

PRELUDE NO. 1 OF THE *WELL-TEMPERED CLAVIER*: THE PIECE IN CONTEXT, AND SOME ASPECTS OF PERFORMANCE PRACTICE

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One of the best-known pieces of music by J. S. Bach is the Prelude in C which begins *The Well-tempered Clavier*, Book 1. Bach might be gratified to learn that after three hundred years it is still offered to countless young students, probably making it his most performed piece. The question which may be asked today of many works by Bach, namely ‘what instrument works best?’ does not need to be asked of Prelude 1. For practising ‘early musicians’, harpsichord and clavichord (although radically different) are equally ideal. Modern pianists can also claim that this piece is a perfect vehicle for the development of varieties of touch and an evenness of dynamic. It is also in the easiest key.

Some very well-known pieces of music escape continued investigation, perhaps on the assumption that everything must surely, by now, have been said. Where the music has an unusually long tradition of performance, this is particularly likely to occur. Again, changes in instrumental practice and musical style will cause ‘iconic’ pieces to be heard and played without reference to their original context, which may lead to considerable distortion. Bach’s *Well-tempered Clavier*, on the other hand, has received much recent scholarly attention, in addition to a continuation of that centuries-old tradition of performance.

Its very first piece, however, can benefit from a brief synthesis, bringing together certain areas of interest which may have been considered only separately by performers. After a brief consideration of *The Well-tempered Clavier* as a whole, this article will focus on four aspects of Prelude no. 1: firstly, the key of C and tuning; secondly, arpeggiated chords and their notation; thirdly, the piece’s basis in realisation of the continuo bass line, and finally, its tempo.

A collection of teaching pieces

The Well-tempered Clavier, or *Das Wohltemperirte Clavier* in Bach’s spelling, was his title for an ambitious collection of teaching pieces completed in Anhalt-Cöthen at the court of Prince Leopold in 1722. The fair autograph copy that survives is likely to date from 1723, and the initial collection – Book I – was worked on further by Bach during the following twenty years of its use as teaching material, prior to Bach’s completion of a second volume in the same form. Bach always chose his words with care: the word *Clavier* can be translated simply as ‘keyboard’,¹ referring to the keyboard instruments current in his day: organ, harpsichord, clavichord, fortepiano, tangent-piano and several others. The word *Clavier* also referred to the keyboard itself, in each of those instruments: players could (as they still can) see and feel octaves containing twelve notes, of which seven are ‘natural’ keys, and five are sharps or flats – ‘accidental keys’. ‘Well-tempered’ referred to a new, more subtle manner of tuning a keyboard

instrument which allowed Bach to compose, and others to play, in all the keys without re-tuning their instrument.

Apart from the use of *Das Wohltemperirte Clavier* by his own students, its title page recommends it to 'those already skilled in this practice'. This suggests that Bach may have had publication at the back of his mind, following the success of the work's precursor, a far more limited collection by J. C. F. Fischer, which will be described later. The carefully worded title page of *The Well-tempered Clavier* itself has the ring of the frontispiece of a published work. Although Bach kept refining this music over the years, we cannot assume that the continuing need to make alterations was a barrier to publication: the composer's own copy of the first edition of the Goldberg Variations contains many 'second thoughts' in red pen, in Bach's own hand.

Nevertheless, he did not publish *The Well-tempered Clavier*, deciding to issue works of more fashionable appeal: publication was expensive and Bach was typical in submitting to the engraver only a small part of his large creative output. *The Well-tempered Clavier* depended for its circulation (which was wide, even in Bach's lifetime) on manuscript copies. We might suspect that the enormous number of these made Bach regret his decision against publication. Printed editions were not issued until 1801, and these, too, quickly circulated among composers of the first rank, who later included Mendelssohn, Schumann and Brahms. Haydn and Mozart had already found the work valuable, working from manuscript copies. We know how quickly most of Bach's music fell out of fashion after his death, making this all the more remarkable.

Collections of pieces in a sequence of keys

Although *The Well-tempered Clavier* was the first collection of fully worked keyboard pieces in all twenty-four keys, there were earlier models based on this concept. Even after the advent of 'modern' tonality in the late seventeenth century, composers including Georg Muffat (1653–1704) and Johann Speth (1664–1720) had produced sequences of pieces for organ in all seven modes. Modes, the age-old system preceding keys as we know them, were still very much in the consciousness of musicians, even into the eighteenth century.

Again, for some two hundred years before Bach's time, something like equal temperament had been employed on fretted instruments such as the lute, theorbo and viol, resulting in several collections of pieces in all the keys. These were designed to develop an unrestricted facility on instruments frequently used for accompaniment, however, rather than promoting the use of remote keys for solo performance.

