

L B M P - 0 2 8 a

J O H A N N S E B A S T I A N B A C H

T H E A R T O F F U G U E

A R R A N G E D F O R T W O K E Y B O A R D S

P R I M A P A R T E

Edited and arranged by

Francis Knights



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## 1. INTRODUCTION

Bach completed his first version of the *Art of Fugue* in about 1742,<sup>1</sup> at about the same time as composing or collecting together the 24 Preludes and Fugues that comprise the second book of the *Well-Tempered Clavier*,<sup>2</sup> and at the same time as publishing the Goldberg Variations. The early 1740s thus saw him preoccupied with both fugue and canon. However, Bach decided to continue working on and greatly expanding the *Art of Fugue* during the following years, a process that he had nearly completed by the time of his death. The work was then engraved and posthumously published as it stood by his heirs in Autumn 1751,<sup>3</sup> with a revised edition containing minor corrections - and including a longer Preface by Marpurg - being published at Easter 1752. The discounted launch price was already high at 5 *Reichsthalers*, to rise to at least 10 (the equivalent-sized *Clavierübung* III of 1739 cost 3), but it was later reduced to 4 (1756), by which time C. P. E. Bach was hoping to dispose of the printing plates for the value of their metal, only about 30 copies having been sold.

## 2. THIS EDITION

The 1752 edition was that which would have been known to the few connoisseurs (including Mattheson and Samuel Wesley) lucky enough to access a copy during the second half of the 18th century. It was re-edited fifty years later by Vogt (Paris, 1801) and Nägeli (Zurich, 1802), with the Bach Gesellschaft edition by Wilhelm Rust (1878) finally taking full account of the composer's (incomplete) autograph as a source.<sup>4</sup> The 1752 edition thus represents the version circulating for the first century of the work's life, and in the version approved by his sons; it has therefore been used as the sole source here. In the print (unlike the '1742' copy) the canons are notated in realized form, which means that they are only given in one version, when for some an alternative is possible.<sup>5</sup>

The source is here presented complete, other than that the original three-part mirror fugues (sometimes called Contrapunctus 13)<sup>6</sup> are here omitted in favour of the two-keyboard arrangement later in the print, and the 'Contrapunctus a 4' that follows the

<sup>1</sup> For an edition, see Bach (2020). The structure and contents of that version (using the numbering of this edition) are 1, 3, 2, 5, 9, 10, 6, 7, 15, 8, 11 and 14.

<sup>2</sup> C. P. E. Bach's original 1751 publication announcement for *Die Kunst der Fuga* intriguingly describes it as containing '24 examples'; see David and Mendel (1998), p.258.

<sup>3</sup> The order and content of the print relative to Bach's intentions has been endlessly debated; see Butler (1983) and Wilson (2014), for example. Claims of fundamental mathematical structures lying behind the work (Loïc and Costa (2011): 'the whole architecture of *The Art of Fugue* is based on the use of the Fibonacci numbers and the golden ratios' (p.189); and Tatlow (2015)) are necessarily compromised by this uncertainty.

<sup>4</sup> Now the first section of D-B Deutsche Staatsbibliothek Mus. ms. autogr. Bach P 200.

<sup>5</sup> See Yearsley (2002), pp.193-195.

<sup>6</sup> Bach (1752), pp.41-44; for an edition see Bach (1989), pp.56-61.

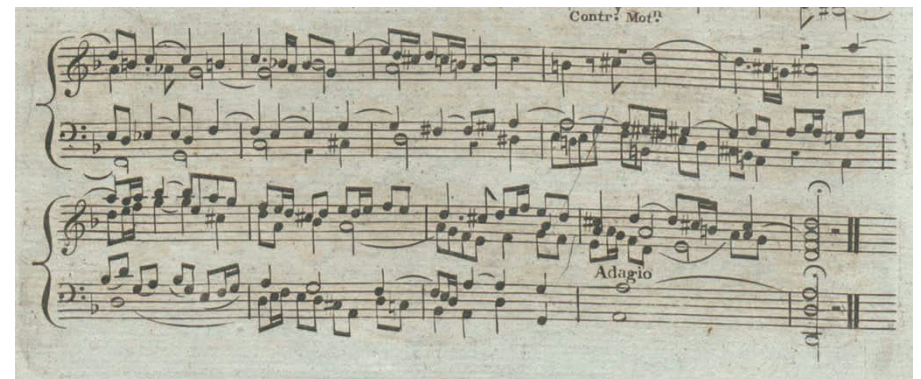
<sup>7</sup> Bach (1752), pp.45-47; see also Kerman (2005), pp.39-49.

