

Bach's *Well-tempered Clavier*

Das Wohl temperirte Clavier.

Præludia, 2.

Fugen Läng alle Tore und Senitoria,
Es seß tertiam majorem als Ut Re Mi an den,
gunt, als ein tertiam minorem ut Re.

Mi Fa Soloprant. Dem
Neben und Gehörig von Lohr-Geirigen
Medicallischen Göttern als ein vater in Tingen, Pö.
Die von Kadel jeneren Göttern
Zeit-Verstand aufgezogen

und vorführen von
Gosam. Pöaslian. Göt.

p. h. Göt. Göt.

Göt. Göt.

Göt. Göt.

rectore d. r.

Göt. Göt.

Göt. Göt.

1742.

Bach's *Well-tempered Clavier*

THE 48 PRELUDES AND FUGUES

David Ledbetter

YALE UNIVERSITY PRESS
NEW HAVEN AND LONDON

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Set in Bembo by Northern Phototypesetting Co. Ltd, Bolton
Printed in Great Britain by The Bath Press

ISBN 0-300-09707-7

Library of Congress Control Number 20021099926

A catalogue record for this book is available from the British Library

10 9 8 7 6 5 4 3 2 1

Published with assistance from the Annie Burr Lewis Fund.

Frontispiece: Bach's original title-page (1722) for Book I.

In memory of
Stanislav Heller

Contents

List of illustrations	x
Preface	xi
Abbreviations	xv
Introduction	1
1. The 1722 title-page	1
2. Genesis and sources	2

Part One: Concepts

ONE	Clavier	13
	1. Clavier	14
	2. Harpsichord	16
	3. Clavichord	18
	4. Spinet	23
	5. Organ	25
	6. Lautenwerk	28
	7. Pianoforte	31
	8. Summary	33
TWO	Well-tempered	35
	1. The background to Bach's tunings	37
	2. Bach and tuning to 1722	41
	3. Bach and tuning c.1740	45
	4. Summary	49

THREE	Preludes	51
	1. The Prelude and Fugue as a genre	51
	Book I	53
	2. Prelude traditions	53
	3. The traditional sectional Praeludium	54
	4. Figuration Preludes	55
	5. The Invention principle	57
	6. Sonata, Dance and Ritornello principles	59
	7. Other types	64
	Book II	67
	8. Types in common with Book I	67
	9. Newer types	68
FOUR	Fugues	72
	1. Definition	72
	2. The theoretical background	73
	3. Bach and the term Fugue	75
	4. Rhetoric	76
	5. Expression and character	80
	6. <i>Stile antico</i>	85
	7. Types of invertible counterpoint	87
	8. Genera of counterpoint	94
	9. Verset fugues	96
	10. <i>Partimenti</i>	98
	11. The Concerto principle	101
FIVE	All the Tones and Semitones	104
	1. Circles and labyrinths	106
	2. Key integrity	111
	3. Ut Re Mi	118
	4. Solmisation and the Heavenly Harmony	120
SIX	Bach as Teacher	126
	1. Bach's educational tradition	127
	2. Bach's teaching programme	129
	3. Keyboard technique	131
	4. Composition	138

Part Two: Commentaries

SEVEN	Book I	143
EIGHT	Book II	235
	Appendix A: Examples 7.30, 8.9, 8.21	333
	Appendix B: The problem of temperament	343
	Notes	344
	Glossary	370
	Bibliography	374
	Index	399

Illustrations

Bach's original title-page (1722) for Book I. Reproduced by kind permission of the Staatsbibliothek zu Berlin – Preußischer Kulturbesitz, Musikabteilung mit Mendelssohn-Archiv.

frontispiece

Johann Heinrich Buttstett: frontispiece from *Ut, Mi, Sol, Re, Fa, La, tota Musica et Harmonia Aeterna* (Erfurt [1716]), continuing the tradition of Kircher and the Renaissance neo-platonist conception of the heavenly harmony. Reproduced by kind permission of the Leipziger Städtische Bibliotheken.

122

Johann Heinrich Buttstett: frontispiece from *Musikalische Clavier-Kunst und Vorraths-Cammer* (Leipzig [1713]); the figure with the hammer at the bottom left is Pythagoras, a reference to the frontispiece of Athanasius Kircher's *Musurgia Universalis* (Rome 1650). Reproduced by kind permission of the Staatsbibliothek zu Berlin – Preußischer Kulturbesitz, Musikabteilung mit Mendelssohn-Archiv.

123

D minor fugue, bars 1–18 in Bach's autograph P 415. Reproduced by kind permission of the Staatsbibliothek zu Berlin – Preußischer Kulturbesitz, Musikabteilung mit Mendelssohn-Archiv.

173

Preface

The two Books of *The Well-tempered Clavier* of J.S. Bach, commonly known in English as The 48 Preludes and Fugues, are at the centre of European civilisation, and are the beloved property of generations of people all over the world. If all of western art music were to be lost and only one work survive, this would be the first choice of many. The achievement of the music at an intellectual level alone puts Bach among the leading intellects of European history. Yet his ability to explore and develop musical materials is fully matched by the scope and power with which he explores moods, emotions and characters, and this is what has made his music so beloved by so many. His own contemporaries remarked how, in spite of formidable complexity, his mastery of ordering materials and of the arts of rhetoric was such that he could reach out and touch the hearts even of those with no special knowledge of musical techniques. The music of Bach transcends the techniques, styles and types of his time and can communicate directly with people who know nothing except the notes he wrote. Why, then, should anybody want to read, let alone write, a book about the very musical traditions he transcends?

The 48 grew out of Bach's teaching activity and, like other great educators in his tradition such as Lassus and Schütz, his teaching was by musical example rather than verbal pretext. He dealt almost uniquely with talented pupils intending to be professional musicians, and they provided him with a knowledgeable audience who could appreciate and encourage him in the speculative aspects of composition. He took virtually every ingredient of music available to him and treated it in the most inventive and original way, finding new possibilities and exploiting the tensions of new combinations, not only of materials, but also of styles, types, genres. All of these he transmuted in the alembic of a powerful intellect and personality, making something great from even humble materials so that they have endured beyond their time. To ignore the context means that we can see only the finished pieces, and have to invent some way of our own to try to penetrate the surface of the music. This was not Bach's

idea at all. His aim was to draw people into sharing his own competence and standards, through application and knowledge. If we are not drawn into this process we turn our backs on the most thrilling artistic training that music has to offer.

To write about music of such quality, so well known, and with such an enormous amount written about it already is a daunting prospect. I came to it through giving music college courses essentially for performers. The 48 Preludes and Fugues are the very sophisticated end product of many strands of a rich tradition, and an ideal vantage point from which to survey virtually all aspects of Baroque keyboard music. Players who are unaware of the stylistic variety in the background tend to make Bach's music sound all the same. But they are also naturally curious about music which so obviously does not reveal all its secrets on first acquaintance. Unlike more recent composers who were inspired by the 48 to produce works demonstrating personal systems of their own, Bach dealt entirely in traditional materials that were readily understood by (at least the better educated of) his contemporaries, and this is a fundamental difference. Awareness of the richness and variety of the tradition gives richness and variety to the performance.

For music analysis too a knowledge of context is vital, otherwise false conclusions can be drawn. In looking for recommendable literature I found much traditional analysis too narrowly focussed on pitch events. Bach lived at a time when prototypes of dance, sonata, concerto and aria were being fused, a process to which he contributed with great cogency and resourcefulness in his suites, partitas, sonatas, and preludes and fugues. An analysis that ignores elements of compositional prototype, style and genre is not telling us much about why Bach wrote the notes the way he did. Another reason why his music speaks is Bach's essential practicality as a musician: for him writing a fugue was as practical a matter as tuning a harpsichord. Yet even something so obvious as the very resourceful way in which he exploits pitch levels on the four-octave keyboard for the structural and emotional projection of a piece hardly figures in any analyses I have seen. Fugues in particular tend to be treated as abstract entities when for Bach they were rooted in improvisation, sonority, character and expression.

The literature about Bach stretches back one quarter of a millennium to his own time. This book reflects the period of the late twentieth-century early music revival, when the interest and dedication of a generation of instrument makers and players combined to make possible once more direct practical knowledge of the instruments and repertoires of Bach's time. Like others of my generation I started with Bach, but then went away to explore these other fields before returning. There has been a vast amount of research and new thinking about Bach in the last quarter-century. My intention is to make at least some of this available in a monograph which people can use to nourish

and deepen their understanding of the 48; not to present finished analyses and conclusions, but to sketch background concepts and techniques in the commentaries and thereby equip readers to make their own journeys of discovery in contemplating the music for themselves. This is only one of many possible approaches and I am very conscious of its limitations. Even in terms of context much more is now becoming known in detail about Bach's immediate environment. All I can say is that I have made a start, and I look forward to the refinements that others will assuredly bring. I have not addressed the vast issue of reception history. The 48 has been at the centre of music training and analysis since Bach's time, and his general influence on composers is immeasurable. This is the area where most new work is currently being done and much needs to be defined before a general summary can be attempted.

I originally aimed to deal with issues at the level where they interested me, while at the same time trying not to leave behind readers lacking the requisite technical knowledge. I found this ultimately too cumbersome, and the interesting points were swamped in basic explanations such as could be found in many other books. I have therefore necessarily had to concentrate on what is new. Explanations of basic concepts are readily available in the *New Harvard* and *New Grove* dictionaries of music. I have, however, included a Glossary of technical terms, and for the very technical business of tuning and temperament an Appendix that aims to put the first principles in a concise and straightforward way.