Fischer's was the most immediate and most ambitious precursor to Bach's collection. Johann Caspar Ferdinand Fischer (c. 1656–1746) was some fifteen years older than Bach, and had a profound influence on the younger man's music. Some preludes in *The Well-tempered Clavier* are refined versions of preludes within keyboard suites by Fischer. As a more direct inspiration in the pairing of prelude and fugue, Fischer's *Ariadne musica neo-organoedum*, published in 1702 and re-issued in 1715, is a set of nineteen pairs in ten major and nine minor keys, together with one in the Phrygian mode based on E, plus five chorale-based ricercars.

Bach borrowed some of Fischer's themes for fugues within The Well-tempered Clavier, most notably the E major fugue of Book 2: this even uses the same key, as a clear tribute. (Bach would surely have observed that Fischer had already demanded an acceptable tuning in the keys of A flat, F sharp, and C sharp major, since he had concluded some minor-key pieces with sustained major chords in these remote tonalities.)

Other contemporaries of Bach who experimented with collections of pieces in a sequence of keys (interestingly, they are all German) include Johann Mattheson (1681–1764), Christoph Graupner (1683–1760), Friedrich Suppig (born 1700), and apparently Johann Pachelbel (1653–1706), though his work is now lost. Bach's, however, was the first keyboard work to devote equal creative excellence to all twenty-four keys, at a time when many were never used. It would have been a novel experience for someone approaching Book 1 in 1722 to see, on turning the page after the second fugue in C minor, a piece in the alien tonality of C sharp major.

The pairing of preludes and fugues

The pairing of a prelude and a fugue, almost synonymous with Bach today, was not a widely-used form. Older German composers like Bach's mentor Dietrich Buxtehude (1637–1707) had written *praeludia*: these were less formal pieces with alternating sections of counterpoint and free material. They owed their inspiration to toccatas by Johann Jakob Froberger (1616–67) and, as a young man, Bach composed a set of six toccatas in the same manner. Since it is hard to find earlier examples, one suspects that Bach drew upon Fischer's collection as an inspiration, offering a form which perfectly suited his creativity.

The preludes in The Well-tempered Clavier foreshadow the keyboard studies of a later era. They begin with various methods of writing and playing broken chords, and proceed to develop a student's ability to make jumps and stretches, and also teach skilled fingering (although, infuriatingly, we lack evidence from surviving manuscripts, of the sort of fingering which Bach may have recommended). They also teach the art of embellishment and of projecting melodic lines effectively – all of which were skills designed to empower students ultimately to compose for themselves.

The key of C

'Meantone' was the tuning system for keyboard instruments that had been in general use for a century before The Well-tempered Clavier was conceived. It produces rich sonorities based on pure thirds in some half dozen keys, but in which modulation is very restricted, since remote keys can produce unpleasant disharmony. When tuning meantone, one usually begins with middle C. In J. S. Bach's youth this note was truly central, both mentally and physically: it was two octaves above the bottom note of the keyboard, which had become C a century earlier, and two octaves below c^{'''}, which was the usual top note of the keyboard. Notes beyond these began to be used only towards the end of the seventeenth century and Bach contrived that every piece in Book 1 of The Well-tempered Clavier fitted within the keyboard's earlier limited compass. Students were seldom able to access the most up-to-date instruments.

Bach's tuning evolved from his youthful experimentation with systems devised by Andreas Werckmeister which were modifications of meantone, described in Werckmeister's *Musikalische Temperatur* (1691).² Whether or not Bach owned a copy (this is not known), he will have experienced the musical effects of Werckmeister's work at an early stage, when applied to organs. Bach's stay in Lübeck in 1705 allowed him to enjoy the new tunings that had been applied there under the direction of Buxtehude, who was closely associated with these experiments. Not long after this experience, Bach composed one of his toccatas in the unusual tonality of F sharp major.

We cannot be sure what Bach's preferred tuning method was at the time of compiling the first volume of *The Well-tempered Clavier*, but the fact that he chose to start this important work with middle C, and to build upon it a chord of C major, shows a traditional mindset. Indeed, the first interval in the piece is C–E, which would have been the first to be tuned when using meantone. His demonstration of the potential of a more modern, more flexible tuning system was linked to – one could say, partly depended upon – this point of departure. I would suggest that the tuning that Bach had in mind may have still produced a very rich C major chord, with the third between C and E being almost pure – perhaps completely pure, as in meantone.³



Illus. 1. J. S. Bach: *The Well-tempered Clavier*, Book 1, Prelude 1, bars 1–5 (Henle Urtext Editions, HN1014, ed. Ernst-Günter Heinemann, 1997).

