Improvisation, da capos and palindromes in BWV 997 and 998

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Of Bach’s works for lute or Lautenwerk, the Suite in C minor BWV 997 and the Prelude, Fugue and Allegro in E; major BWV 998 are the only two substantial original compositions to date from the Leipzig years.¹ (For convenience I shall refer to them as 997 and 998.) In many ways they seem to be a pair. Both begin with a prelude and a large-scale da capo fugue. The treatments are complementary: 998 is in a relatively loose, improvised style; 997 is denser, more premeditated. 998 exists in a good autograph which has been dated on the basis of paper and handwriting to around 1735. The earliest datable copy of 997 is by Johann Friedrich Agricola, and the guess is that he copied it during his studies with Bach, between 1738 and 1741.² It therefore falls conveniently near the famous visit of the lutenists Silvius Leopold Weiss and Johann Kropfgans to Bach in Leipzig in August 1739. Although the dates point to a similar time of composition, there is a crucial difference in notation that indicates different intentions. 998 is in normal staff notation and is designated for ‘Luth. ò Cembal’, which could mean lute or harpsichord, or possibly lute-harpsichord, or all three. All the staff-notation versions of 997 are designated for keyboard, but three of the movements exist in a lute intabulation by Johann Christian Weyrauch. The keyboard versions use a notation that Bach used for keyboard instruments playing lute parts, in which the upper stave is notated an octave above sounding pitch.³

Improvisation
Bach owned an apparently good lute at the time of his death, but he does not seem to have played the instrument to any extent himself. On the other hand, he

² For a summary of the source situation for 997 and 998 see David Ledbetter, Unaccompanied Bach: Performing the Solo Works (New Haven and London: Yale University Press, 2009), pp. 252–3 and 259.
³ In the Arioso No. 19 of the third (c. 1730) and fourth (c. 1749) versions of the St John Passion.
also owned two Lautenwerke at that stage, and Agricola says that he saw a Lautenwerk in Bach’s house around 1740, the time of the Weiss/Kropfgans visit and when Agricola probably copied out 997.\(^4\) There is no doubt that the Lautenwerk was an instrument favoured by Bach, on which he particularly liked to improvise. I have discussed elsewhere the improvised nature of the Suite in E minor BWV 996, which is probably to be associated with the purchase in 1715 by Duke Ernst August of Sachsen-Weimar of a Lautenwerk made by Bach’s Jena cousin, Johann Nicolaus Bach.\(^5\) The Prelude of 998 is remarkable for the economy and simplicity of its materials, very noticeable when compared with pieces in a similar vein such as the E\(_\sharp\)-major Prelude from the second Well-tempered Clavier and the Prelude of the E\(_\sharp\) Cello Suite.\(^6\) The *inventio* of the 998 Prelude is a six-bar block consisting of a pedal and a cadence formula (Example 1).

Unusually for Bach, this is repeated literally during the piece, three times in related keys and once back in the tonic. Episode material is made from a standard cycle-of-5ths continuo formula, run at two different speeds. Hermann Keller thought that the progression in bars 39–40 sounds so illogical that Bach could not have written it, and proposed Bach’s pupil Johann Ludwig Krebs, who played the lute, as the composer (Example 2a).\(^7\)

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\(^6\) For possible connections between the Prelude in E\(_\sharp\) major from the second Well-tempered Clavier and the Prelude of 998 see Ledbetter, *Bach’s Well-tempered Clavier*, pp. 268–70.

