquiring organist' in performing a chorale in a multitude of ways while becoming 'practised in the study of pedalling'.¹⁵ Each chorale is a single variation (no longer than the hymn melody itself) and linked in style to the popular chorale partita – an important crossover tradition between the organ and stringed keyboard instruments, especially the clavichord. The *Orgelbüchlein* chorales are eminently suitable for private and public meditation, at home or in church. The material from which Bach constructs his chorales is not intrinsically instrument specific to the organ, the assumed final destination mentioned in the preface. Every chorale has a strongly defined character and musical substance, both closely derived from Bach's theological understanding of the text of each hymn. The clavichord is just as able to convey the affect and musical-rhetorical figures of each chorale as the organ: perhaps it is better suited to do so.

The main difference between playing these chorales on the clavichord rather than on the organ is one of dynamic: dynamic control of small details and nuances, and general changes of dynamic in the short, medium and long range. Both types are admirably demonstrated by Harald Vogel in his 1997 recording.¹⁶ Changes in dynamic are achieved by changes in string tension and therefore affect the quality and intensity of sound, not just the overall volume.

For me the greatest strength of the clavichord over the organ is clarity. Lower pitches in particular often become confused on the organ but on the Pedal clavichord the pedal line and tenor manual part gain much clarity and precision of speech. And 8' alone in the pedal increases this transparency, for example in the serpent-like pedal ostinato *Jesu, meine Freude* BWV 610 (and especially the trio *Nun komm, der Heiden Heiland* BWV 660 from

'The Eighteen'). For the majority of chorales with active semiquaver *figurae* (for example, *Lobt Gott, ihr Christen allzugleich* BWV 609), and those with a high density of smaller notes values and predominant low textures (*Mit Fried' und Freud' ich fahr' dahin* BWV 616) the clavichord brings both expressive lucidity and freedom. Likewise, exaggerated dynamic shapes, not easily brought out on the organ, as in *Von Himmel kam der Engel Schaar* BWV 607. Dramatic chorales where the clavichord must work to bursting point (*In dir ist Freude* BWV 615 and *Christ ist erstanden* BWV 627) and highly expressive chorales reliant on the subtle reiterations of rhetorical and figurative detail (*In dich hab' ich gehoffet, Herr* BWV 640) demonstrate the touch and dynamic superiority of the clavichord. Most importantly, it brings a new and individual variety of affective characters.

The pedal clavichord is very demanding to play. It can teach the organist how to sustain musical ideas, listen and react. Its unique touch (by which the player must actively sustain the tone at all times), clarity in the tenor and bass, historically acknowledged appropriateness in polyphony,¹⁷ and greater responsiveness to rhythmic nuance, and vocal and instrumental effects, can all feedback positively into organ playing. Even the clavichord's two main limitations, lack of sustain and narrower upper and lower limits of tempo, can be turned to advantage. Sustain on the clavichord must often be enhanced (faked, even) in imaginative ways (by adding ornamentation, for example). The tempo question is also very interesting. Pieces do not have to go so fast or so slowly on the clavichord. Each instrument dictates the optimal tempi for a piece. Metronome markings become meaningless. What is important is making a good sound and appropriate musical rhetoric.

Apart from the technical and training aspects, there are many insights for organ performance: dynamic and phrasing, breathing and vocality, string playing as inspiration for rhythm and musical nuance, generally playing notes fuller (with tone), especially in the pedals, and thinking (and feeling) the music from the bass upwards. As Jacob Adlung put it in 1726:

*Anyone who has learned well on a clavichord can also handle an organ, harpsichord, or such, all things being equal; that is why these instruments are used for teaching. Some spurn them because they are so muted, and it is indeed true that many of them turn out too soft. But there are some that will hold their own in an ensemble of several violins. And even if they are more muted than other instruments, the fact remains that [their tone] is delicate; it is not possible to express the graces (Manieren) as well on any other [instrument] as on the clavichord.*¹⁸

Terence Charlston performs on harpsichord, clavichord and organ, and his extensive discography includes mainstream and less-familiar repertoire from the Middle Ages to the present day. He is Professor of Harpsichord and Chair of Historical Keyboard Instruments at the Royal College of Music, where he was awarded honorary Fellowship (FRCM) in 2020. www.charlston.co.uk.