The first prelude contains only modest modulation and in its initial form there was even less than in the final version that we play today. Players who tuned meantone from habit would have found no audible problems when playing Prelude no. 1 and its fugue. Their downfall would have occurred in stages: some doubtful harmonies in the Prelude and Fugue no. 2 in C minor (but requiring only the re-tuning of G sharps to give A flats), would have led to catastrophic disharmony from the start of the next prelude – no. 3 in C sharp major. Today's students may need reminding that in 1722, a collection of solo pieces giving equal weight to all twenty-four keys on a keyboard instrument was a novel, striking achievement.

Apart from tradition, Bach would have been aware of other advantages of the key of C major, with which to begin this mighty work. In his time, the concept of 'key

character' was well established: different keys were associated with different moods. C major was described in 1682 by Marc-Antoine Charpentier (1643–1704),⁴ and by Bach's contemporary Johann Mattheson⁵ amongst many others, as a key conveying simplicity, purity, resolution, and confidence. This is a natural mood in which to set out on the journey through *The Well-tempered Clavier*, and even today, when the idea of keys possessing individual characters is almost (but not quite) obsolete, most players will not diverge widely from such an approach when playing its first piece.

Another concept may also have been in Bach's mind: the chordal structure permeating this prelude can be seen to reflect the triad – the 'perfect harmony' from which, in the theoretical investigation of music from the Renaissance onwards, all music could be seen to derive. As David Ledbetter pointed out, the first two chords of *Prelude no. 1* present the three notes of the C major triad, in ascending order.⁶

Well-tempered tunings

There was a growing use of equal temperament in Germany during Bach's latter years.⁷ There are, however, both practical and musical reasons for doubting its use as Bach's choice of tuning for *The Well-tempered Clavier Book I*. The differences between well-tempered tunings and equal temperament were held to be important in Bach's time. Essentially, the former offered practical methods of tuning, while the latter, at least in its pure form, remained a theoretical concept, and further, even approximations of it would produce unsatisfactory music. A considerable number of leading musicians, both then and later, were of this view, including G. F. Handel (who left his own slightly vague instructions for tuning the harpsichord unequally), several French authorities and, tellingly, Bach's own sons and students.

Apart from the near-impossibility of achieving a faultless equal temperament when tuning by ear, particularly if time was precious, there were two musical considerations for avoiding it: firstly, the richness that was heard when the most common keys were tuned in something close to the old system of meantone would be lost. No intervals are tuned pure in equal temperament (all thirds, for example, are equally rather wide). Secondly, the particular characteristics of different keys, audible in an unequal tuning, were recognised as attractive and useful. There were no fundamental differences of opinion about these qualities, which are automatically removed in equal temperament.

Meantone and 'well-tempered' systems

Following the influential work of Andreas Werckmeister, modulation involving remote keys, which had remained fairly irrelevant until about 1700, began to be increasingly important to composition, but meantone remained the tuning of choice in many contexts. During the seventeenth century, with the pure thirds of meantone seen as the basis of good tuning, many harpsichords and organs were built with a number of accidental keys split front to back, providing two notes within the length of the key, and extra strings (or organ pipes) to provide those notes – thus extending the number of keys in which meantone could be tuned. The most common arrangement was to have split keys to provide both E flat and D sharp, and G sharp and A flat, since these were distinctly different notes. After 1700 this system disappeared, but many of the new

well-tempered systems remained close to meantone, retaining several pure thirds, and many tended to favour either ‘flat’ or ‘sharp’ keys.

As eighteenth-century music underwent radical changes, ever more flexible tuning systems were devised. Despite this, even in the century’s final quarter some authorities continued to promote tunings quite close to meantone. And alongside the work of theoreticians, perhaps the majority of practising musicians throughout Europe employed a modified form of meantone known as ‘ordinary temperament’: this was as flexible as was normally required, since most music continued to employ a limited selection of keys. Inevitably, this was a subtly varied and personal system: *tempérament ordinaire*, as generally understood, is unsuited to Bach’s Well-tempered Clavier, unless one selects, for the most part, only pieces in the more common keys since, unlike most of Bach’s keyboard music, many of its pieces are in remote keys. Bach’s title page suggests a single tuning of a specific type, able to deal with all the keys. Nevertheless, players who use historical tunings – indeed most who appreciate his music in general – acknowledge that Bach was conscious both of different key-characters, and of the particular harmonic richness connected to unequal tunings. Prelude no. 1 is a significant, though basic, example of this.

The practicalities of tuning

Bach’s student Johann Philipp Kirnberger (1721–83), his first biographer Friedrich Wilhelm Marpurg (1718–95), and his most famous biographer, Johann Nikolaus Forkel (1749–1818),⁸ each supply anecdotal evidence for Bach the practical musician, who is described as tuning with great ease and speed. One account mentions that he employed a system where all the thirds were wider than pure.⁹ Another commented that as he played, it was hard to immediately differentiate one key from another by ear: an important indication that Bach’s tuning may have been quite sophisticated, but was clearly unequal.