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It is true that Bach would more normally resolve the Neapolitan 6th in bar 39 onto a 4/2 chord on A₃ (that is, onto the last inversion of the home dominant 7th), but he may have wished for once to avoid this habitual resolution (Example 2b). The resolution to a 6/4/2 on E₃ is in fact another indication of the improvised nature of the piece. To get this resolution on the keyboard (Example 2c) one need only play a chord of F₃ major, then move the upper parts a semitone up to F major, and the bass a semitone down to E₃. The result may sound more typical of Anton Bruckner than of Bach, but the origin in keyboard improvisation is probably the same: Example 2d shows a similar progression in minor at the opening of Bruckner’s Ninth Symphony. The early training of many nineteenth-century composers was in eighteenth-century techniques of improvisation.⁸

Example 2b: Usual resolution of N⁶ to V₃/₂; 2c: Resolution of F₃ to E₃/₂; 2d: Opening progression of Bruckner’s Ninth Symphony, first movement

This Prelude and Fugue have often been compared to pieces by Silvius Leopold Weiss. In fact the pieces generally chosen as particularly similar do more to emphasise the difference between Bach and Weiss, and to highlight Bach’s peculiarity. André Burguéte, for example, cites the Prelude of Weiss’s Sonata 37 in C (Example 3).⁹

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This has the same standard lute effect of a diapason note struck with the thumb, followed by several upper notes, obviously a lute effect consciously chosen by Bach, but there the similarity ends. Weiss is much less formally elaborate. To my knowledge he did not use in his preludes what Joel Lester calls the ‘parallel-section’ structure favoured by Bach. Weiss uses the standard ingredients of a pedal, a sequence, and a scale in a looser and simpler way, more akin to keyboard preludes of this type by Johann Caspar Ferdinand Fischer. The opening of Weiss’s prelude could equally be compared with that of the Prelude of Bach’s E♭-major Cello Suite, but that also shows how exceptionally organised Bach is even in his most improvising mood. For Bach the pattern is an *inventio*, to be varied and developed. For Weiss it is a gesture, and when it has made its point he moves on.

The Prelude of 997 is a very much more elaborate use of the parallel-section principle. Comparison with other pieces of around this time, such as the Fantaisie über ein Rondo for clavier BWV 918, or the introductory Fantasia of BWV 1025, shows how tightly constructed and purposeful is this Prelude. It uses the expanded form of the ritornello shape much favoured by Bach in the second *Well-tempered Clavier* (also compiled around 1740). There is a closed first phrase of five bars (Example 4); then a spun-out phrase that passes through the relative major to the dominant; and a closing phrase with a chromatic tinge and cadence.\textsuperscript{11}

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\textit{Universitätsbibliothek, Ms. Mus. 284I\(\frac{1}{1}\)I\(\frac{1}{6}\), ed. Tim Crawford, Das Erbe deutscher Musik, Sonderreihe, Bände 13\(\frac{1}{1}\)4 (Kassel: Bärenreiter, 2007), vol. 7, p. 50.}

\textsuperscript{10} Joel Lester, ‘Heightening levels of activity in J.S. Bach’s parallel-section constructions’, \textit{Journal of the American Musicological Society}, 54/1 (Spring 2001), 49–96.

\textsuperscript{11} For details of the origin and Bach’s use of this structure see Ledbetter, \textit{Bach’s Well-tempered Clavier}, pp. 59–64.
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Example 4: BWV 997, Prelude, opening motif

All through this, new figurations are developed cumulatively from the opening *inventio*. Bach reruns this ritornello pattern twice, first in G minor, moulding these shapes further, and modulating to the next expected goal, the subdominant. The final section begins with a new, broken-up and intensified development of the *inventio*, concentrating on its expressive appoggiatura. Altogether this Prelude compares very favourably in its maturity of structural control and development with cognate preludes in the second *Well-tempered Clavier*.