I wish to express my thanks to all who have assisted me in this project. Special thanks are due to the Leverhulme Trust, who provided me with a research year, and to the Research Committee and Library of the Royal Northern College of Music. I wish to thank particularly the music librarians of the British Library, Cambridge University Library, the Staatsbibliothek zu Berlin and the Leipziger Städtische Bibliotheken; also Bärenreiter Verlag for permission to reprint the extract in Ex.8.1b. Many individuals have contributed to my work, in particular Lothar Bemmman, John Caldwell, David Fuller, Hubert Henkel, Francis Knights, Dieter Krickeberg, Grant O'Brien, Winfried Schrammek and Lance Whitehead; Jon Baxendale has set the music examples. Of Bach scholars, I am particularly grateful to Alfred Dürr for his encouragement and for very kindly allowing me to see materials for the Neue Bach-Ausgabe edition of Book II before it was published, and to Yo Tomita, whose generosity with time and information is seemingly inexhaustible. Finally I would like to express personal gratitude to the memory of Joseph Grocock, who was an inspiring and unstinting teacher of fugue at an early stage of my career and whose own book on the 48 is due for publication at the same time as this; and to Brigitte von Ungern-Sternberg for much fun, support and assistance in Berlin.

Abbreviations

A large number of sources for *The Well-tempered Clavier* are mentioned in this book. It is not possible to give full details for all of them: for further information the reader is referred to the Critical Notes in AB I and II, and to KB V/5, and V/6.1 and 2.

AB I, II	<i>J.S. Bach: The Well-tempered Clavier, Part I, Part II</i> , ed. R. Jones (London: The Associated Board of the Royal Schools of Music, 1994)
BA I, II	<i>Johann Sebastian Bach: The Well-tempered Clavier I, II</i> , ed. A. Dürr (Kassel: Bärenreiter, 1989, 1996)
BG XIV	<i>Das wohltemperirte Clavier, erster Teil, zweiter Teil</i> , ed. F. Kroll, Gesamtausgabe der Bach-Gesellschaft, Jahrgang XIV (Leipzig: Bach-Gesellschaft, [1866])
BR	<i>The Bach Reader</i> , ed. H.T. David and A. Mendel (New York: Norton, 2/1966)
BWV	<i>Bach-Werke-Verzeichnis</i> , ed. W. Schmieder (Wiesbaden: Breitkopf & Härtel, 2/1990)
D-B	Staatsbibliothek zu Berlin
D-Dl	Dresden, Sächsische Landesbibliothek, Musikabteilung
DdT	<i>Denkmäler deutscher Tonkunst</i>
Dok.I, II, III	<i>Bach-Dokumente</i> , ed. W. Neumann and H.-J. Schulze (Kassel: Bärenreiter, 1963–78)
DTÖ	<i>Denkmäler der Tonkunst in Österreich</i>
GB-Lbl	London, The British Library
I-Bc	Bologna, Civico Museo Bibliografico-Musicale
KB V/5	Plath, Wolfgang, <i>Johann Sebastian Bach: Neue Ausgabe sämtlicher Werke Serie V. Band 5 Klavierbüchlein für Wilhelm Friedemann Bach. Kritischer Bericht</i> (Kassel: Bärenreiter, 1963)
KB V/6.1	Dürr, Alfred, <i>Johann Sebastian Bach: Neue Ausgabe sämtlicher Werke Serie V. Band 6.1 Das wohltemperierte Klavier I. Kritischer Bericht</i> (Kassel: Bärenreiter, 1989)
KB V/6.2	Dürr, Alfred and Bettina Faulstich, <i>Johann Sebastian Bach: Neue Ausgabe sämtlicher Werke Serie V. Band 6.2 Das wohltemperierte Klavier II. Kritischer Bericht</i> (Kassel: Bärenreiter, 1996)
MB	<i>Musica britannica</i>
MGG	<i>Die Musik in Geschichte und Gegenwart</i> , ed. F. Blume (Kassel: Bärenreiter, 1949–79); ed. L. Finscher (2/1994–)

NBA V/6.1, 2	<i>Johann Sebastian Bach: Das wohltemperierte Klavier I, II</i> , ed. A. Dürr, Neue Ausgabe sämtlicher Werke Serie V. Band 6.1, 2 (Kassel: Bärenreiter, 1989, 1995)
NBR	<i>The New Bach Reader</i> , ed. H.T. David and A. Mendel, revised C. Wolff (New York: Norton, 1998)
<i>New Grove</i> 2	<i>The New Grove Dictionary of Music and Musicians</i> , ed. S. Sadie (London: Macmillan, 2/2001)
NL-DHgm	The Hague, Gemeente Museum
PF	<i>Preludes Fughettas composed in conjunction with the Well-tempered Clavier II</i> , ed. A. Dürr (Kassel: Bärenreiter, 1995)
Schweitzer I, II	<i>J.S. Bach: Le musicien poète</i> (Paris 1905; enlarged German edition Leipzig 1908); translated E. Newman (London: A. & C. Black, 1911)
Spitta I, II, III	Spitta, Philipp, <i>Johann Sebastian Bach</i> (Leipzig 1873–80); translated C. Bell and J.A. Fuller-Maitland (London: Novello, 1883–5)
US-NH	New Haven, Yale University, The Library of the School of Music
US-Wc	Washington, Library of Congress
VBN	Beißwenger, Kirsten, <i>Johann Sebastian Bachs Notenbibliothek</i> (Kassel: Bärenreiter, 1992)
<i>Wegweiser</i>	Anon., <i>Kurtzer jedoch gründlicher Wegweiser</i> (Augsburg, 4/1708, 5/1718); partial ed. R. Walter (Altötting: Coppenrath, 3/1964)

Introduction

Bach had little patience with expressing his artistic purposes in words, at least in written form. The first volume of the *Bach-Dokumente*, in which his writings are collected, is by far the slimmest of the three, and the writings consist mainly of business letters and references. The one place where he did express his musical intentions verbally is in title-pages, whether of publications or of fair-copy manuscript collections such as the *Orgel-Büchlein*, the Inventions and Sinfonias, and *The Well-tempered Clavier*. In these the terms he used and the intentions he expressed are very revealing if read with a sense of their use in his environment. This book therefore has a series of six introductory chapters aiming to give a context for each of the principal terms of the 1722 title-page of *The Well-tempered Clavier* (Book I). Then, since both Books contain groups of pieces that work systematically through possibilities, details of which are vital for understanding the 48, not least for performers, and since people playing individual preludes and fugues will want some particular comment for the pieces they are working on, there are two chapters (one for each Book) giving more detailed information about each of the 96 pieces.

1. *The 1722 title-page*

The formulation of a title-page should ideally be brief and to the point, and in Bach's day took a standard form of: (1) motto, (2) statement of genre, (3) details of use, (4) author, (5) author's professional position, and (6) details of publication, where relevant.¹

The 1722 title-page may therefore be analysed as follows (with the principal terms in bold):

- | | |
|--|---|
| <p>(1) Das Wohltemperirte Clavier.</p> <p>(2) oder <i>Præludia</i>, und <i>Fugen</i> durch alle Tone und Semitonia, So Wohl <i>tertiam majorem</i> oder <i>Ut Re Mi</i> anlangend, als auch <i>tertiam minorem</i> oder <i>Re Mi Fa</i> betreffend.</p> <p>(3) Zum Nutzen und Gebrauch der Lehr-begierigen Musicalischen Jugend, als auch derer in diesem <i>studio</i> schon <i>habil</i> seyenden besonderem ZeitVertreib</p> <p>(4) aufgesetzt und verfertigt von Johann Sebastian Bach</p> <p>(5) <i>p.t.</i> HochFürstlich Anhalt-Cöthenischen Capel-Meistern und Directore derer Cammer <i>Musiquen</i>.</p> <p>(6) <i>Anno</i> 1722.</p> | <p><i>The Well-tempered Clavier</i>.</p> <p>or Preludes and Fugues through all the tones and semitones, both with the major 3rd, or <i>Ut Re Mi</i> and with the minor 3rd, or <i>Re Mi Fa</i>.</p> <p>For the use and improvement of musical youth eager to learn, and for the particular delight of those already skilled in this discipline</p> <p>composed and presented by Johann Sebastian Bach</p> <p>while capellmeister to the Prince of Anhalt-Cöthen, and director of his chamber music.²</p> <p>in the year 1722.</p> |
|--|---|

In taking these terms as chapter headings I have put the noun *Clavier* first and the qualifier *Well-tempered* second in order not to begin with what is probably the most abstruse discussion for the non-expert reader. There follow chapters on the prelude, the fugue, tonality, and the place of the 48 in Bach's educational programme.

Reference is made in the text to individual sources where they are relevant to the argument of this book. Full details of the very complex source situation are readily available in the Critical Notes of AB I and II, and in KB V/6.1 and 2. I have therefore not reproduced the details here, and have included only brief information in this Introduction in order to sketch the background to the genesis of the two collections.