If Bach was using a tuning that was quick and reasonably easy to apply, then it could not in any case have been perfect equal temperament. Bach’s tuning of his harpsichord – if indeed he restricted himself to one system most of the time – may have been one that was coming into common use, or subtly adapted to his own taste: a perfectly normal occurrence in an age of non-standardisation. Apart from this, we have no documentary evidence for Bach’s personal tastes. Considerable efforts have been made in recent years to uncover the meaning of what is almost certainly a tuning code, written as a graphic series of loops above the title page of Book 1, possibly in Bach’s hand. The reader can pursue these efforts by research online. They are too extensive to summarise here, and results have so far proved fascinating but inconclusive.

If we consider Prelude 1 as possible evidence of Bach’s taste in tuning for the requirements of The Well-tempered Clavier in 1722, then a system which incorporated a pure, or almost pure third C–E becomes quite probable. We have noted that its very first notes present this interval, which is that with which musicians would generally have begun, when tuning their keyboard instrument in meantone. One can view Bach’s collection as an extravagant exploration of how one could move from such a starting point into a new and sophisticated use of remote keys.

The novelty of well-tempered systems

Unlike clavichords, most of which were fretted, even after 1700, so that the temperament (normally meantone) was ‘built into’ the instrument, harpsichords had separate strings for each note, and presented no such restrictions. New temperaments, aimed in many cases at the practising harpsichordist, began to be devised: by 1732, Johann Georg Neidhardt (1680–1739), a major figure in the development of tuning,¹⁰ had published directions for no fewer than twenty-one tunings varying from one of a conservative nature (which he called the ‘village’ temperament, aimed at unsophisticated musical environments), through ever more flexible tunings, culminating in ones designed for ‘big city’ and finally ‘court’ use, the latter being a slightly differentiated form of equal temperament – presumably a theorist’s ‘perfect’ tuning, due to its internal consistency and total flexibility. Musicians specialising in period performance are re-discovering these tunings. I have used one of Neidhardt’s systems of 1724 for a recording of Mattheson’s keyboard music, and have been asked to tune his ‘big city’ temperament for a concert of mid-eighteenth century orchestral pieces.

Bach, on the other hand, compiled the first book of *The Well-tempered Clavier* when well-tempered systems were still quite a new idea. We can assume that he engaged fully with current developments of thought and practice, but as tunings became more flexible, they demanded ever greater skill and time to apply. Had Bach chosen a really ‘advanced’ system for his own use, apart from the extra difficulty of using it (and teaching it), this would have had other disadvantages. If he wrote music which depended on such a system for effective performance, he would be composing, as it were, for idealised rather than real musicians.

We may reject the idea of Bach being deeply concerned about the limitations of some who would play his music, but we can easily imagine him enjoying the challenge of composing so skilfully as to make all the keys ‘work’ within a tuning system that was either already in reasonably common use, or that he himself was actively promoting among his students – one which remained quite easy to use. From a practical standpoint, therefore, my conclusion is that Bach created *Book 1 of The Well-tempered Clavier* to allow an entire performance on a single tuning. This had to be easy enough to tune, so that the player could repeat the exercise without much trouble, but also flexible enough to accommodate all the music without much unpleasant disharmony.

Developments in tuning after Andreas Werckmeister

Apart from Bach’s desire to build upon the foundations laid by Fischer, the practical reasons for his own collection were primarily connected to his inspiring, but rigorous teaching methods. We learn from Werckmeister, writing in 1698,¹¹ how important it was becoming to play in remote keys – not because there was much new music written in them, but because good keyboard players were expected to be able to transpose at sight. Among the reasons why such a skill was required in Germany during Bach’s lifetime was the difference in pitch between organs and other wind instruments. Bach’s set of pieces went beyond helping the development of a normal keyboard technique: it

offered music that was rewarding (and often demanding) to play, and was also a subtle aid to the ability to play fluently and creatively in all the keys.

Although well-tempered systems were relatively new when Bach compiled Book 1, there is a gap of more than two decades between Werckmeister's early work and the first book of *The Well-tempered Clavier*, and during this time ideas about tuning were evolving fast. Werckmeister himself changed his attitude in the last few years before his death in 1707, to a conviction that equal temperament was the best theoretical system, although he continued to recommend something more practical, and differentiated, for actual use. In a similar way, Neidhardt had described and named equal temperament in 1706, but went on to explore tunings on a practical rather than a theoretical level for several more decades.