Although Weiss does not use this principle in preludes, he does in dances, and in fact the ritornello shape I have just described is common in works of various composers of the time, including Weiss and Telemann. Weiss treats it more loosely than Bach and in a way that shows its convenience for improvisation, with a character head, a sequence based on one of a number of standard continuo patterns, a closing idea, and a cadence. It can then be rerun a number of times with variations and developments. The pattern of character head – sequential tail – and cadence is in fact an improvisation gambit that can be traced back at least to Thomas de Sancta Maria’s *Arte de tañer fantasia* of 1565.12

**Da capos**

Both 997 and 998 have substantial da capo fugues, and one has to ask what the attraction of this form in instrumental music was for Bach at a time when there was a general move away from the da capo form for arias. Five of the six cantatas of the *Christmas Oratorio* have at least one non-da capo aria, and the same trend is noticeable in Handel’s operas after 1730.13 Even within the da capo form, David Schulenberg has shown that Bach was exceptionally varied in his treatment.14 Even so, it is questionable whether some of the forms described are really da capo forms at all when it comes to instrumental music. In a true da capo aria the first

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12 Sancta Maria’s model was Josquin (*Libro llamado Arte de tañer Fantasia* (Valladolid: Francisco Fernandez de Cordova, 1565) *segunda parte*, p. 64).
13 The earliest item in the *Christmas Oratorio* is possibly from the St Mark Passion (1731), the rest are all 1733 or 1734.
section cadences in the tonic. If the first section follows the usual pattern for a binary sonata or dance movement and has a modulation, usually up a 5th to the dominant, there can be an exact reprise if the final section starts in the subdominant and moves up a 5th, back to the tonic, a good example being the E-major Prelude from the first Well-tempered Clavier. A tonic reprise became more normal in the 1730s, with examples in the D-major and F♯-minor Preludes of the second Well-tempered Clavier. Yet we are still a long way here from the classical sonata principle and it is really more useful to see these pieces as further examples of Lester’s parallel-section model, in which each successive section further varies and develops the material. The notion that pieces with a tonic final section adumbrate the classical sonata form is encouraged merely by the fact that these pieces happen to have only three sections, which can be seen as equivalent to exposition, development, and recapitulation. In spite of Hugo Riemann, the tripartite model is by no means the only one – the F♯-major Prelude from the first Well-tempered Clavier has a total of five parallel sections.

Bach used a kind of da capo structure in a number of instrumental works from around 1720. Five of the preludes of the English Suites have a da capo, but this has more to do with Bach’s favoured combination of fugue and concerto than with the two-section aria da capo. The da capo in the English Suites is merely the opening ritornello section repeated en bloc at the end. Gregory Butler has suggested that Bach took this structure from Albinoni’s Concertos Opus 7 and Opus 9 (published in Amsterdam in 1715 and 1722), citing the third movements of the First and Sixth Brandenburg Concertos as examples. I do not find this entirely convincing since there is no evidence that Bach knew these particular Albinoni concertos, and it can hardly be surprising if two composers working with similar formal principles in a similar style do not occasionally hit on similar solutions. There is, however, no denying the main point of Butler’s comparison: the large tonic section at the beginning, repeated in toto at the end. An exceptionally complex example from this period is the Fugue of the C-major Violin Solo BWV 1005. This not only has the combination of concerto and fugue, with the entire opening section repeated da capo at the end, but it also has a clear binary structure, with a dominant cadence shortly after the half-way point and the subjects inverted thereafter, as are similar materials in the Gigue of Johann Paul Westhoff’s A-minor Suite for unaccompanied violin.

Johann Peter Kellner, in his copy of the C-major violin Fugue, simply wrote the words ‘Da Capo’ at the relevant point. In the 1720 autograph (P 967) Bach has filled out the texture of the beginning of the reprise in order to make it emerge from what has gone before and not be too crudely obvious. There is always a danger of anticlimax in a literal repeat. The formal combinations of this fugue are not there just for their own sake. There is a problem in writing such a long piece, based on an economical amount of material and for an instrument of restricted pitch range, of how to maintain impetus and make events significant. Bach’s sophisticated blend of formal prototypes provides the necessary orientation. The concerto format, with its contrast of ‘tutti’ passages, based on one texture and set

16 For details see Ledbetter, *Unaccompanied Bach*, pp. 148–60.
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of note values, and ‘solo’ passages, based on another texture and note values, marks out the broad areas. The binary element, emphasised by the inversion of subject and counter-subject after the ‘double bar’ (so to speak), then gives a yet larger division, and the da capo rounds it all off.