<sup>8</sup> This is most unusual; while Bach was known to extend fugues (for example, those in E minor and

mirror fugues is not included.<sup>7</sup> This latter piece was added to the print in error (the different opening makes it look like another work), but is actually an early version of Contrapunctus 10, with 22 bars added at the beginning.<sup>8</sup>

## 3. COMPLETIONS

The printed edition offered the chorale *Wen[n] wir in hoechsten Noethen* - presented as Bach's deathbed compositional act - at the end by way of compensation for the incomplete final fugue.<sup>9</sup> While the *Art of Fugue* remained as a technical and theoretical monument,<sup>10</sup> and possibly unperformed,<sup>11</sup> the necessity of completing the unfinished fugue was not evident. The earliest attempt to make the *Fuga a 3 Soggetti* 'performable' appears to be by Joseph Dietenhoffer, in about 1800.<sup>12</sup> The Preface to his *Set of Ten Miscellaneous Fugues* notes, 'no Person ever attempting to finish it ... a Clause has been added to it at the Place where Bach left of', and the supplied ending is a simple two-bar perfect cadence marked 'Adagio' (ex.1).



Ex.1 Joseph Dietenhoffer, *Set of Ten Miscellaneous Fugues*, p.18 (end)

in A flat from Book 2 of the *Well-Tempered Clavier*), possibly for numerological reasons (see Tatlow (2015)), an additional exposition to an existing fugue seems unprecedented.

<sup>9</sup> Several decades later C. P. E. Bach annotated the final bars of the autograph manuscript with, 'NB While working on this fugue, in which the Name BACH appears in the countersubject, the author died'; David and Mendel (1998), p.260, illustrated at p.275. The chorale is in a different key, and hence an appendix to the work rather than part of it. See also Terry (1933).

<sup>10</sup> One of the first technical analyses was made by Moritz Hauptmann in 1841; for a translation, see Boyd (1987).

<sup>11</sup> The first recorded performance in Britain was on string quartet in Oxford in 1910; Meyerstein (1927). The first ever recording was made by the Roth Quartet in 1934, reissued on Divine Art DDH27804 (2013), while the earliest recording on two keyboards was made by Richard Buhlig and Wesley Kuhnle (pianos) in about 1935, reissued on Pearl 0105 (2002). See Gutmann (2012).

<sup>12</sup> Dietenhofer (n.d.).

However, the discovery by Gustav Nottebohm<sup>13</sup> that the ‘missing’ fourth theme could be combined with the other three acted as a spur to a variety of completions. To date, some two dozen performers and musicologists have provided versions of the final fugue, published and unpublished, including Rudolf Barshai, Erich Bergel, Alexandre Boëly, Thomas Daniel, Kimiko Douglass-Ishizaka, Henrik Dyhr, Geir Øyvind Eskeland, Michael Ferguson, Zoltán Göncz, David Goode, Kevin Korsyn, Colin MacKnight, Davitt Moroney, Hugo Riemann, Lionel Rogg, David Schulenberg, Yngve Jan Trede, Daniil Trifonov and Helmut Walcha.<sup>14</sup>

This edition provides three numbered alternatives of the ending to No.21: that from the source, which is truncated at the last cadence before the music breaks off; with the seven additional bars written by Bach in the incomplete manuscript;<sup>15</sup> and with Donald Tovey’s substantial 1931 completion.<sup>16</sup> This is supplemented in an Appendix with Tovey’s own quadruple invertible fugue in the manner of Bach, an extraordinary technical achievement composed to fulfil the Obituary’s description of the work’s ‘missing’ culminating fugue:

[Bach’s] last illness prevented him from completing his project of bringing the next-to-last fugue to completion and working out the last one, which was to contain four themes and to have been afterward inverted note for note in all four voices (C. P. E. Bach and J. F. Agricola, *Obituary* (1754)).<sup>17</sup>