Notes

- 1 Terence Charlston, 'A visit to the GOArt project, Göteborg', *British Clavichord Society Newsletter*, 36 (November 2006), pp.13–16.
- 2 Coincidentally, the two instruments reside less than 10 miles from each other.
- 3 Francis Knights, 'Bach's pedal clavier: eight problem works', *RCO Journal*, xiv (2020/2021), pp.26–34.
- 4 Susi Jeans, 'The Pedal Clavichord and Other Instruments of Organists', *Proceedings of the Royal Musical Association*, 77th session (1950–1), pp.1–15. Karrin Ford, 'The Pedal Clavichord and the Pedal Harpsichord', *The Galpin Society Journal*, 1 (1997), pp.161–179, quotation at 178. Joel Speerstra, *Bach and the Pedal Clavichord: an Organist's Guide* (Rochester NY, 2004), pp.17–23.
- 5 See Denzil Wraight, 'A 14th-century clavichord according to the book of Baudecetus', <http://www.denzilwright.com/Baudecetus.pdf> (2012), p.16. Bernard Brauchli, *The Clavichord* (Cambridge, 1998), pp.40–41. Speerstra (2004), p.21.
- 6 The others are: Johann Georg Marckhert (1815, Ostheim v. d. Roehm, now in Bachhaus, Eisenach) and Anonymous (Glück?, Germany after 1844, now in Deutsches Museum, Munich), both with one manual and a separate pedal clavichord. See Jochen Rácz Misushima, 'The Pedal Clavichord. Part Two: Surviving Pedal Clavichords', *Clavichord International*, ii/2 (November 1998), pp.37–42. Also, Brauchli (1998), p.155 and Speerstra (2004), pp.52–68.
- 7 Jacob Adlung, ed. J. L. Albrecht and J. F. Agricola, *Musica mechanica organoedi*, 1726 (Berlin, 1768/R) §. 571, p.144. Quentin Faulkner, *Musica mechanica organoedi: Musical mechanics for the organist* (Zea E-Books, 2011), <https://digitalcommons.unl.edu/zeabook/6>, p.766.
- 8 Adlung (1726), §.598, p.159. Faulkner (2011), p.796.
- 9 From D-B Mus.ms. 15762/1-2.
- 10 Pedal Exercitium BWV 598 (D-B Mus.ms. Bach P 491), for example. Facsimile at https://www.bach-digital.de/receive/BachDigitalSource_source_00001544. The Mützel exercises (D-B Mus.ms. 15762/1-2) are available online at <https://digital.staatsbibliothek-berlin.de/werkansicht/?PPN=PPN731664469F> and <https://digital.staatsbibliothek-berlin.de/werkansicht/?PPN=PPN731810201>. Finn Viderø, *Organ School* (Copenhagen, 2/1963); Sandra Soderlund, *Organ Technique: An Historical Approach* (Chapel Hill, NC, 2/1982); Speerstra (2004), pp.95–113.
- 11 Peter Williams, *The Organ Music of J.S. Bach* (Cambridge, 1980–84), iii, pp.241–251; Speerstra (2004), pp.95–128; Jochen Rácz Misushima, 'The Pedal Clavichord. Part One', *Clavichord International*, ii/1 (May 1998), pp.4–10 at 8–9; Ulrika Davidsson, 'The Pedal Clavichord as a Tool in Keyboard Education', *De Clavichordio*, x: Proceedings of the X International Clavichord Symposium Magnano, 2011 (2012), pp.63–82.
- 12 Jacques van Oortmerssen, *A Guide to Duo and Trio Playing: Studies in historical fingering and pedalling for the organ* (Sneek, 1986).
- 13 Hans Klotz, *Über die Orgelkunst de Gotik, Renaissance und des Barock* (Kassel, 2/1975), p.377, quoted in Williams (1980–84), i, p.9; see also Speerstra (2004), p.45.
- 14 And good clavichords were expensive even then; Ford (1997), p.178.
- 15 Williams (1980–84), vols.ii–iii.
- 16 Harald Vogel, *The Bach Circle, Volume 1 – Selected Organ Works*, Organeum OC-27901 (1997).
- 17 Zarlino thought the clavichord better suited to polyphony than any other instrument; Brauchli (1988), pp.90–1 and 314, n.70.
- 18 Adlung (1726), §. 572, pp.144–145; Faulkner (2011), pp.766–767.