Moving on to the 1730s, Bach shows a renewed interest in da capo structure for fugues, although some of the works are problematic. The organ Fugue in C minor BWV 537/2 lacks the care that Bach shows in the violin Fugue to integrate the da capo and make it emerge as a climax from the last episode. This is one of the features of this C-minor Fugue that give one pause in attributing at least the da capo to Bach. The earliest source is a copy by J.T. and J.L. Krebs, dated 1751, and it is generally thought to be a Leipzig work, but various gaucheries in the da capo are difficult to believe of Bach in the 1730s and Peter Williams has suggested that Bach may have just written the words ‘Da Capo’ at the relevant point. Alternatively 537/2 may have been another incomplete fugue, like the C-minor fragment paired with the other Grigny-esque Fantasia BWV 562. In 537/2 there is no obvious tonic ending to the opening section and the da capo may have been a makeshift devised by either or both Krebs.

There are no such problems with the most obvious example of a da capo fugue from this time, the E-minor organ Fugue BWV 548/2, one of Bach’s greatest fugal creations. The earliest source is part-autograph, completed by J.P. Kellner, from around 1727 to 1732, and it may or may not be significant that the wedge shape of the subject, opening out via the augmented 6th to the octave, is the same progression that opens the famous aria ‘Pallido il sole’ from Hasse’s Cleofide which Bach may have heard in Dresden in September 1731. As with the English Suite preludes, this is not an aria da capo (with roughly equal sections) but a concerto da capo (repeating the opening ‘tutti’ at the end). What is significant is that the episodes are based on a different note value (semitones) from the first section (quavers), as is common with concertos. The first episode begins in as different a manner as possible from the opening section, and as usual with Bach when he sets up contrasting ideas, the rest of the fugue is the gradual amalgamation of the two, with the da capo built in as the climax of the final episode.

A further fugue that features this difference in note values between sections is the incomplete fugue of around 1738 that goes with the hand-crossing C-minor

17 Peter Williams, The Organ Music of J.S. Bach (Cambridge University Press, 2/2003), p. 62; Williams says that the da capo begins with the subject, actually it begins with the answer. According to Dietrich Kilian, the Fuga copy ‘beider Schreiber ist offenbar in einem Arbeitsgang entstanden’ (NBA KB IV/5–6, p. 330).
18 The final section of the Fugue would seem to require the combination of the main subject with the rising chromatic tetrachord subject of the middle section, along the lines of the A minor ‘manualiter’ Fugue BWV 904/2, but the subjects do not combine well and Bach may have abandoned the attempt. Peter Williams sees the quaver motif that develops into the countersubject of the chromatic subject as the linking factor (The Organ Music of J.S. Bach, p. 63).
19 The opera première was on the 13th and on the 14th Bach ‘let himself be heard on the organ at St Sophia’s Church in the presence of all the Court musicians and virtuosos in a fashion that compelled the admiration of everyone’ (NBR p. 311); his improvisations may have included reminiscences from the opera. For the main source of 548/2 see Russell Stinson, The Bach Manuscripts of Johann Peter Kellner and His Circle (Durham and London: Duke University Press, 1989), pp. 15 and 148.
clavier Fantasia BWV 906. It is possible to devise a makeshift conclusion by repeating the opening section da capo from where Bach breaks off, but it is not clear if this was intended to be a da capo fugue with a contrasting middle section, or an amalgamation type like the ‘Wedge’, and the various conclusions that have been attempted take different options. What is certain is that the Fugues of both 997 and 998 are much closer to the aria-type da capo than anything we have considered so far, with two sections of more or less equal length. Here Bach is interested in using the concerto-type change of note value from predominantly quavers to predominantly semiquavers to give the contrast that in an aria would normally be created by change of mode. Here again Bach’s treatment contrasts with that of the lutenist Weiss in, for example, the Fugue of his Sonata 22. Weiss uses the contrast of note value for more relaxed, prelude-like, episodes rather than to define a complete middle section. His subject is an improvisation warhorse designed to work in stretto with itself at various pitch and rhythmic intervals. When Weiss introduces his stretto it is unfortunate for him that our modern ears are full of the same stretto on Bach’s trumpets as the crowning glory of the B minor Mass, but that just demonstrates what can be achieved with these old traditional materials (Example 5).