Johann Mattheson was an influential figure who changed his viewpoint on tuning over time. As an accomplished organist, by 1731 he was writing that although it was a matter of regret that key-characters would have to be discarded, equal temperament was the ideal system, at least for organs.¹² However, in his earlier published writings he had stressed the disadvantages of equal temperament, even when issuing forty-eight test pieces for thorough-bass in all the keys, in 1719.¹³ Mattheson and Bach were aware of each other's creative activities. One could view Mattheson's offering of 1719 and Bach's of 1722 as illustrating how individuals separated by space (and personality) but nevertheless part of a creative continuum, could share ideas – even unconsciously – and produce a creative output, as it were, in a common cause.

My personal opinion is that Bach, while still working in a relatively isolated environment at the court of Anhalt-Köthen in 1722, remained very conscious of meantone, and will already have gone through the stage of modifying his tuning system on the basis of Werckmeister's work in his younger days, rather than branching out into entirely new realms of thought. David Ledbetter (among other scholars) believes that Bach's use of key within Book 2 of *The Well-tempered Clavier* hints at a shift in his thinking about temperament: he associates this with the increasing popularity of equal temperament in the last two decades of Bach's life.¹⁴ If, as I suspect, Bach continued, for his own convenience, to use and teach a tuning or tunings that were more conservative than this, because they were faster and easier to apply, then perhaps some of the time he may have had equal temperament in his head, even if not in his instrument.

The survival of well-tempered tunings

In 1739 the young Johann Kirnberger (1721–83) studied with Bach in Leipzig. As Carl Philipp Emmanuel paid him tribute by writing that all his knowledge came from his esteemed father, Kirnberger acknowledged his teacher as the source of all his skill, and maintained a reverence for Bach to the end of his life. In the early 1770s he published analyses of tunings including equal temperament, but his best-known contribution in this field today is known as Kirnberger III. This system is similar to that of the French theoretician Rousseau, published in 1775 (who referred to earlier musicians, including François Couperin).¹⁵ Rather remarkably (considering the system's late date) it incorporates a pure third C–E. By this decade, a conservative unequal tuning system

was an anachronism in Germany. But The Well-tempered Clavier begins with this interval, and some, including H. Kellertat¹⁶ and H. Vogel,¹⁷ were convinced that Kirnberger III must be how Bach taught his students to tune. There are grounds for rejecting this idea, including the unfortunate fact that Kirnberger himself failed to link this tuning with his teacher.¹⁸ Nevertheless, the survival of enthusiasm for unequal systems, decades after the end of the Baroque period, may reinforce the suitability of such tunings for Bach's Well-tempered Clavier.

Arpeggiated chords and their notation

Having considered Bach's use of tuning at some length, we shall now focus more briefly on his use of arpeggiated chords. Once Bach had fixed on the opening to Prelude no. 1, he chose to make the nature of his broken chords almost the most basic possible – a simplicity which has contributed to its lasting attraction. Even more rudimentary would have been the use of six notes, with each hand playing a C major triad, an octave apart. All it took was the omission of the top note, to arrive at Bach's chosen chords. The left hand now played the two bottom notes rather than three, and the right hand shifted downwards by one inversion, making the top note E rather than G. When he later came to make improvements to the piece, Bach left the layout untouched, merely introducing more subtlety and variety to the harmonic modulation.¹⁹

If we look at the way the upward-arpeggiated chords are notated, the right-hand is indicated by semiquavers. The two notes in the left hand, though specific in their duration, are to be sustained until the next bass note is played. But significantly, in an early version of the piece, a copy for his first son Wilhelm Friedemann around the age of ten, in *Clavier-Büchlein* (1720),²⁰ the first bass note in each group was notated as a full-length minim, while the second left-hand note was less prescriptively indicated

than in later versions. In this early form of the piece, we can also observe a rare example of shorthand (contrary to Bach's normal practice), in which the nature of the arpeggiation is specified at the start of the piece, but block chords are used later – perhaps simply to save paper, ink, and time.

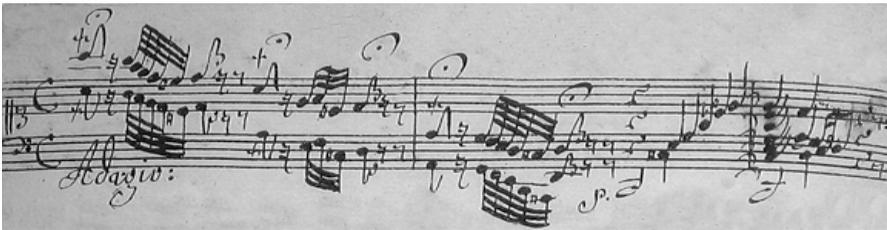


Illus. 2. *Clavier-Büchlein vor Wilhelm Friedemann Bach* (1720), first page of Prelude no. 1 in C (BWV 846a). New Haven CT, Yale University Library.