#### 4. INSTRUMENTATION

It was evident early on that the *Art of Fugue* was playable on the keyboard from open score,<sup>18</sup> but not until Gustav Leonhardt’s influential 1952 book<sup>19</sup> was the case fully made that it was a keyboard work as such. In fact, statements to the effect that the work fits under ten fingers are not strictly correct: the mirror fugues exceed Bach’s normal stretches, while the two-clavier arrangements obviously require more than one player and one instrument.<sup>20</sup> And no one keyboard type covers all the options: the canons exceed the normal organ compass, while the final appended chorale is an organ work.<sup>21</sup> Therefore, if the *Art of Fugue* is a ‘keyboard’ work, it is not one which can be played

<sup>13</sup> Nottebohm (1880, 1881).

<sup>14</sup> For a description of a number of these, see Overduin (2001) and MacKnight (2021), p.392. Any of them may be substituted for the Tovey version printed here.

<sup>15</sup> Some players will wish to end by breaking off with Bach’s last notes; in the words of David Schulenberg, this is ‘a dramatic gesture but one that invites a sentimental response’ (Schulenberg (2006), p.424).

<sup>16</sup> New research using computational tools to assess the stylistic closeness to Bach of a number of completions rates Tovey quite highly; see Paz, Knights, Padilla and Tidhar (forthcoming). Tovey’s version is probably on the long side; Tatlow (2015), p.246 uses numerological methods to propose that just 41 bars are missing, a figure actually very similar to a number of other completions.

<sup>17</sup> David and Mendel (1998), p.304.

<sup>18</sup> Carl Czerny had produced a heavily-edited keyboard edition in about 1830.

<sup>19</sup> Leonhardt (1952), supported by his 1953 Bach Guild recording on harpsichord, since reissued on

entire on any single type of keyboard, as it stands. Given the need for two claviers for No.18-19 anyway, and the strong tradition of keyboard duos in the Bach family,<sup>22</sup> the use of a pair of instruments (harpsichords, clavichords, organs) seems a strong solution. In fact, the original print is still reasonably serviceable for those fluent in C-clefs, one part reading the first and third lines and the other the second and fourth, but a corrected and well laid-out modern edition is preferable, as here. Both parts are given in full score in this edition, as much of the pleasure of performing comes from engaging with the contrapuntal dialogue between the players, but the *secondo* is displaced by a page throughout, in order that the page turns are different each time.<sup>23</sup>

#### 5. PERFORMANCE

The pieces can be categorized by technique into six groups: ‘simple’ fugues (1-4),<sup>24</sup> stretto fugues (5-7), fugues with multiple subjects (8-11), mirror fugues (12-13, 18-19), canons (14-17) and miscellaneous (20-21). There is no historic performing tradition for the *Art of Fugue*, and the composer himself may never have regarded it as a single entity for performance, so players may choose to give the entire work (about 90’) as one concert with an interval, or else select pieces or groups of pieces. For example, the canons and chorale might be omitted, or interspersed between the sets of fugues, or the main series of fugues (1-11, 20) could be performed as a single sequence.

The division between two players means that ornaments to the subjects can be supplied in full, by analogy (for example, in Contrapunctus 8 and 9). Canons could be shared between players (one hand on each instrument) if preferred, and conversely Contrapunctus 8 could be performed just by one player, using a standard edition.<sup>25</sup>

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April 2022

Vanguard Classics ATM-CD-1652 (2006).

<sup>20</sup> For a discussion of all these issues, see Knights (2020).

<sup>21</sup> Williams (2003), p.386 incorrectly states that the chorale (which C. P. E. Bach described as a ‘four-part church hymn’) can be played with two hands, and seems to doubt that it is an organ work.

<sup>22</sup> Knights (2021b).

<sup>23</sup> If there are no page turners, it is possible for one player to ‘lend’ the other a few notes from time to time to enable a smoother turn.

<sup>24</sup> Demeyre (2013), p.177 suggests that the term ‘simple’ indicates that here Bach had ‘consciously avoided the contrapuntal techniques for which the *Art of Fugue* subject was basically designed – stretto, diminution, augmentation, contrary motion, invertible counterpoint and subject transformation’.

<sup>25</sup> For example, that by Moroney; Bach (1989), pp.28-33.