\[\text{Example 5: S.L. Weiss, Sonata 22, Fugue, bars 106–14}\]

In contrast to this, the seeming simplicity of the E\textsubscript{♭} Fugue in 998 in fact conceals much contrapuntal art in that Bach gives an irregular, quasi-tonal answer (Example 6).


He did not need to do that and in fact his answer at first appears to have the weakness of striking the note B♭ three times, where a normal answer would go up to C in the middle. But this answer enables him to have a counter-subject that is a kind of free inversion and diminution of the subject, and gives him a shape that he can mould freely in different harmonic directions, which is one of the principal delights of this fugue, particularly in the middle section. Here again, as in the ‘Wedge’ BWV 548/2, Bach has built the beginning of the da capo into the concluding bars of the middle section (Example 7).

**Example 7: BWV 998, Fuga, dovetailed reprise**

Palindromes

As Bach experimented further with a more aria-like da capo principle in fugues, he seems to have become intrigued with its possibilities for symmetry. Symmetrical structures were in themselves nothing new. The E-minor Fugue from the first *Well-tempered Clavier* is a remarkable example from around 1720 of the 2:1 proportion, obviously deriving from this fugue’s unusual status as being in only two voices. After the exact mid-point, everything from the first half is inverted in the second. It is not of course a palindrome in the sense of some of Haydn’s minuets or of Alban Berg, but the second half is nonetheless a sort of mirror-image of the first. Another example from around that time is the first

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movement of the Second Brandenburg Concerto, also heavily based on the 2:1 proportion. In this case it clearly derives from the natural trumpet’s harmonic series, in which the harmonic number doubles with each octave, the octaves being numbers 1, 2, 4, 8 and 16 of the series. The trumpet also has two voices, the ‘heroic’ (or fanfare) and the ‘musical’ (or clarino), as prescribed on the title-pages of the classic tutors by Fantini and Altenburg. The movement is accordingly in two halves, with matching harmonic structures (Example 8).

Example 8: Second Brandenburg Concerto, harmonic structure of the first movement

A startling example of symmetry from the 1730s is the F-major Duetto from the third Clavie-Übung (published in 1739). This has been analysed so often that I need hardly go into it here, except to say that it is a two-voice da capo fugue with an A section of 37 bars and a B section of 74 bars. From the exact midpoint (bar 74 of the total piece) Bach inverts and reverses the order of events of the first half of his B section (Example 9). He makes the mirror image as obvious as possible by the clear directionality of his themes around bar 74: from bar 69 he has the subject recto in major in the left hand, with a straight descending chromatic scale in the right hand; then from bar 74 the subject is inverso in minor in the right hand with the straight chromatic scale ascending in the left hand.

Example 9: BWV 803, Duetto in F major, mid-point, bars 69–78

There are purely compositional fascinations here that must have attracted Bach, such as the extreme economy possible with permutational material, something he

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23 Girolamo Fantini, Modo per Imparare a sonare Di Tromba Tanto Di Guerra Quanto Musicalmente (Frankfurt: Daniel Watsch, 1638); Johann Ernst Altenburg, Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst (Halle: Joh. Christ. Hendel, 1795).
had learnt in early cantata choruses. The rigidity of the scheme and its chromatic language made Hermann Keller exclaim in despair: ‘Darf ich es sagen, dass ich das Stück nicht verstehe?’  