How specific is Bach's notation?

How prescriptive was Bach's notation in the final version of Prelude no. 1 (see illus. 1)? For performance of the right-hand groups, some take a literal approach, and so feel they ought to be played detached or relatively dry, a view held by David Schulenberg.²¹ The fact that Bach changed his mind, becoming more specific in his indication of the length of the notes in the left hand, but leaving the right-hand notes as semiquavers, can be seen to support this view: perhaps he was, in his 'final' version, indicating exactly what he wanted.

Before exploring this further, however, we must consider Bach the organist. The accumulation of sound in an upward-moving arpeggiated chord with held notes is used in organ music only for special effect. A notable example (let us assume it is by Bach) is the written-out chord that forms the second motif of the Toccata and Fugue in D minor, BWV 565 (see illus. 3). Such chords lose their impact when repeated, even (perhaps especially) if played faster. Bach may have been mentally in 'organ' mode when composing the first draft of the C major prelude, leading him to restrict a sustained effect to the bass note alone.



Illus. 3. J. S. Bach, Toccata and Fugue in D minor (BWV 565), bars 1–3. Eighteenth-century manuscript copied by Johannes Ringk (Wikimedia Commons).

Perhaps he had only partially moved towards thinking in terms of other keyboard instruments when he revised Prelude no. 1: holding the two left-hand notes still works on the organ (just), but carrying a sustained effect into the right hand does not. There are so many instances within *The Well-tempered Clavier* of Bach thinking as an organist (the numerous pedal-points lasting several bars are the most obvious examples), that this should not be ignored.

Be this as it may, there are arguments against this detached approach, when applied to the harpsichord, clavichord, or indeed the fortepiano or modern piano. The first objection may be regarded as subjective: it is possible to assume that Bach changed the notes played by the left hand to two sustained notes as a suggestion of the way that all the spread chords should be executed. For those who believe that Bach was keen to indicate his intentions exactly, however, this will be unacceptable.

But one must also recognise the context of 'preluding' – a tradition that was an accepted convention in Bach's time. Preluding involved the exploration, and exploitation, of the sound of the instrument. There are parallels in similar material written as much as a century earlier for other plucked instruments, such as the

collections for theorbo by Johann Hieronymus Kapsberger (c. 1580–1651),²² in which note-length was defined not by notation, nor by the player’s technique, but simply by the nature of the instrument’s sustaining power.

While conscious imitation of such a style may not have been in Bach’s mind, the tradition of broken chords being sustained in a natural, flowing manner, would have been.²³ Bach owned several *lautenwerke* (lute-harpsichords), on which a performance of this piece would have sounded very close to that of a theorbo or large lute since, like this instrument which the *lautenwerk* imitates, there was no means of terminating a note through damping. On a *lautenwerk*, the question of how the right-hand notes might be played would not really arise. When using a conventional harpsichord, though, players could use a prelude – one like this or a host of others, including improvised ones – to discover the extent to which a note’s sound might continue; they could discover how beautiful (or otherwise!) the instrument sounded, and how the action responded to touch.

The notation of such arpeggiated pieces tended to be rather simple, as in similar compositions by J. C. F. Fischer.²⁴ As we have seen, a direct precursor of Bach’s Well-tempered Clavier was Fischer’s *Ariadne Musica* (1702), a collection of pieces, most written for manuals only, or with an optional pedal part; Bach held Fischer’s work in high regard. Fischer’s Prelude no. 1, Harpeggio, from the Suite no. 8, Polymnia (see illus. 4) in *Musicalischer Parnassus* (1738),²⁵ was published sixteen years later than Bach’s Prelude no. 1. Bach’s prelude is far more sophisticated than Fischer’s,²⁶ which is in triple time:



Illus. 4. J. C. F. Fischer: Prelude no. 1, Harpeggio, from Suite no. 8, Polymnia, in *Musicalischer Parnassus* op. 7 (1738), bars 1–4.²⁷

Bach’s notational consistency

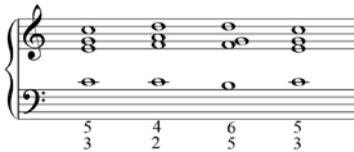
J. S. Bach was consistent in his use of notation. Had he indicated clearly (by the use of ties, note values, or even slurs) an intended over-holding in the right hand, he might well have felt it necessary to do so throughout the entire piece, creating an over-elaborate and unsightly score – and one which limited the expressive opportunities available to the player. His notation was normally very consistent within a piece (and as his life progressed, became ever more so), and his practice was not to give initial hints.