JOHANN SEBASTIAN BACH

THE ART OF FUGUE

PRIMA PARTE



LYREBIRD

CONTRAPUNCTUS 1

Musical score for Contrapunctus 1, measures 1-8. The score is in G minor (one flat) and common time (C). It consists of two systems of staves. The first system has a treble staff with rests in measures 1-4 and a melodic line in measures 5-8, and a bass staff with rests throughout. The second system has a treble staff with a continuous melodic line and a bass staff with rests throughout.

9

Musical score for Contrapunctus 1, measures 9-16. The score is in G minor (one flat) and common time (C). It consists of two systems of staves. The first system has a treble staff with a melodic line and a bass staff with rests in measures 9-12, followed by a melodic line in measures 13-16. The second system has a treble staff with a melodic line and a bass staff with a melodic line throughout.

16

Musical score for measures 16-21. The score is written for two systems, each with a grand staff (treble and bass clefs). The key signature is one flat (B-flat). The first system (measures 16-21) features a melodic line in the treble clef and a bass line in the bass clef. The second system (measures 22-27) features a treble clef staff with whole rests and a bass line with a more active melody.

22

Musical score for measures 22-27. The score is written for two systems, each with a grand staff (treble and bass clefs). The key signature is one flat (B-flat). The first system (measures 22-27) features a treble clef staff with a melodic line and a bass line with a more active melody. The second system (measures 28-33) features a treble clef staff with a melodic line and a bass line with a more active melody.

29

First system of musical notation, measures 29-35. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music features a variety of note values including quarter, eighth, and sixteenth notes, as well as rests and slurs. The bass line is particularly active with many sixteenth-note passages.

Second system of musical notation, measures 29-35. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues with similar rhythmic patterns and melodic lines as the first system, with some slurs and rests.

36

First system of musical notation, measures 36-42. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues with similar rhythmic patterns and melodic lines as the previous systems, with some slurs and rests.

Second system of musical notation, measures 36-42. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues with similar rhythmic patterns and melodic lines as the previous systems, with some slurs and rests.

43

Musical score for measures 43-48. The score is written for two systems, each with a grand staff (treble and bass clefs). The key signature is one flat (B-flat). The first system (measures 43-48) features a melody in the treble clef and a bass line in the bass clef. The melody consists of eighth and quarter notes, with some rests. The bass line is more active, featuring eighth and quarter notes. The second system (measures 43-48) continues the melody and bass line, with the melody ending on a whole note and the bass line ending on a whole note.

49

Musical score for measures 49-54. The score is written for two systems, each with a grand staff (treble and bass clefs). The key signature is one flat (B-flat). The first system (measures 49-54) features a melody in the treble clef and a bass line in the bass clef. The melody consists of quarter and eighth notes, with some rests. The bass line is more active, featuring eighth and quarter notes. The second system (measures 49-54) continues the melody and bass line, with the melody ending on a whole note and the bass line ending on a whole note.

55

First system of musical notation, measures 55-60. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music features a complex melodic line in the treble staff with many accidentals and a more rhythmic accompaniment in the bass staff.

Second system of musical notation, measures 55-60. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues from the first system, showing a melodic line in the treble staff and a bass line in the bass staff.

61

First system of musical notation, measures 61-66. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues from the previous system, featuring a melodic line in the treble staff and a bass line in the bass staff.

Second system of musical notation, measures 61-66. It consists of two staves: a treble clef staff and a bass clef staff. The key signature has one flat (B-flat). The music continues from the previous system, showing a melodic line in the treble staff and a bass line in the bass staff.

# CRITICAL REPORT

## CRITICAL REPORT

The original engraving (Bach (1752)) is generally very accurate but varies somewhat in terms of clarity of layout and spacing from piece to piece; some cramped engraving is a result of the score only taking up 65 pages. Errors involve missing articulation signs, dots or accidentals rather than pitch or note duration mistakes.