2. Genesis and sources

Book I The origins of both Books probably go back to Bach's teaching at Weimar. Heterogeneous origins are more obvious for Book II, but Book I also is a composite collection. The only documentary evidence for the composition of (presumably) Book I is a section of E.L. Gerber's life of Bach in his *Lexicon der Tonkünstler* (Leipzig 1790). Gerber's father, H.N. Gerber, had studied with Bach in the mid-1720s, including *The Well-tempered Clavier* (Book I) which Bach played through to him no less than three times, so Gerber's 'certain tradition' may be a family one.³ The whole passage is worth quoting:

... And this astonishing facility, this fingering never used before him, he owed to his own works; for often, he said, he had found himself compelled

to make use of the night in order to be able to bring to realisation what he had written during the day. This is all the easier to believe since it was never his habit in composing to ask advice of his *clavier*. Thus, according to a certain tradition, he wrote his *Tempered Clavier* (consisting of fugues and preludes, some of them very intricate, in all 24 keys) in a place where ennui, boredom, and the absence of any kind of musical instrument forced him to resort to this pastime. (Dok.III p.468, NBR p.372)

Speculation has attempted to identify the ‘place’: perhaps the prison at Weimar where Bach was detained for a month just before he left Weimar for Cöthen at the end of 1717, or Karlsbad (Karlovy Vary in Bohemia), a spa town where he went in the suite of Prince Leopold of Cöthen on several occasions. The latter is unlikely since the purpose of his presence there was to demonstrate his own ability and to direct the other musicians the Prince took with him. The passage is based on things that are certainly true of Bach, but it is also tainted with decorative myth-making aimed at presenting Bach as extraordinary and unique in all respects, a feature common to many later anecdotes. The ‘fingering’ concerns Bach’s use of the thumb (a point also mentioned by C.P.E. Bach). Bach certainly seems to have developed a technique based on pivoting over the thumb, more advanced than what had been general in his youth, and the Book I preludes that appear in Wilhelm Friedemann Bach’s *Clavier-Büchlein* show the sort of exercise he developed for this. But he was by no means alone, and the technique he developed was no different from that described by Rameau in his *Méthode* of 1724. That Bach composed away from the keyboard will impress those unaccustomed to writing music, and of course he could never have produced the prodigious amount of concerted church music of his early Leipzig years had this not been so. But for keyboard music Gerber’s assertion is contradicted by C.P.E. Bach, who tells us that Bach tended to base his *clavier* works on improvisation (‘*Fantasiren*’; Dok.III p.289, NBR p.399). The ‘place of ennui and boredom’ also has generic associations, particularly with learned counterpoint (‘very intricate fugues’), just as the famous descriptions of the impassioned playing on the violin by Corelli (in the 1709 English translation of Raguenet), or on the clavichord by C.P.E. Bach (Burney) resonate with classic descriptions of the lyre playing of Orpheus. Luigi Battiferri, in the Letter to the Reader of his collection of learned keyboard *Ricercari* (Bologna 1669, a work which may be in the background to Bach’s learned counterpoint), claims to have written them ‘more to avoid idleness than for any other purpose’.⁴ There is a note of disparagement and apology here for such an uningratiating pursuit, shared by Gerber’s ‘*Zeitvertreib*’ (pastime), which is most definitely not shared by Bach’s ‘*besonderem Zeitvertreib*’ in the 1722 title-page. If there is a grain of truth behind Gerber’s story, it may apply to the more schematically planned fugues of Book I, though even these have a strongly tactile keyboard quality not found in Battiferri’s *ricercars*.

The sources of Book I give a more suggestive impression.⁵ The central, and by far the most important, source is the autograph fair copy (Staatsbibliothek zu Berlin, Mus.Ms.Bach P 415) whose title-page is analysed above.⁶ But there are also around half a dozen sources containing early versions of pieces. Of these the best known is the *Clavier-Büchlein* for Wilhelm Friedemann Bach, begun by Bach on 22 January 1720. Into this Friedemann, around 1721 and with assistance from his father, copied early versions of 11 of the first 12 preludes of Book I (there is no prelude in E flat major).⁷ The interest of this particular source, apart from its very direct connexion with Bach, is what it seems to reveal about Bach's educational programme and the place of the Book I preludes in it (this is discussed in Chapters Three and Six below). It also raises several questions. Was there originally a series of educational preludes without fugues? To what extent do the fugues really belong to the preludes, or were they originally two different collections, probably not covering all keys?

Suggestive as the *Clavier-Büchlein* is, it does not contain the very earliest known versions. These are in a manuscript (currently unlocated but there is a microfilm of it) copied around 1800 for J.N. Forkel (Bach's first biographer), who edited one of the very first printed editions of the 48 (Vienna: Hoffmeister, 1801).⁸ The copy was made from a (now lost) original that Forkel presumably had acquired from W.F. or C.P.E. Bach, both of whom he knew personally. Since this is already a complete copy of Book I it unfortunately tells us little about how the concept of a collection of preludes and fugues in all keys originally germinated in Bach's mind. For that we can only speculate, considering the nature of the pieces and the circumstances of Bach's career around 1720. In assessing the relationship between prelude and fugue, it should be remembered that fugue for Bach was not an abstract exercise. The ability to project complex counterpoint was for him the touchstone of good keyboard playing, so the fugues are no less an exercise in practical keyboard skill than the preludes (Dok.III p.476, NBR p.322).

Signs that a number of the pieces were originally written with the old 'Dorian' key signatures suggest that they were not conceived as part of a collection covering all keys. Also, some pieces show signs of having been transposed into the remoter keys (D sharp minor, G sharp minor), implying a mixed origin for the collection, with some pieces newly composed for the purpose and others brought in from older stocks. Some pieces may even have originally been notated in the old keyboard tablature (KB V/6.1 p.357). Judging by the early sources it looks as if Bach gradually built up the collection in the same way as he was later to assemble Book II, by having individual preludes and fugues on separate leaves, generally with the prelude on one side and the fugue on the other. These could be kept together in a box and corrected, jettisoned, or added to as Bach refined the pieces, until he was finally ready to make the

1722 fair copy.⁹ It was during this process that Bach got round to using the modern system of key signatures.¹⁰

The move towards using every note on the keyboard as a tonic was very much in the air at the time (fully discussed in Chapters Two and Five), so Bach may well have been working around to it anyway. As far as a proximate stimulus is concerned, this may have been provided by the Hamburg composer and writer on matters musical Johann Mattheson, who also seems to have been in the background to Book II. Mattheson is perhaps best known for his youthful escapades with Handel who, like many others, seems later to have wanted to keep him at arm's length (Burrows 1994 pp.16–18). Mattheson abandoned a career as singer and opera composer when he started to go deaf, and took to writing about music, particularly for a new type of elegant and lettered audience that had little patience with what they considered the pedantry and obscurity of traditional German writing. In 1713 he published his first book presenting his new view, replacing old cantoral tradition with current French fashion as implied by the word *Orchestre* in its title. His strictures on tradition raised hackles, most notably those of Johann Heinrich Buttstett, a distant relative of Bach's and organist at Erfurt, who in 1716 published a reply.¹¹ In it he defended technical aspects of the tradition such as the modes and solmisation (the system of hexachords based on calling the notes Ut Re Mi etc. rather than letters of the alphabet) by appealing to the old Renaissance neo-Platonist tradition of the heavenly harmony which, after all, had been subscribed to by Martin Luther himself and was the basis for the value placed on music in the Lutheran Church (see Chapter Five).

Bach himself deeply valued this tradition, not just as a large part of his connoisseurship of musical styles and materials, but also as the basis of the livelihood of generations of his family. In 1717 Mattheson published a second *Orchestre* defending the first and viciously attacking Buttstett. Whatever Bach thought of Buttstett, he could hardly overlook the fact that Mattheson had seen fit to include in this a quite gratuitous and obscene criticism of Bach's father-in-law, Johann Michael Bach, a good composer whom Bach respected, painting him as a provincial booby with inadequate grasp of fashionable French style.¹² In the midst of this Mattheson had the impudence to insert a patronising footnote addressed to J.S. Bach in Weimar, asking him to provide biographical information towards a projected Triumphal Arch (*Ehrenpforte*) of 100 German musicians, not in the event published till 1740 (Dok.II p.65, BR pp.228–9). It can hardly be wondered at that Bach failed to respond to this invitation. Further circumstances that may have a bearing are that Mattheson published in Hamburg in 1719 a collection of figured-bass exercises in all 24 keys, the first publication to do this; and that Bach was in Hamburg in November 1720 playing for the post of organist at the Jakobikirche. Bach rarely expressed himself in written words, but his 1722 title-page makes a point

of describing major and minor keys in old-fashioned terms of the hexachord (Ut Re Mi), and the very first prelude and fugue could be read as a supportive commentary on Buttstett's frontispiece (see Chapter Five and the commentaries on the C major and D minor pairs in Chapter Seven). There could be no finer irony than that Bach, the firm supporter of tradition, should have written the first collection of fully composed pieces to use every key as a tonic, amply demonstrating an advanced connoisseurship of the latest French styles and how they might be given depth by traditional techniques.

It is most unlikely that Bach intended printed publication of *The Well-tempered Clavier* of 1722. The cost of engraving such a quantity of complex music in keyboard score would have put copies way beyond the reach of its intended market.¹³ In any case, the prevalence of printed over manuscript copies of music did not begin to establish itself until the 1780s. Copying music was in Bach's day considered one of the principal ways of learning to compose, involving humility, effort and close observation. The 1722 fair copy was made by Bach as an exemplar for students to copy from. The success of his achievement may be gauged by the fact that more copies were made of it than of any other Bach work.¹⁴ From corrections made in P 415, and how these are reflected in copies, we may distinguish an original state and three stages of revision, commonly assessed as A1 (1722), A2 (perhaps 1732, the date at the end of the MS), A3 (probably after 1736), and A4 (probably in the 1740s; NBA V/6.1 p.X). The later revisions of Book I therefore overlapped with the preparation of Book II.