My long-held conclusion is that Bach disliked intrusive elements which, contrary to his self-imposed notational standards, undermined the purity and consistency of the notation itself. One might suppose that he allowed the player to decide which approach he had in mind: either reasonably consistent legato, or legato only in the left hand. However, as we shall see, this simple choice between two alternatives is ultimately

unhelpful, and we must doubt whether Bach expected such a simplistic choice to be made.

The continuo line as a foundation of the piece

Finally, we shall focus on Prelude no. 1's basis in the continuo line and some implications for performance arising from this fact. Prelude no. 1 exemplifies the Baroque tendency for music to be conceived from the bass upwards: the first four bars, indeed, might be a gentle joke on Bach's part. In terms of elementary continuo playing they present, perhaps, the first harmonic progression which a beginner might have met as a child: over the four bass notes C, C, B and C, the harmonies offer (in the implied figured bass) 5:3, 4:2, 6:5, and a return to 5:3.²⁸



Illus. 5. Bach's *Well-tempered Clavier*: chords over the first four bass notes of Prelude no. 1.

The bass is slow-moving in this prelude and, unlike that of so many of the later preludes, it hardly makes a satisfying line if played on its own. There are, of course, numerous figurations which could be played over it: as we have it, the prelude stipulates just one. But it is easy to imagine Bach encouraging his students to offer alternatives. We know (and how surprising it is!) that he invited pupils to offer their own alternative elements even to some of his more 'finished' music.²⁹

Other performance possibilities

Even as we have them, the chords present more than one possibility, as we have just seen, and we can explore this a little further. A fully legato approach will involve holding the last top note of each arpeggiated chord into the quaver rest which follows it. Bach included a rest, one can argue, in conformity with notational grammar, rather than intending a literal application. Some will prefer to avoid a fully legato approach, and will release the notes of each arpeggiated group immediately before the quaver rest.

Beyond this choice lies a whole series of degrees to which the notes within the chords may be held. The player can subtly vary these to draw attention to harmonic shifts, or to give more apparent weight to one arpeggiated chord over another. Should it be felt desirable, one can emphasise the first of the chords in each bar over the second, making the second an echo of the first, rather than a simple repeat. Pianists might find themselves using their instrument's dynamic control to achieve something like this, but harpsichordists can change the extent to which they sustain the chord, or alter the weight given to each chord's first note, to achieve a similar effect.

The element of Baroque music known as 'beat hierarchy' supports this idea.³⁰ In the time signature of Prelude no. 1, which is C (4/4), the first beat is the most important, and the next most important is the third beat, which occurs at the mid point of each bar. If the second half of each bar is given the same weight as the first, this natural,

Prelude no. 1 of the Well-tempered Clavier

effective skeletal structure disappears: one bar becomes, in effect, two bars of 2/4. The player loses the expressive option of giving equal or even greater weight to the second half of a bar, or bars, to increase tension before a point of particular interest.

Some players have adopted the habit of emphasising the second note of each group rather than the first – that is, in the first chord, the E, a third above middle C. The stress is thereby transferred from the bass to a harmony note. Had Bach wanted this, he would have written the first note, C, as a leading note, preceding a naturally strong beat. We noted earlier that in the first version of Prelude no. 1, Bach wrote the E as a semiquaver, which emphasised its function as simply part of the harmony, and gave an even stronger impression of the importance of the first note of each group. In the last line of the piece, where the broken chords finally give way to a different, freer use of the right hand, the structure requires the emphasis to be directed – or returned – to the beginning of each bar.



Illus. 6. J. S. Bach, *The Well-tempered Clavier*, Prelude no. 1, final six bars (Henle Urtext Editions, HN1014, ed. Ernst-Günter Heinemann, 1997).

Choice of tempo

Many musicians today may feel that tempo, when not indicated explicitly by the composer, is a matter for the player, as interpreter of the score. In Bach's day all performances would naturally be different, due to the personality of the performer and to their conscious choices, but the music's natural unfolding would take precedence over the player's ego. The idea of players making an existing piece 'their own' was not to become common for another century.³¹

One area in which the concept of personal interpretation might be at odds with this is ornamentation. Particularly among singers and instrumentalists performing a single line (including the right hand when it assumes this function in keyboard music), eighteenth-century performers would have felt they had a right to add decoration, sometimes almost to the obliteration of the composer's line. This can be seen as a result of the nature of Baroque composition. Since the melody was normally

subservient to the bass, upper parts were generally conceived after the bass had been established. In this context, the melody line was liable to be less 'fixed' than it was to become during the Classical period. Even within The Well-tempered Clavier, it is clear that Bach allowed players freedom over ornamentation.³²