Open-score clefs (C1, C3, C4, F4) have been modernized, as has the beaming. Original accidentals applied only to the note they appear before, with the exception of repeated pitches; accidentals above a note are here used to indicate editorial additions or to clarify ambiguities. However, all cautionary accidentals have been retained as in the original (their usage in some cases supports the argument that the work is an open-score keyboard piece), as have the movement titles. Ties, where reasonably assumed to be missing, have been added sparingly and marked with a short line through the centre (see Knights 2021c). Pairs of tied crotchets - many systems of the original engraving end with a partial bar - have been replaced with a minim, and so on, without comment. Original lengths of final notes appear as in the engraving, but what appear to be repeat marks at the end of a number of fugues – the purpose of which is unclear - have been suppressed.

In the commentary, lower-case Roman numerals indicate stave from highest to lowest, followed by /, bar number, crotchet beat and note within that beat. Thus ii/55.2.1 indicates the first note of beat 2 of bar 55, second stave down. A very brief description of each piece is also given, and players are encouraged to analyze the works in detail, with the assistance of Tovey (1931b) or other writers.

### 1. Contrapunctus 1

Bach (1752), pp. 1-2.

Fugue in four parts, presenting the theme that will be developed throughout the work.

i/41.1 redundant natural

ii/52.2.1 redundant flat

### 2. Contrapunctus 2

Bach (1752), pp. 3-5.

Fugue in four parts, accompanied by dotted figures throughout (note that these were even quavers in Bach's earlier version; see Bach (2020), pp. 8-10).

ii/49.1.2 flat added

iii/64.4 flat in error for natural

### 3. Contrapunctus 3

Bach (1752), pp. 6-8.

Theme in inversion, with chromatic accompaniment.

ii/17.2 originally crotchet–quaver for dotted crotchet (tie missing)

### 4. Contrapunctus 4

Bach (1752), pp. 8-12.

Theme in inversion, with varied episodes.

iv/85.4.2-86.1 redundant slur omitted

### 5. Contrapunctus 5

Bach (1752), pp. 13-15.

Theme filled in with dotted figures, with entries in contrary motion, and the use of stretto.

### 6. Contrapunctus 6 a 4 in Stylo Francese

Bach (1752), pp. 16-18.

'French-style' dotted rhythms are incorporated, with the version of the theme from Contrapunctus 5 heard in contrary motion and in diminution (half note values); stretto is used extensively. By comparison, the early version (Bach (2020), pp. 22-25) does not give the 'Stylo Francese' title and has fewer dotted rhythms.

i/45.2.3 natural missing

ii/51.1 quaver rest misplaced in previous bar

ii/76.3 dot missing

### 7. Contrapunctus 7 a 4 per Augment et Diminut

Bach (1752), pp. 19-21.

The themes from Contrapunctus 5 appear again, also in contrary motion, but now in both augmentation and diminution. Densely constructed, with only one short episode.

iii/13.1.4 sharp missing

iii/36.1 dot missing

iii/51.2.1 dot missing

iii/54.4 redundant slur omitted

### 8. Contrapunctus 8 a 3

Bach (1752), pp. 21-25

A triple fugue with three expositions; the themes are combined at the end. The three-part texture has been divided between the two players by alternating the phrases of the inner voice; sometimes the final note is extended from a quaver to a crotchet to provide a slight overlap, or otherwise doubled (ii/33.1, iii/136.1, ii/168.1, ii/187-188).

i/32.3.1 sharp in error

i-iv/188 repeat mark suppressed

### 9. Contrapunctus 9 a 4 alla Duodecima

Bach (1752), pp. 26-28.

A double fugue, with the theme from Contrapunctus 1 returning in augmentation; invertible counterpoint at the 12th is the principal feature.

i-iv/130 repeat mark suppressed

#### 10. Contrapunctus 10 a 4 alla Duodecima

Bach (1752), pp. 29-31.

A further double fugue, this time using invertible counterpoint at the 10th.

i-iv/120 repeat mark suppressed

#### 11. Contrapunctus 11 a 4

Bach (1752), pp. 32-36.

A triple fugue that reworks the three themes from Contrapunctus 8, using inversion.

i/57.2 quaver rest missing

iii/67.1 dot missing

iv/94.3 semiquavers in error for quavers

i/101.4 possible triplet implied

iv/162.2 quaver rest missing

#### 12. Contrapunctus [rectus] a 4

Bach (1752), pp. 37-38.

12. and 13. are a pair of mirror fugues, with the same music upside down, and using the main theme transformed into 3/2. The source titles 12 'inversus' in error.

iv/78.3 dot missing

#### 13. Contrapunctus inversus a 4

Bach (1752), pp. 39-40.