After Bach's death it is not known what happened to the autograph. It is not listed in C.P.E. Bach's estate in 1790. Robert Volkmann (composer) acquired it some time after 1840, and there is a tradition that it suffered flood damage from the Danube in Budapest where Volkmann lived from 1842. Volkmann gave it during his lifetime to Richard Wagener, professor of anatomy at Marburg, who presented it to the Royal Library, Berlin, in 1874. With time the MS deteriorated, particularly because the ferrous content of Bach's (home-made) ink oxidised and ate through the paper, meaning that note-heads would fall out like confetti when you opened a page. In order to counteract this a number of pages were covered with chiffon silk in 1941/2 (this is visible in the facsimile edition). It then turned out that the adhesive keeping the chiffon in place was in turn degrading the paper, so in 1986 the chiffon was removed and each page split (like Melba toast) and given a new paper core. Now it lives in a box containing the old binding (dating from the mid-nineteenth century), the bits of chiffon silk, and the MS itself in a linen folder (KB V/6.1 pp.19–20).

Of the copies, of special interest for performance indications are that by Bach's pupil C.G. Meißner (NL-DHgm 69.D.14, formerly known as the 'Zurich Autograph'; see NBA V/6.1 Anhang 3); Anna Magdalena Bach's (P 202), with many ornaments added by Wilhelm Friedemann Bach; and the

personal copy of Bach's pupil Kirnberger (not copied by him: *D-B Am.B.57* (1)), with fingerings presumably by Kirnberger (see the commentary on the B flat major prelude).

Book II During the decade 1735–45 Bach produced a phenomenal amount of keyboard music, both new works and revisions of old ones. Part II of the *Clavier-Übung* was published in 1735, Part III in 1739, and the Goldberg Variations in 1741. From 1738 to 1742 he put together Book II and at the same time prepared the manuscript of the so-called 'Eighteen' chorale preludes for organ (P 271). As these were finished he went straight into *The Art of Fugue* and prepared the first version of that (P 200) around 1742. Bach's preoccupations of the 1730s are most clearly seen in *Clavier-Übung* III. They are an interest in the most traditional (*stile antico*) and the most 'modern' (galant style), sometimes kept separate, but sometimes combined as opposite manners in the same piece. These are also worked in Book II, together with Bach's renewed interest in genera of counterpoint, an interest he was to develop systematically in *The Art of Fugue*.

There are several reasons why Bach may have wished to provide a counterpart to *The Well-tempered Clavier* of 1722. He had been using that as teaching material for fifteen years and very probably wanted variety, and also pieces in the latest styles. The late 1720s and 1730s are the time when he had the greatest number of pupils, with further talented children born in 1732 (Johann Christoph Friedrich) and 1735 (Johann Christian) who would eventually need to be catered for. The style issue was very important in the 1730s because of the criticism of him published in 1737 by Johann Adolph Scheibe, accusing him of a heavy, outmoded style, overloaded with counterpoint. The controversy over this was to plague Bach for the best part of a decade (NBR pp.337–53). In 1738 defences of him were published by a university friend, J.A. Birnbaum, and a learned friend and pupil, L. Mizler. On a day-to-day level it was shortly before this that Bach's relations with the Rector of the Thomasschule had reached their lowest ebb (1736–7). It is therefore not surprising that he retreated into the more speculative area of his composition (keyboard music) where he had the largest and most appreciative following, and where he could deal with the most enduring artistic principles. In addition, it was around 1738 that his colleague at the Frauenkirche at Halle, Gottfried Kirchhoff (who took the post there in 1714 when Bach turned it down), published his (now lost) *L'ABC musical: Präludia und Fugen aus allen Tönen*, expressed as *partimenti*. And in 1737–9 Johann Mattheson impinged again with his largest and most prestigious book, *Der vollkommene Capellmeister*, explaining, among much else, genera of counterpoint, and following on from two publications (1735, 1737) of keyboard fugues of his own on several subjects.¹⁵ *Der vollkommene Capellmeister* contains another invitation to Bach, to

write fugues on three subjects, which could join Mattheson's own (Dok.II p.378). Bach commented on the invitation in his own way in Book II; to have responded in any other way would have been to lend his weight to Mattheson's opportunistic persecution of others.

The source situation for Book II is considerably more complex than for Book I, as is the literature.¹⁶ There is no single authoritative autograph source to compare with P 415. What we have is a collection of individual leaves known as the London autograph (roughly $\frac{3}{4}$ is in the hand of Anna Magdalena Bach), begun in 1739;¹⁷ and a fair copy dated 1744 made by Bach's eventual son-in-law Johann Christoph Altnickol, whose first duty as a pupil of Bach's was evidently to make the copy (P 430). He must have been bright because Bach seemingly asked him to make alterations on his own initiative. The problem is that what Altnickol copied from was not the London autograph but another original (probably begun around 1738; now lost) which seems to have contained to some extent earlier states of pieces. In other words, Bach seems to have had two boxes with individual preludes and fugues on separate leaves and to have worked on both of them, but unsystematically. Before he gave Altnickol the older one to copy from he went through it again (around 1742–4), so that it ended up with a mixture of partly earlier, but also partly later, readings than the London autograph. This creates problems for editors in deciding on a final version, solved by Alfred Dürr in NBA V/6.2 by giving two complete versions of Book II, one from the London autograph and one from P 430.¹⁸

The sources for Book II reveal much more about the anthology nature of the collection than do those of Book I. There are some thirteen sources containing early versions. The earliest of these (none autograph) date from the 1720s, though since they are copies the originals must have been older and some items may well go back to Weimar days, even before Bach started compiling Book I. In assessing the original date of a piece it has to be borne in mind that relative simplicity does not necessarily imply a very early date. It could be that a piece was sketched by Bach during a lesson, and that could have happened at any time. Also, a piece may seem simple in comparison with what Bach ultimately made of it, but sophisticated in comparison with the sort of prototype it relates to (see the commentary on the C sharp major fugue in Chapter Eight).¹⁹

Two sources show us how Bach began assembling materials for Book II around 1738. One, copied by his pupil J.F. Agricola (P 595), has four fughettas, in C major and minor and D major and minor, beginning a series in the commoner keys. The major-key fughettas were transposed up a semitone to C sharp and E flat when they went as fugues into Book II. The other source was copied by Anna Magdalena Bach (P 226), and has a prelude in C major (transposed up to C sharp in Book II) and the D minor pair. Thereafter we can see in the London autograph two campaigns for covering the chromatic octave.

The first (c.1739–40) has the commoner keys, the preludes are headed ‘Praeludium’, and the pieces are copied either by Bach or Anna Magdalena or a combination of both. The keys are c, d, E flat, E, e, F, f sharp, G, g, A, a, b. The second campaign (c.1740–41) has the advanced keys, with preludes headed ‘Prelude’, copied by Bach. The keys are C sharp, d sharp, F sharp, g sharp, B flat, b flat, B. The last pieces added are the A flat prelude (c.1741) and the C major pair and the A flat fugue (c.1742, worked up from earlier pieces). The pairs in C sharp minor, D major, and F minor are now missing, but evidently came in the second campaign since Bach’s most literal copyist heads them ‘Prelude’ in his copy (KB V/6.2 p.33).

We have no autograph title-page for Book II, but most copies have something like that of Altnickol’s 1744 copy (P 430) which is a cut-down version of the 1722 one:

Des Wohltemperirten Claviers Zweyter Theil,
bestehend in Praeludien und Fugen durch all Tone und Semitonien
verfertigt von Johann Sebastian Bach,
Königlich Pohnisch und Churfürstl. Sächs. Hoff Compositeur, Capell-
meister, und Directore Chori Musici In Leipzig.
[Altnickols signature and the date are after the last fugue.]²⁰

Strictly speaking, each Book is a *Well-tempered Clavier* in itself, and to call it Part I or Part II implies that the part is incomplete. But judging by the prevalence of ‘Zweiter Teil’ on the title-pages of copies of Book II, at least Bach’s pupils regarded this Book as Part II. There is no totally satisfactory solution so I have followed traditional English usage, with ‘the 48’ as a collective title, and Book I and Book II for the individual components.

Judging by the number of copies made it looks as if after 1740 every one of Bach’s pupils had to make a copy. Of interest to performers is, again, Kirnberger’s copy for its fingerings (*D-B* Am.B.57 (2); see the commentary on the G major fugue in Chapter Eight).

PART ONE

Concepts

CHAPTER ONE

Clavier

The unspecific nature of the word *Clavier* in early eighteenth-century Germany has left the question of Bach's preferred instrument for *The Well-tempered Clavier* open to much argumentation and assumptions based on personal prejudice. The main arguments for harpsichord and clavichord respectively were set out in a debate which ran through the first decade of the twentieth century: those on the harpsichord side by Karl Nef in two well-informed and rational articles (1903, 1909); those on the clavichord side by Richard Buchmayer (1908). Nef's arguments provided the substantive element in further articles by the arch-champion of the harpsichord, Wanda Landowska (1907, 1911), who added an element of her own hysterical prejudice against the clavichord. In spite of her knowledge of seventeenth- and eighteenth-century instruments, and even occasional public performances on them, her dislike of the clavichord was lifelong and passed on to generations of students. When Ralph Kirkpatrick broadcast Book I of the 48 on the clavichord in New York in 1945/6 Landowska is said to have remarked that it was a pity he could not afford a harpsichord.¹

The clavichord side was championed in the early part of the century by Arnold Dolmetsch, who recorded eight preludes and fugues as well as the Chromatic Fantasia in 1932, and later by Ralph Kirkpatrick, who recorded the entire 48 in 1967.² Few recent recordings have been on the clavichord, and none on the sort of clavichord Bach might have used before 1740.