One possible clue is in the six-pointed star on the title-page of Johann Heinrich Buttstedt’s *UT, MI, SOL, RE, FA, LA* (of 1716), in which the upward-pointing triangle represents the major triad, and the downward pointing triangle the minor triad, all adding up to ‘tota musica et harmonia æterna’. Bach himself used a similar formulation: ‘Fa Mi, et Mi Fa est tota Musica’ in conjunction with the canon BWV 1078 dedicated to Benjamin Gottlob Faber in 1749, alluding to the fact that Fa Mi is a solmisation for the notes FABE. It is also a solmisation for BACH. The F-major Duetto specialises in major/minor combinations, and diatonic/chromatic contrast (‘concordia discors’). Commentators have probably been right to see Cross symbolism; there is little else that can explain such an extreme chiastic scheme, and Albert Clement has identified what may be a literary justification for that. The extreme economy of the ‘Duetto’ may reflect the extreme concentration of meditation that the subject of the Cross evokes.

The C-minor Fugue of 997 shares with the Fugue of 998 the aria-type da capo form and a countersubject that is a free inversion of the subject, but otherwise it is a much more complex and substantial conception. It is certainly the greatest baroque fugue for lute, and one of Bach’s greatest fugues overall. Both it and its Prelude are worthy to stand beside the latest and greatest of the preludes and fugues of the second *Well-tempered Clavier*. It is beyond the scope of this article to go into all its beauties, but just to point out what I have never seen in any previous analysis, that its middle section has a quasi-palindromic structure that matches that of the F-major Duetto, but in a much freer and more expressive way. It is tempting to think that schematic works are earlier than more freely moulded ones, where the freedom seems to be the product of mastery and maturity. Some have thought that the Cello Suites antedated the Violin Solos for this reason, and it certainly seems to be so in comparing the D-minor Fugue of the first *Well-tempered Clavier*, which works through a strict scheme of inversions and augmentations, with that of the second, which seems designed to contrast with that in its freedom and maturity of expression. Yet the F-major Duetto and the Fugue of 997 have precisely the same contrast in two almost exactly contemporary pieces.

The middle section of the 997 Fugue consists of a group of three blocks that repeat in an ingenious palindromic formation, with the first appearance of each block in the dominant key G minor, and the second appearance in the tonic C minor (Example 10). Block A (bars 55–59) returns to finish the section (bars 24–29).
105–109); Block B (bars 75–83) returns in bars 98–104; Block C (bars 83–87) returns in bars 93–97. When repeated (from bar 93) the blocks are contiguous, without linking episodes, in a process one might call Ausbau. They are also condensed in that the repeated version of Block B (from bar 98) elides the head of the subject (if you compare bars 75–76) since it had already appeared inverted towards the end of Block C (in bars 95–96). The skilful dovetailing of this scheme, the asymmetry of linking episodes, and the effect of continual organic growth mean that, in spite of its logic, any feeling of schematic stiffness is avoided.
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Example 10: BWV 997, Fuga, middle section, bars 49–109

Has this arrangement some symbolic significance? Anne Leahy proposed a Trinitarian programme for 998. Has this arrangement some symbolic significance? Anne Leahy proposed a Trinitarian programme for 998. A Passion programme has been suggested for 997, based on the similarity of the opening motif of the Prelude (see Example 4) to that of the ‘Kreuzstab’ Cantata BWV 56; and of the Sarabande to the final chorus of the St Matthew Passion (Example 11).

30 Booklet notes for Andreas Martin, Bach Lute Works, CD HMI 987051 (Harmonia Mundi Iberica, 2004).
The Fugue, with its chiastic subject and countersubject, can now be seen to have a quasi-palindromic middle section, matching that of the F-major Duetto but in a much freer and more expansive way. It may be that the theme of the Cross is being worked out here too (Example 12).