This is the last piece in the print titled 'Contrapunctus'.

ii/33.3 semibreve rest in error for dot

i-iv/56 repeat mark suppressed

#### 14. Canon per Augmentationem in Contrario Motu

Bach (1752), pp. 48-50.

Canon in two parts, with the second voice heard simultaneously augmented and inverted.

i/23.3-24.1 slurs from grace note to main note, but a slur on the paired quavers may have been intended, as in bars 75-76

ii/82.2-3 slur placed a note early (compare i/30)

#### 15. Canon alla Ottava

Bach (1752), pp. 51-52.

Canon at the octave.

ii/7.3 staccato dot missing

ii/48.1 appoggiatura missing

ii/68.3 staccato dot missing

ii/88.2.3 sharp missing

#### 16. Canon alla Decima Contrapunto alla Terza

Bach (1752), pp. 53-54.

Canon at the 10th. A short melodic flourish may be added in bar 81.

ii/79.3 originally two quavers, tie missing

i/81.1 dot missing

#### 17. Canon alla Duodecima in Contrapunto alla Quinta

Bach (1752), pp. 55-56.

Canon at the 12th.

The slurring of four-quaver groups is not consistent between four notes or one-plus-three notes, but the source has been replicated as closely as possible. Players may wish to make the phrasing consistent throughout.

#### 18. Fuga a 2 Clav

Bach (1752), pp. 57-58.

18. and 19. are a pair of mirror fugues, derived from Contrapunctus [13] a 3 (not included here) and with the addition of a free fourth voice throughout; two-keyboard performance is specified. The rhythmic notation, varying between even semiquavers, dotted semiquavers and triplets, is precisely indicated throughout (as it is, for example, in another similarly rhythmically complex Bach work, *Vater Unser in Himmelreich* BWV682, from *Clavierübung III*). However, partial rhythmic assimilation of the dotted rhythms to triplets may also be a performing possibility in this instance.

iv/32.1 originally GFE, leading to parallels with ii/32.1

iii/40.3 originally two semiquavers, amended to match iii/38.3

#### 19. Fuga a 2 Clav alio modo

Bach (1752), pp. 59-60.

ii/31.1 originally AGF, leading to parallels with iii/31.1

#### 20. Fuga a 3 Soggetti

Bach (1752), pp. 61-65; Tovey (1931a), pp. 104-108.

The 'unfinished' four-part fugue appears to complete the 'Contrapunctus' sequence, but is not named as such. It is a triple fugue, including the B-A-C-H motif from bar 193 (H is B natural in German), and where it breaks off in the autograph manuscript would almost certainly have developed into a quadruple fugue. Three numbered versions of the ending are supplied: that from the source (Bach (1752), p.65), which is truncated at the last cadence before the music ceases; with the seven additional bars written by Bach in the incomplete manuscript; and with Tovey's completion. The 1752 ending, in A major, may seem a curious makeshift, but this is not the final work in the print, and the original version of Contrapunctus 2 also ended in the dominant (Bach (2020), p.10). For a detailed discussion of the solutions to Bach's unfinished fugue, see Korsyn (2016).

iii/108.1-2 three quavers in error for crotchet and two quavers

i/114.2-3 two crotchets without tie may be an error for a minim

i/233.1 originally crotchet and crotchet rest

i-iv/233.3 1752 source ends here

### 21. Choral. Wen[n] wir in hoechsten Noethen

Bach (1752), pp. 66-67.

This organ chorale (also catalogued as BWV668a) was reportedly dictated on the composer's deathbed (David and Mendel (1998), p.260), but not actually composed there. It appears incomplete in another source as *Vor deinen Thron tret' ich* BWV668 and is also related to BWV641; see Williams (2003), pp. 310-311, 382-386.

### 22. Invertible Fugue on Four Subjects, Rectus

Tovey (1931a), pp. 116-127.

A description of the structure can be found in Tovey (1931b), pp. 50-57. It was published as for quartet (violin, viola and two cellos), and contains many articulations and dynamics suitable for strings, which have been omitted here (apart from selected phrase markings, applying mostly to conjunct paired crotchets), both as unnecessary for early keyboard instruments, and in order to match the format of Bach's original work. Those wishing to explore early 20<sup>th</sup>-century Bach performance style on the piano may wish to reinstate them from the source.