The articles of Nef and Buchmayer are refreshingly sensitive and objective, even if Buchmayer's repetition of Forkel's opinion that Bach would have found the harpsichord 'soul-less' does not necessarily reflect Bach's attitude. Later German writers suffered from a misapprehension of the nature of the harpsichord: Erwin Bodky (1960, but summarising writings going back to the 1930s) considered that the essence of harpsichord expression was in changing stops and manuals; Karl Geiringer (1967 p.259) thought that pieces without rests cannot be for harpsichord because manual changes are not possible. Such

attitudes are difficult to understand now unless one remembers that from the 1930s to the 1960s the great majority of harpsichords made in Germany were of an ‘improved’ modern type which had neither the quality of sound nor the responsiveness of instruments of historical construction. Our knowledge of all keyboard instruments in Bach’s environment, and particularly the harpsichord, clavichord, pianoforte, and even the Lautenwerk, has increased immeasurably since then.

1. *Clavier*

The most straightforward meaning of the term *clavier* is simply a keyboard. It is used when different types of keyboard are described, as for example by Johann Baptist Samber in his important organ tutor of 1704,³ who lists the possibilities as (1) fully chromatic; (2) with short octave; and (3) with split keys (*subsemitonia*) (p.89). Bach’s Weimar cousin J.G. Walther, in his educational treatise for Prince Johann Ernst of Sachsen-Weimar, gives the same basic definition, adding that it may be for the hands (*Manuale*) or the feet (*Pedale*; 1708 pp.44, 55). Various contemporary dictionaries define the word *clavier* as the keyboard of clavichord, harpsichord, or organ. This is precisely the usage of Werckmeister in his 1681 title-page ‘Wie . . . ein *Clavier* wohl zu *temperiren* . . . sey’, and in his numerous tirades against split keys. In view of other similarities of terminology between Bach and Werckmeister, this is the most likely definition of the term in the *Well-tempered Clavier* title: linked to the term ‘wohltemperirt’, a fully chromatic keyboard, without split keys, tuned so that all 24 keys are usable as tonics.

Although towards the end of Bach’s life the term *clavier* came sometimes to be used specifically for the clavichord, for most of his life it meant keyboard instruments in general.⁴ Usage was however variable, depending on context and phraseology. Mattheson in 1713 (pp.256, 262) expands on a distinction going back to Praetorius (1619) between organ, *clavier* (by which Mattheson means harpsichord) and *Instrument* (which includes other keyboards such as virginals, spinets, regals, positives, and clavichords). The use of the term *Instrument* for virginals or spinet stretches from Praetorius to Türk (1789), but the restriction of *Clavier* to harpsichord is unusual, perhaps because Mattheson was looking for an elegant German equivalent for the French *clavecin*. *Clavier* was also used in this sense in Bach’s environment. In documents and title-pages having versions in both French and German, the German *Clavier* is commonly rendered by the French *clavecin*, though this is probably only because the harpsichord and spinet were the only two keyboard instruments in common use in France other than the organ. In the earliest account of the famous contest arranged between Bach and the French organist and harpsichordist

Louis Marchand in Dresden in September 1717, J.A. Birnbaum, who was probably writing with Bach's assistance, many times talks of Bach's prowess on 'organ and clavier'. Marchand was 'the greatest man in all France on the clavier and the organ' and the contest was to have taken place on the clavier (1739; Dok.II p.348, NBR p.79). Jakob Adlung, who claims to have had the same story from Bach himself, uses the same terminology (1758; Dok.III p.121, BR p.445). It is most unlikely in this instance that clavier can mean anything other than harpsichord.

In its general sense the main question is to what extent the term clavier included the organ. In general descriptions of keyboard instruments it could include the organ, as in Adlung's list (1768 I p.3) where it covers organ, clavi-chord, harpsichord, clavicymbelium, spinet, Lautenwerk, Violdigambenwerk 'etc.', which is obviously meant to cover every available keyboard instrument. This is the range of the term also in various *Clavier-Übung* collections,⁵ including Bach's own, which embrace organ (III), two-manual harpsichord (II and IV), and unspecified clavier (I). This inclusive usage was common in the titles of published collections of keyboard music, for obvious reasons.

There is however a distinction in the locution 'Orgel und Clavier' which is very common in describing people's accomplishments. This distinction is made in Bach's obituary, written mainly by C.P.E. Bach, and in Forkel's biography, where Bach as organist and as clavier player is the subject of two separate chapters. Bach himself made the distinction on occasion. For example in recommending G.G. Wagner for the post of cantor at Plauen in 1726, he lists among his accomplishments 'fernehin spielet er eine gute Orgel und *Clavier*' (Dok.I p.48). The same distinction is in the title-pages written around 1720, when Bach was rationalising and extending his teaching material, of the *Orgel-Büchlein*, and the *Clavier-Büchlein* for Wilhelm Friedemann Bach (Dok.I pp.214–15). Exclusion of the organ is implicit in the advertisement for the second and third Partitas in 1727, which is addressed 'denen Liebhabern des *Clavieres*' (Dok.II p.169), recalling the identical formulation in the title-page of the 1723 fair copy of the Inventions and Sinfonias (Dok.I p.220).

'Liebhaber' do not come into the 1722 title-page for Book I of the 48, their place being taken by 'those who are already skilled in this discipline', i.e. playing in all keys: Bach intended this collection primarily as the apex of his system of professional keyboard training, rather than for the delectation of amateurs. It is therefore more relevant to the 48 to consider the use of the term clavier in its educational sense, an equally common usage in the first half of the eighteenth century. It is a striking fact that during Bach's time at Weimar and Cöthen all documentary references to him having to do with a keyboard instrument other than the organ are explicitly to the harpsichord (*clavecin*, *Clavicymbel* etc.).⁶ But for his pupils the term is always clavier. P.D. Kräuter, for example, had a grant in 1712 'for learning clavier and composition' with Bach

(Dok.II p.47), and formulations similar to this are common in accounts of pupils' activities throughout his career. With this instructional usage we are back to the keyboard itself, and only by extension to particular keyboard instruments. This is what was meant in the report of the committee responsible for appointing a new cantor for St Thomas's Leipzig in 1723, when they said Bach 'excelled in the clavier' (Dok.II p.94). He was a master of the keyboard. The crowning skill in that mastery was the ability to play with equal facility in all keys on the well-tempered keyboard.

2. *Harpsichord*

The only keyboard instruments, other than the organ, with which Bach is associated in references dating from his lifetime are the harpsichord, the Lautenwerk, the pianoforte, and the non-specific clavier. In works that have got a specific designation it is for harpsichord.⁷ From 1708 Bach was court organist at Weimar, but also court harpsichordist, and had to apply himself to harpsichord repertoire (C. Wolff 1991 p.27). Both here and at Cöthen he had responsibility for the maintenance of harpsichords (Dok.II pp.41, 70, 86), a task at which he excelled according to C.P.E. Bach (Dok.III p.88). His prowess as a harpsichordist must have been as notable as that as organist, if the story of the Marchand competition is anything to go by, and the fact that Prince Leopold appreciated this is reflected by the stream of ensemble works with virtuoso harpsichord participation that Bach produced at Cöthen, when his involvement with the organ lessened, works that include the Fifth Brandenburg Concerto and sonatas with obbligato harpsichord. This continued in Leipzig, with the second part of the *Clavier-Übung* (1735) and the harpsichord concertos in the late 1730s. Bach's continuing interest in the development of virtuoso harpsichord technique is well attested in such works as the C minor Fantasia 'per il Cembalo' BWV 906 (c.1726–31) and the Goldberg Variations (1741), and there are some mild evidences of it in Book II of the 48 (c.1740).

One of the implications of the word clavier is that circumstances may well dictate which keyboard instrument to use. There can be no doubt that for Bach the harpsichord was the instrument for public performance. Even Forkel says that he regarded the clavichord as for study and private entertainment (1802 p.17, NBR p.436). It would therefore be natural to see pieces which use figurations and textures associated with public genres such as the concerto as more probably conceived for harpsichord. The aggressive virtuosity of the fugues in G major and A minor from Book I, the former with figurations strongly recalling the Fifth Brandenburg Concerto, the latter with its Vivaldian drive and grand expansion of texture towards the end, requires the brilliance

of the harpsichord to make its full effect. The ‘concert’ endings that Bach added to some of the preludes from W.F. Bach’s *Clavier-Büchlein* as he assembled Book I may indicate a change from one instrument to another, or at least a dual usability: the étude for study, the virtuoso piece for performance. Both C.P.E. Bach and Marpurg recommend students of the keyboard to play pieces on both harpsichord and clavichord: the clavichord for expression, and the harpsichord for strength (C.P.E. Bach 1753 p.9; Marpurg 1765 p.4).

The conscious restriction of compass to four octaves (C–c^{'''}) in Book I in itself argues for a general usability in line with the educational dimension of the word *clavier*. Although this compass is the commonest one in Bach’s keyboard works generally up to around 1726, there are numerous cases of its being exceeded in works either specifically for harpsichord (such as the Fifth Brandenburg Concerto, which in the 1721 version requires BB–c^{'''}) or more likely to be for harpsichord. There is as little standardisation in pieces as there is in surviving instruments. While the Weimar manual concerto transcriptions taken as a whole require a compass of BB flat–d^{'''}, there are within them cases of transposition to keep within the four-octave compass (for a summary see Schulenberg 1992 p.401). Most relevant to Book I is the *Clavier-Büchlein* for Wilhelm Friedemann. The Book I preludes there (entered over the period 1720–2) stay within the four-octave compass, but the Menuet BWV 843 immediately before them (entered 1720–1) requires GG. Both the two-part Invention and the three-part Sinfonia in E major (BWV 777 and 792) require BB. At the other end of the compass, the *Clavier-Büchlein* does not exceed c^{'''}. Alfred Dürr, in his survey of keyboard compass in the *clavier* works, concludes that Bach around 1720 must have had an instrument which went down chromatically to AA, but without GG since it is often avoided (1978a p.81), the GG in BWV 843 being unique in this respect. A clavichord with this keyboard would have been a rarity indeed, but harpsichords in Bach’s area commonly extended to AA, GG or even FF (Henkel 1977, 1989). The fact that this compass is not exceeded does not of course preclude a number of pieces having been primarily or exclusively designed for harpsichord. As Dürr says, Bach’s sons would hardly have been given the newest or most expensive instruments to practise on, and his other pupils must have had to make do with whatever instruments they owned or could get access to (1978a p.77). Even so, the inclusive educational meaning of the word *clavier* need not also mean an inclusive intention in composing individual pieces.

Over the last two decades much has been learnt about harpsichord types in Bach’s environment. The two instruments at Charlottenburg have been identified through their decoration as the work of Michael Mietke, from whom Bach collected a harpsichord for the Cöthen court in 1719 (Krickeberg 1985, Germann 1985). More surprising has been the reinstatement of the so-called ‘Bach-Flügel’,⁸ long thought to have belonged to Bach, but whose connexion

with him and even with eighteenth-century tradition was doubted by Friedrich Ernst (1955), who had been involved in restoring it for the 1950 bicentenary.⁹ From having been a jewel of the collection it languished for several decades in a semi-dismantled state in a cellar of the Berlin Instrument Museum until it was recognised by Dieter Krickeberg as the work of Johann Heinrich Harrass (d.1714) of Gross-Breitenbach in Thuringia. It had belonged in the late eighteenth century to Count Voss-Buch, who bought Bach manuscripts from Wilhelm Friedemann Bach in the 1770s. Wilhelm Rust, who knew members of the Voss-Buch family, reported in 1890 that by family tradition the harpsichord also had come from Wilhelm Friedemann, and indeed it is difficult to see how otherwise an instrument from a small town in Thuringia would have ended up with a well-to-do family in Berlin, which had its own flourishing harpsichord building tradition of Mietke and Rost. The connexion with Bach is by no means proved, but the possibility is intriguing given the unusual nature of the instrument. It has a five-octave compass (FF-f^m), rare even in French harpsichords before 1714, and an original disposition of 1 × 16' and 1 × 4' stops on the lower manual, and 1 × 8' (with buff) on the upper.¹⁰ Later the 4' was moved to the upper manual and another 8' added to the lower, an alteration that could have been made before 1714.¹¹ So Wilhelm Friedemann may after all have grown up with a harpsichord of the celebrated 'Bach disposition', so long discredited. What is clear is that there was a strongly individual Thuringian tradition of harpsichord building, with 16' and even 2' stops not uncommon, perhaps because many harpsichord makers were also organ builders. This contrasts with the more cosmopolitan and Francophile centres of Berlin, Hamburg and Hanover, although Michael Mietke, or his sons, made at least two harpsichords with 16' stops.¹² None of these types accords with the old view that German makers were indebted mainly to Italian models.

3. *Clavichord*

The statement that Bach's favourite clavier was the clavichord goes back no further than Forkel (1802 p.17; NBR p.436). There are no references to Bach playing the clavichord which date from his lifetime. The earliest dates from 1775, when Johann Friedrich Agricola, who had studied with Bach between 1738 and 1741, remembered Bach 'often' playing the Sonatas and Partitas for unaccompanied violin on the clavichord, adding as much extra harmony as he considered necessary (Dok.III p.293, BR p.447). Although Forkel is a valuable witness in that he knew both C.P.E. and W.F. Bach personally, he was also writing at a time of rising German nationalism and reaction against things French. His expressed purpose was to present the music of Bach as 'an inestimable national inheritance, against which no other people can set up

anything comparable'.¹³ The clavichord was the German keyboard instrument because it could express the soul, unlike the 'soul-less' harpsichord suitable only for the 'empty and effete' music of Louis Marchand and François Couperin (1802 p.7; NBR p.427). Other evidence suggests that Bach's own attitude to the French harpsichord school was very different from this.

The clavichord was nonetheless the commonest keyboard instrument in Bach's environment.¹⁴ It is the one recommended as an instrument of study for beginners in German writings from Virdung (1511) to F.C. Griepenkerl (1820), though that in itself may have made it less than attractive to Bach as a virtuoso performer, however much he occupied himself with it as a teacher. The vogue of the clavichord as the vehicle of *Empfindsamkeit*, with instrument-specific effects such as *Bebung* and *Tragen der Töne*, began only towards the end of Bach's life and there is no evidence of them in his clavier works.¹⁵ In addition, the instrument as he would have known it up to the 1740s had technical limitations which would have ruled out some at least of the 48. Yet Forkel's words deserve consideration. Taken with other remarks of his about the clavichord, they give a subtler and more believable picture than just crude partisanship.

Forkel certainly knew the best of late eighteenth-century clavichord playing. He had been a friend and pupil of W.F. Bach, and praised him for his 'extraordinary *Delicatesse*' (1782 p.114). The clavichord was the ideal vehicle for the oratorical manner of the Enlightenment: 'A pleasant, gentle, ingratiating and captivating tone is not enough. It must in addition be, like the various passions, now gentle, now livelier, now wild and vehement; it must be able to assume all these different qualities and be so flexible that it can be drawn, dragged, enlivened, struck, held, not to mention the endless gradations of loud and soft and the *Bebung*.'¹⁶ This strongly recalls Burney's celebrated description of C.P.E. Bach's playing, and the *Probestücke* C.P.E. Bach provided to illustrate the first part of his *Versuch* (1753), with their mercurial changes of mood and style, multiple dynamics, and clavichord-specific effects. But where in J.S. Bach's clavier works would such overtly emotional performance be in place outside the Chromatic Fantasia, significantly one of Bach's best-known keyboard pieces in the later eighteenth century, yet awkward to play on the sort of clavichord Bach might have had around 1720? Both W.F. and C.P.E. Bach admitted to Forkel that they had had to choose a style of their own since they could never have competed with their father in his (1802 p.44; NBR p.458). Their style was particularly associated with the clavichord as a 'new' instrument. In any case it was evidently only on the very finest Silbermann clavichords that C.P.E. Bach was able to produce all his effects.¹⁷ Forkel was under no illusion that the clavichord in Bach's day was suitable for this type of expression: it reached its first perfection only with Fritz of Brunswick and Hass of Hamburg (i.e. in the 1740s). Before that it had lacked sufficient volume and

compass (1782 p.5), and the fact that it was fretted prevented it playing in all keys since 'it could not yet be tempered pure' (1802 p.14, NBR p.433). His description of Bach's attitude to it is correspondingly more modest: Bach considered it the best instrument for study and for private entertainment, and for the expression of his most refined ideas, 'and did not think any harpsichord or pianoforte could produce such a variety of shadings of tone as this admittedly quiet yet on a small scale extraordinarily pliable instrument' (1802 p.17, NBR p.436).¹⁸

There is nothing here that we cannot readily believe of Bach. Certainly it was the common practice instrument of organists, most often made by organ builders, up to around 1740 with the common organ short-octave keyboard compass C/E-c''' (Meer 1975 p.102), the short octave being an economy that made more sense on the organ than on a stringed keyboard instrument. Praetorius extols the advantages of the clavichord for beginners in being easy to maintain, because there are no troublesome quills, and to tune, because it is fretted (1619 p.61). J.G. Walther (1732 article 'Clavicordo') describes it as the 'first grammar' of all keyboard players. The word grammar has a pejorative ring, at a great distance from the fully developed artist's concerns of rhetoric and declamation, just as the basics of notation are at an infinite distance from the art of playing well (François Couperin 1717 Preface). Yet many Germans regarded the clavichord as having virtues in the formation of sensitivity of finger and ear beyond those of a mere functional keyboard. Handel, from a similar background to Bach's, said as much to Mrs Delany.¹⁹

Particularly after around 1700 there was a growing interest in it as an instrument in its own right. Clavichords were being made with a fully chromatic C-c''' compass, with double rather than triple or quadruple fretting, and with luxurious finishes implying elegant, upmarket destinations. They figured at courts: the organ builder H.G. Trost in the 1720s looked after clavichords as well as harpsichords and spinets at Altenburg, as well as three clavichords in addition to a harpsichord that had been brought over from Friedenstein in Gotha (Friedrich 1989 p.55); J.C.F. Fischer's grandly titled *Les pieces de clavessin* (1696) were republished as the more homely *Musicalisches Blumen-Büschlein* in 1698. In the dedication to Princess Francisca Sybilla Augusta of Baden he says he will not disturb the boudoir of the new mother with the noise of violins and trumpets, but play these suites with the quiet reverence due to the new-born child on the clavichord or spinet ('Instrument'). Mattheson was merely reflecting the trend when in 1713 he told the 'Galant Homme' that the clavichord was the 'most beloved of all claviers' (p.262). 'Hand- und Galanterie-Sachen' such as overtures, sonatas, toccatas, suites etc. are best played on the clavichord, where one can express the singing manner with overholding and softening (a reference to French harpsichord style) much better than on the spinet and harpsichord (p.264). It

is probably no accident that this is virtually identical to the list of genres on the title-page of his own *Harmonisches Denckmal* (1714).²⁰ There is no reason to regard certain types of repertory as the exclusive preserve of any one instrument.