### 23. Invertible Fugue on Four Subjects, Inversus

Tovey (1931a), pp. 116-127.

iv/143/6 BB caused by inversion is provided with a Cello II *ossia* an octave higher by Tovey for the string version

## BIBLIOGRAPHY

For general reading on Bach's life and music, see Boyd (2006), Moroney (2000), Williams (2012) and Wolff (2005), with further historical and analytical detail available in Jones (2007, 2013) and Williams (2016). Four other very useful general books on the composer are Butt (1997), David and Mendel (1998), Boyd (1999) and Leaver (2017). For Bach's keyboard music and performance issues, see Badura-Skoda (1993), Troeger (2003) and Schulenberg (2006).

There are several hundred articles and books dealing with the *Art of Fugue* (see the Bach Bibliography, <http://swb.bsz-bw.de>), and Tovey (1931b), Butler (1983), Dirksen (1994), Demeyre (2013), Göncz (2013), Korsyn (2016) and MacKnight (2021) are among the most useful. In this edition, reference has also made to the versions by Tovey (1931a), Williams (1986), Moroney (1989) and O'Donnell (2020).

Johann Sebastian Bach, *Die Kunst der Fuge* (Leipzig, 2/1752).

Joseph Diettenhofer, *A Set of Ten Miscellaneous Fugues ... for the Organ or the Piano Forte* (London, n.d.).

Wilhelm Rust (ed), *Bach-Gesellschaft Ausgabe*, Band 25.1 (Leipzig, 1878).

Martin Gustav Nottebohm, 'J. S. Bach's letzte Fuge', *Musik-Welt*, xx (1880), pp. 232-236 and xxi (1881), pp. 244-246.

E. H. W. Meyerstein, 'The First Public Performance (1927) of Bach's "Art of Fugue"', *The Musical Times*, lxxviii/1018 (1 December 1927), p.1116.

Donald Francis Tovey (ed), *Die Kunst der Fuge (The Art of Fugue) by Johann Sebastian Bach* (Oxford, 1931a).

Donald F. Tovey, *A Companion to 'The Art of Fugue'* (Oxford, 1931b).

C. Sanford Terry, 'The Choral in "The Art of Fugue"', *The Musical Times*, lxxiv/1084 (June 1933), pp. 500-501.

Gustav Leonhardt, *The Art of Fugue - Bach's Last Harpsichord Work: An Argument* (The Hague, 1952).

Christoph Wolff, 'The Last Fugue: Unfinished?: Seminar Report: Bach's "Art of Fugue" - An Examination of the Sources', *Current Musicology*, xix (1975), pp. 71-77.

Gregory Butler, 'Ordering Problems in J. S. Bach's "Art of Fugue" Resolved', *The Musical Quarterly*, lxix (1983), pp. 44-61.

J. S. Bach, ed Peter Williams, *Kunst der Fuge* (Mainz, 1986).

George R. Boyd, 'Hauptmann's Commentary on the "Art of Fugue": A Translation', *Indiana Theory Review*, viii/2 (Fall 1987), pp. 45-66.

J. S. Bach, ed Davitt Moroney, *Die Kunst der Fuge* (Munich, 1989).

Zoltán Göncz, 'The Permutational Matrix in J. S. Bach's Art of Fugue. The Last Fugue Finished?', *Studia Musicologica Academiae Scientiarum Hungaricae*, xxxiii, Fasc.1/4 (1991), pp. 109-119.

Paul Badura-Skoda, *Interpreting Bach at the Keyboard* (Oxford, 1993).

Hans Heinrich Eggebrecht, trans Jeffrey L. Prater, *J.S. Bach's The Art of Fugue: The Work and its Interpretation* (Ames, 1993).

Pieter Dirksen, *Studien zur Kunst der Fuge von J. S. Bach* (Wilhelmshaven, 1994).

David Schulenberg, 'J. S. Bach's "The Art of Fugue, the work and its interpretation; The Riddle of Bach's last fugue', *Notes*, li (1995), pp. 1317-1321.