It must be borne in mind, however, that unfretted clavichords were extremely uncommon before 1740. Only three German examples are known to survive, of which the most important is by Johann Michael Heinitz, made possibly in Berlin and dated 1716.²¹ Unfretted instruments must have existed at least by the 1690s, since in the introduction to a collection of organ toccatas and Magnificat versets the Augsburg Cathedral organist Johannes Speth (1664–c.1720) says his pieces will need ‘a well set up and properly tuned spinet or clavichord, and the latter will have to be arranged so that every key has its own choir of strings and not that 2, 3, or 4 keys strike one choir’ (1693 *Vor-Bericht*).²² The main issue here is tuning, and the usual fretting for $\frac{1}{4}$ -comma meantone would not cope with his pieces which demand E flat as well as D sharp, A flat and G sharp, A sharp and B flat, and E sharp. Fretting for anything other than $\frac{1}{4}$ -comma meantone would have been unusual before around 1720 (Hellwig 1973).²³ The rough and ready solution of bending tangents is unlikely to have produced satisfactory results (Petri 1782 p.374). More satisfactory would be to temper the basic 5ths $\frac{1}{8}$ comma or less (Barbour 1951 p.148). This is the principle behind the ‘well-tempered’ tunings described (imprecisely) by Werckmeister (1698b pp.64–5) for triple-quadruple-fretted (‘gebunden’) and double-fretted (‘bundfrey’) clavichords. His tract is important for showing that the term ‘wohltemperirtes Clavier’ was applicable to the fretted clavichord in Bach’s environment.

Werckmeister here says that tangents really need to be arranged for a ‘good temperament’, and from the 1720s some were set up for well-tempered tunings, or even approached equal temperament (Hellwig 1973 p.65; Henkel 1981 p.17). Significantly, though, writers who advocated equal-tempered or similar tunings, such as Bendeler (c.1690) and Neidhardt (1706), list spinet, harpsichord and regal as candidates for their tunings, but not the clavichord. It is noticeable that in his obituary, C.P.E. Bach switches from the general clavier to the specific ‘Clavicymbal’ when he comes to Bach’s skill at tuning (Dok.III p.88).

A further technical difficulty of playing the 48 on the usual German clavichord of before 1740 is the short-octave (C/E–c^{'''}) organ compass. This would exclude all 96 pieces in the two books of the 48 with the exception of a few early versions (such as those of the preludes in C major, D minor, and E minor of Book I, given in NBA V/6.1 Anhang 1). Some instruments had split keys for D/F[♯] and E/G[♯], which increases possibilities but they still lack C[♯] and E^b, and some rapid figurations would be very awkward to negotiate. Instruments with fully chromatic keyboards were not common, and even those without the

short octave often lacked the C \sharp , which would rule out 17 pieces of Book I and 16 pieces of Book II.²⁴ There is no evidence in copies of figurations being adapted to accommodate the short octave, though players may have adapted as they played on particular instruments. Book II requires AA–d \flat , though C–c \flat is only rarely exceeded and the two cases that go beyond c \flat are in pieces which have been transposed upwards (the C sharp major Fugue, to c \sharp ; and the A flat major fugue, to d \flat). The five-octave (FF–f \flat) keyboard, common from the 1760s, survives first in an instrument by H.A. Hass (Hamburg 1742), but the compass AA–f \flat is given by Henkel for a German instrument (double-fretted) from the second quarter of the 18th century (1981 p.50, No.21). But given the mixed origins of the pieces in either Book of the 48 it is somewhat artificial to posit a single instrument that could play them all.

The technical difficulties of playing pieces in complex textures and advanced keys on the fretted clavichord have been variously exaggerated by proponents of the harpsichord, and minimised by those of the clavichord. Erwin Bodky considered that they ruled out the clavichord entirely; Arnold Dolmetsch and Edwin Ripin considered that there are surprisingly few passages which they make unplayable. The main problem is the great variety of fretting patterns, particularly in the late seventeenth century.²⁵ We may eliminate instruments with triple and quadruple fretting in the upper part of the keyboard. These are quite suitable for 17th-century modal music with a decorated melody or running passagework in the right hand and a two-part or chordal accompaniment in the left, but are quite unsuitable for the keys and textures of the 48. From around 1700, however, there is a fair degree of standardisation, with double fretting generally starting around c, and all the d's and a's free.²⁶ The typical octave is therefore as follows:

c/c \sharp , d, e \flat /e, f/f \sharp , g/g \sharp , a, b \flat /b

Henkel gives semitone values for eleven relevant clavichords, showing that in the great majority of cases these are the actual notes (i.e. e \flat , not d \sharp etc.). In fact chromatic semitones tend to be rather smaller than they need be. It can easily be seen that a place such as bar 45 of the C sharp minor Fugue of Book I, where the counterpoint requires a d \sharp to be held through an e \flat , cannot be literally rendered on this instrument; a more serious conflict is at bar 94, where the same two notes are required as part of two of the subjects of the fugue. By far the most thorough and scientific investigation of this problem has been made by Richard Loucks (1992), who has graded simultaneous semitones into five types, in ascending order of awkwardness: (a) which involve no fretting conflict; (b) where the lower note is sounded first: this means losing a held note (as in bar 45 of the C sharp minor Fugue), and in many cases could slip past without notice; (c) where the upper note is sounded first: this can create a serious problem in losing an important thematic note; (d) rare cases where both notes

of a fretted minor 2nd are required to be struck simultaneously (as in bar 94 of the C sharp minor Fugue): this has to be got around by some expedient such as arpeggiation, or altering the music; (e) when this occurs in the course of important thematic material and there is no possibility of fudging it.

All in all, Loucks finds only seven instances of types (d) and (e) in all 96 pieces. There is of course the extra degree of care needed in many places to ensure that notes sound properly, particularly in intricate textures in advanced keys but, as Loucks very reasonably points out, that is part of the art of playing the clavier.

The fretted clavichord is therefore an important instrument for the 48. Given the mixed origins of the two collections, and the general educational intention, the instrument is ideal for students in terms of economy, the necessity for a clean finger action, and ease of tuning and maintenance. The great educative value of the clavichord is that it takes a positive effort of hand and ear to make a singing sound on every note. The problem of blocking, its main bugbear, seems much less on 18th-century instruments in good condition than on some modern versions.

4. *Spinet*

The spinet has been curiously neglected in discussions of possible instruments for the 48, possibly because it was impossible for Germans of the Wilhelmine era to envisage this ‘Tonheld deutscher Nation’ seated at such a thing. But as an instrument readily available to ‘lehrbegierige Jugend’ it comes very much into the frame.²⁷ In fact it is as probable as the clavichord, if not more so. In the 17th century it was so common that it was known simply as ‘Instrument’, a fact lamented by Praetorius as a vulgar particular use of a general term. In Praetorius’s time ‘Instrument’ covered ‘Clavicymbel, Symphony, Spinet, Virginal und dergleichen’ (i.e. quilled keyboard instruments; from the reference to his illustrations it is clear that Symphony is another term for spinet/virginal-type instruments; 1619 p.11, p.62, Plate XIV). This is the meaning in the title of Ammerbach’s *Orgel oder Instrument Tabulatur* (1571/1583) of which Bach possessed no less than three copies, Ammerbach being one of his predecessors as Thomascantor in Leipzig. By Adlung’s time the word spinet meant a small 2’- or 4’-pitched instrument, a large one at 8’ pitch being called ‘Instrument in the narrower sense’ of the word; it could also be called Virginal (1758 p.558). Türk reflects this continued usage into the late eighteenth century (1789 p.3).

Harpsichords were not common in seventeenth-century Germany, the spinet in its various forms being the standard plucked-string keyboard instrument. Such title-pages of keyboard works as go beyond the word clavier

virtually always mention the spinet, in formulations such as ‘allen Liebhabern des Claviers auf einem Spinett oder Clavichordio zu spielen’ (Johann Krieger, *Sechs musicalische Partien*, Nuremberg 1697); the clavichord is never mentioned on its own. The spinet is generally listed as one of the instruments beginners graduate to after having started on the clavichord (e.g. Walther 1732 ‘Clavichordio’). It is also an instrument mentioned, rather than the clavichord for obvious reasons, when advanced tunings are proposed, as in Werckmeister’s *Musicalische Temperatur* (1691), where it is the only stringed keyboard instrument (title-page and p.2). In fact with its one 8’ set of strings, and a separate string for each note, it is an ideal instrument for learning to tune or to experiment with tunings.

The word ‘Spinett’ in late seventeenth-century Germany covered all plucked stringed keyboard instruments other than the harpsichord. It existed in a variety of shapes, but generally was rectangular or trapezoid with a single set of strings at 8’ pitch and a keyboard compass of C/E–c^{'''}. Its various forms had different qualities of their own and it was not just a cheap alternative to the harpsichord.²⁸ Fewer survive than clavichords since this homely instrument went out of fashion before the harpsichord did. Adlung, writing probably in the late 1720s, says that, although it had gone out of fashion, it could still be as usable as a harpsichord if well made. He says it has four octaves and as many keys as the harpsichord (therefore a chromatic compass C–c^{'''}; 1768 II p.123).²⁹ A mid-eighteenth-century German pentagonal spinet with this keyboard was in the Leipzig collection (Henkel 1979 No.58), so possibly instruments of that sort were being made through the first half of the century. Ones with the common C/E short octave (therefore lacking C[#] and E^b, and also F[#] and G[#] if there were no split keys) would be virtually useless for the 48.

After around 1700 the place of the rectangular instrument was taken by the newly fashionable bentside spinet (‘Querspinett’) which genuinely was a cheaper and space-saving alternative to the harpsichord. It could have a similar range and registration to the harpsichord, as has the instrument by Christoph Heinrich Bohr (Dresden, probably 1713), No.56 in Henkel 1979. This has two manuals, with two 8’ and one 4’ stops, and a compass of GG/BB–c^{'''}, with split E^b/BB. It thus descends diatonically from C to GG, but lacks C[#], which cuts out over one third of the pieces in Book I, including most of those in the advanced keys which were the main point of the collection. It could, however, play up-to-date repertory in keys from C minor to A major such as François Couperin’s first book (1713).³⁰ This is the type of instrument J.G. Walther meant in describing the spinet as a small harpsichord (1732 ‘Spinetta’). Many German makers produced them, including Michael Mietke (Krickeberg and Rase 1987 p.310).

The ‘Spinettgen’ in the list of Bach’s effects at his death was probably at quint or 4’ pitch, hence the diminutive. Its valuation of three thalers was near

the bottom for a usable instrument. The rubbish valuation was 16 Groschen (a viola and a cello in the inventory): Werckmeister says that instruments at this price are only good for cooking fish (1698b p.67; Dok.II p.493). It has been thought that the '3. Clavire nebst Pedal' given to the fifteen-year-old Johann Christian by Bach before his death may have been a complete set of stringed keyboard instruments: harpsichord, clavichord, spinet and pedal-clavier.³¹ This is an attractive idea, but it is very noticeable how precise the terminology is in the inventory, with three grades of 'Clavesin', and also 'Lauten Werck' and 'Spinettgen', apart from various other instruments carefully graded in quality. The two older brothers from Bach's first marriage were already making disapproving noises that Johann Christian should be taking an equal share in the estate having received this gift; it is unlikely that they would have acquiesced had there been anything as valuable as a harpsichord involved. The very portable clavichord is conspicuous by its absence from the list, and this was the time when the word *clavier* was coming to mean it particularly.³²

5. Organ

Whatever Bach's original intention, there was certainly a tradition in the later eighteenth century of playing the 48 on the organ. In England particularly, where pedal technique was rudimentary, they were thought of as organ repertory, from Johann Caspar Heck (1775; Dok.III p.299) through Samuel Wesley to Mendelssohn and beyond. A.F.C. Kollmann thought this due to lack of knowledge of Bach's large organ works:

... it must be observed; that though many of Bach's pieces composed for the harpsichord, also have a fine effect on a manual organ, particularly most of his forty-eight fugues in the Well Temper'd Clavier ... the list of his works will shew, that they do not come under the denomination of his *organ* pieces; because they are deficient in *his* principal requisite for such pieces, being a part for obligato *pedals*. And consequently their effect cannot give an idea of his organ playing; unless an obligato part for the *pedals* be still selected from their bass part, and performed on a double bass stop. (1812 p.35)

The custom of playing them on the organ was merely transplanted from Germany. Rellstab in 1790, announcing an edition of the 48, said that corrupt versions of the pieces were circulating among clavierists and organists (Dok.III p.487). We still have many of these 'corrupt' versions in manuscript collections where items from the 48, particularly early versions of pieces from Book II, are mixed in with undoubted organ works. Some sources include pedal indications, notably for the E and E flat major Fugues of Book II, and many pieces have the heading 'manualiter', including a source of Book I very close to Bach

(P 401) which has it on each folio. If these two fugues from Book II seem suitable candidates, performance on the organ seems to have been by no means limited to *alla breve* fugues. One of Bach's last pupils, Johann Christian Kittel, who studied with him between 1748 and 1750 and was one of the most important transmitters of the Bach tradition into the 19th century, envisages what many would regard as quintessentially stringed-keyboard textures as examples of the harmonic type of prelude for organ:

Pieces in this style demand a very fine harmonic instinct and insight. Since the organ is almost the only instrument on which their effect measures up to expectation, so this manner of writing deserves particular attention from organists Bach also left the best models of [it]. I shall only mention the well known preludes in C major from the first part of the Well-tempered Clavier, and C sharp major from the second. The latter in particular is to be played slowly on the organ (many falsely believe that Bach's pieces cannot be played quickly enough) with well chosen, gentle registration, like a fervent, devotional prayer in which desires and sighs break free from the oppressed heart, and the lively fugal conclusion like an Amen full of joyful trust. (1803 pp.64–5)³³

Admittedly Kittel's own examples of the harmonic type of prelude are in the 'gebunden' style with tied notes and suspensions, and are much more in keeping with the late eighteenth-century ideal of solemn organ style.

In the twentieth century the organ has found convinced advocates for the 48. Hans Brandts Buys thought that all Bach's works with the C–c''' compass restriction were for organ since works designated for harpsichord exceed this range (1955 p.110–11). Bernard Bartelinck, who had performed both Books on the organ of the Oude Kerk, Amsterdam, found the big, late-Baroque type of organ ideal for them, particularly the fugues in five parts; the three-part fugues he played as trios (1957 pp.153–4). Elinor von der Heyde-Dohrn has made an elaborate subjective case for the organ, with good points (1978). Unfortunately the instances she cites point up the distinctiveness of Bach's organ writing as opposed to the 48. For instance, the D sharp minor Fugue of Book II has in common with the D minor Fugue BWV 538/2 (the so-called 'Dorian' fugue) a D tonality, and a scalar ascent with syncopations in its subject, but there the similarity ends. The quality of intense personal meditation, with a very sensitive and detailed manipulation of texture, in the D sharp minor fugue has little in common with the broad architectural paragraphing and public rhetoric of the 'Dorian'. The most convincing and best documented case was made by Robert L. Marshall (1986). His conclusion is that, on account of the C–c''' compass restriction, the organ cannot be ruled out as an instrument for the 48. Even in Book II this compass is exceeded only occasionally, and some earlier versions keep within it. Such descriptions as we have of Bach's public

performances were all on the organ, though the Marchand contest was to have been on the harpsichord. Unfortunately the one description of Bach playing the 48 (Book I), by E.L. Gerber, says Bach played them to his father, H.N. Gerber, during lessons 'an eines seiner vortreflichen Instrumente' (Dok.III p.472). Since Türk (1789) still uses the word 'Instrument' in the narrow meaning of a plucked-string keyboard instrument, it looks as if that is what Gerber (1790) meant.

Some of the limitations of the clavichord also apply to the organ. Fully chromatic four-octave keyboards were not unknown in church organs before 1720, but they were not common.³⁴ Normally, like the clavichord, they lacked the low C#, which therefore rules out such seeming organ candidates as the C sharp minor fugue of Book I. Positive organs must have been common in homes, judging by the number of references to them in works dealing with keyboard instruments. Adlung (1758 p.551) describes positive organs in private houses, with stops up to 2' maximum and without pedalboards but sometimes with pulldowns. He also mentions claviorgana (p.563) but says these were more common in his youth (i.e. 1710s and 1720s).

The tuning problem is also in common with clavichords. Organ builders were very conservative and many church organs must still have been tuned in something very like $\frac{1}{4}$ -comma meantone, though more sophisticated places seem to have used more modern tunings. Bach's *Orgel-Büchlein* (1708–17) has a range of tonics from A major to F minor, and visits all twelve major triads. A much wider range of tonics is in Fischer's *Ariadne Musica Neo-Organodum* (1702), which has all but C sharp and F sharp majors, and their relative minors, and G sharp minor. Circulating tunings were more practicable on positive organs and must have been quite widely practised judging by the number of references in the writings of Werckmeister, Neidhardt, Mattheson etc.³⁵

The verset tradition from which *Ariadne Musica* sprang is on the face of it the most convincing link between the 48 and the organ. Bach's organ students at Weimar had to contemplate the possibility that they might have to function in a Catholic church. Some German towns had both Catholic and Lutheran churches, such as Erfurt where Bach's relative Johann Heinrich Buttstett played the organ in churches of both persuasions.³⁶ Some early sources of preludes and fughettas subsequently used in Book II suggest that Bach at Weimar may have been compiling a teaching collection similar to *Ariadne* (see Chapter Three section 1). But in spite of the organ environment of the composition prototype the pieces are by no means clearly in an organ style. Accounts of Bach's teaching are all to do with the clavier. His organ teaching probably consisted of thoroughbass and improvisation, the skills required in tests for organ posts (Stauffer 1994 pp.36–7). Pedal technique could have been taught on the pedal harpsichord or clavichord, the usual instruments for organ teaching and practice (Ford 1997). The revisions to the C major prelude BWV