Zoltán Göncz, 'Reconstruction of the Final Contrapunctus of The Art of Fugue', *International Journal of Musicology*, v (1996), pp. 25-93.

John Butt (ed), *The Cambridge Companion to Bach* (Cambridge, 1997).

Hans T. David and Arthur Mendel (eds), rev Christoph Wolff, *The New Bach Reader* (New York, 1998), pp. 236-8.

Malcolm Boyd (ed), *Oxford Composer Companions: J. S. Bach* (Oxford, 1999).

Davitt Moroney, *Bach: An Extraordinary Life* (London, 2000).

- Jan Overduin, 'Nine Published Completions for Keyboard of BWV 1080, 19, from The Art of Fugue by J. S. Bach', *The American Organist*, 35 (2001), pp. 78-82.
- David Yearsley, *Bach and the Meanings of Counterpoint* (Cambridge, 2002).
- Richard Troeger, *Playing Bach on the Keyboard: A Practical Guide* (Pompton Plains, NJ, 2003).
- Joseph Kerman, *The Art of Fugue: Bach Fugues for Keyboard 1715-1750* (Berkeley, 2005)
- Christoph Wolff, *Johann Sebastian Bach: The Learned Musician* (Oxford, 2005).
- Malcolm Boyd, *Bach* (Oxford, 2006).
- Zoltán Göncz, *Joh. Sebastian Bach: Contrapunctus 14* (Stuttgart, 2006).
- David Schulenberg, *The Keyboard Music of J. S. Bach* (New York, 2/2006).
- Sylvestre Loïc and Marco Costa, 'The Mathematical Architecture of Bach's The Art of Fugue', *Il Saggiatore musicale*, xvii/2 (2011), pp. 175-196.
- Peter Gutmann, *Bach, The Art of the Fugue* (2012), <http://classicalnotes.net/classics4/bachart.html>.
- Richard Jones, *The Creative Development of Johann Sebastian Bach*, 2 vols. (Oxford, 2007, 2013).
- Peter Williams, *Bach: A Life in Music* (Cambridge, 2012).
- Ewald Demeire, *Johann Sebastian Bach's Art of Fugue: Performance Practice Based on German Eighteenth-Century Theory* (Leiden, 2013).
- Zoltán Göncz, *Bach's Testament: on the philosophical and theological background of The Art of Fugue* (New York, 2013).
- Glen Wilson, 'Bach's Art of Fugue: suggestions for the last gap', *Early Music*, xlii (2014), pp. 249-257.
- Ruth Tatlow, *Bach's Numbers: Compositional Proportion and Significance* (Cambridge, 2015).
- Peter Williams, *Bach: A Musical Biography* (Cambridge, 2016).
- Kevin Korsyn, 'At the Margins of Music Theory, History, and Composition: Completing the Unfinished Fugue in Die Kunst der Fuge by J. S. Bach', *Music Theory & Analysis*, iii/11 (October 2016), pp. 115-143.
- Robin A. Leaver (ed), *The Routledge Companion to Johann Sebastian Bach* (Abingdon, 2017).
- Anatoly P. Milka, trans Marina Ritzarev, *Rethinking J.S. Bach's Art of Fugue* (London, 2017).
- J. S. Bach, ed John O'Donnell, *Die Kunst der Fuga, 1742* (Tynset, 2020).
- Francis Knights, 'Bach's Art of Fugue as a keyboard work', *Dolmetsch Foundation Bulletin*, New series No.38 (Autumn 2020), pp. 8-12.
- Francis Knights (ed), *Complete Keyboard Duos by the Bach Family* (Tynset, 2021a)
- Francis Knights, 'Early keyboard duets', *Sounding Board*, xvi (2021b), pp. 21-33.
- Francis Knights, 'To tie or not to tie? Editing early keyboard music', *National Early Music Association Newsletter*, v/1 (Spring 2021c), pp. 15-19.
- Colin MacKnight, 'Ex Uno Plures': *A Proposed Completion of Bach's 'Art of Fugue'*, DMA dissertation (Julliard School of Music, 2021).
- Ivan Paz, Francis Knights, Pablo Padilla and Dan Tidhar, 'An Information-Theoretical Method for Comparing Completions of Contrapunctus XIV from Bach's Art of Fugue', *Empirical Musicology Review* (forthcoming 2022).