Setting ornamentation aside, certain parameters for performance were built into the score itself, and observed by all composers and musicians of the period. One of these was tempo: in an age before the invention of the metronome, and when directions for tempo were rare, composers could feel confident that a performance would only deviate from their desired tempo to an extreme degree under the hands of a particularly wilful player. The chosen combination of note value and time signature (particularly when the music was clearly within a certain genre, such as a dance piece) was generally sufficient to ensure this. Commentators such as Johann Mattheson paid considerable attention to this question, clarifying accepted norms rather than suggesting anything novel.³³

Bach's pupil Kirnberger, writing after 1770, was still attempting to identify what had of necessity to be a less than perfect relationship between time-signature, note-values and tempo. Throughout his life, Kirnberger expressed his loyalty to the teachings of his early mentor. He used examples from music by Bach and François Couperin to illustrate the importance of the message conveyed by a particular time signature, as in the Fugue in F major, no. 11 from Book 2 of Bach's Well-tempered Clavier, to which Bach gave a time signature of 6/16. Kirnberger writes that he regrets the loss of this time signature, which gives a clearer idea of a brisk tempo than does a time signature of 6/8.³⁴ His investigation of the implications of 4/4 are relevant to Prelude no. 1 of Book 1: Kirnberger would classify the piece as a 'light' 4/4, using this term to distinguish it from more weighty music where notes as small as semiquavers only occasionally occurred.³⁵

The starting point when choosing a tempo for a piece in 4/4, based mostly on groups of semiquavers, would be not to deviate greatly from $\text{crochet} = 60$. It is impossible to cite any contemporary authority for this, since a consensus, both in the eighteenth century and now, is towards the inherent flexibility of tempo. Among influencing factors have always been mood, acoustics, personality and taste.³⁶ To support such a bold assertion, then, one would need to compare a large number of pieces by Bach in the same time signature and using similar note values.

These should include many allemandes, as well as preludes within The Well-tempered Clavier, many of which echo this formalised dance. The Prelude in F minor, no. 12 in Book 1 is an example; it can be compared with the Allemande of French Suite no. 4 in E flat major (BWV 815). And in an age when mechanical repetition was seldom to be heard except in the ticking of a clock, the influence of this pulse should not be underestimated, nor should that of the human body itself, to which it is closely related.

Bach's own choice of tempo

For evidence of Bach's own preferences, we have the comments of his biographer Forkel: that when playing his own pieces, Bach generally adopted a very brisk tempo.³⁷

The helpful implication of this is that if there was a general response to a piece in a particular time signature, Bach himself may have tended to play somewhat faster, and would presumably have looked with favour on students who emulated this.

Mattheson's comment on this is pertinent: 'Those who have never found out how the composer himself wanted the work to be performed, will hardly be able to play it well'.³⁸

Bach added a written tempo indication only rarely, generally at points where a significant error might otherwise occur, as in the Prelude in G minor, no. 16 of The Well-tempered Clavier Book 2 and the Fugue in B minor, no. 24 of Book 1, both marked *largo*. This may well have had an accepted implication, and here would avoid a performance that was unduly brisk. The Prelude in B minor, no. 24 of Book 1 is headed *andante*, and that of Book 2 *allegro*, both advising the performer not to play too slowly. Other than occasional indications of a change of speed during a piece, these are the only such headings in the entire work.

Another simplistic point may be added. Approaching the problem from the opposite direction, as it were, there would be a common understanding between composer and performer that, for example, a piece in 4/4 should not be fast enough to qualify for a tempo of 2/4, just as one in 3/4 would be slower than one written in 3/8. The broken chord patterns in Prelude no. 1, however, might well suggest a rather livelier pace than that of most allemandes written in 4/4, while anything slower would sound unduly laboured.

We have now come full circle. As stated near the beginning of this article, a piece in C major was associated with an expected 'mood'. An important requirement for conveying this mood would be to adopt an appropriate tempo. This serves to emphasise that the performer needs to keep in mind simultaneously the three elements focused upon in this article: firstly the Prelude's key and the *affekt*, or mood, associated with this key; secondly, the notation of its arpeggiated chords (and the choices available for their performance), and thirdly, the importance of considering the continuo line as the foundation of the piece.

Notes

¹ The German word *Clavier* seems to have been chosen in this case as a general term, rather than a specific one. In 1722 it would have referred more to the harpsichord (*cembalo*) than to the clavichord or organ, but in conjunction with the adjective *Wohltemperirte*, the term applied more generally to keyboard instruments.

² See Pieter Bakker, 'Andreas Werckmeister: The Historical Positioning of his Writings', transl. Pleuke Boyce, in *Kunst en Wetenschap*, 2015, pp. 5–28.

³ Bach's pupil, the music theorist Johann Philipp Kirnberger (1721–83) published three well-tempered tuning systems in the 1770s. The best-known and most sophisticated of these, known as Kirnberger III, employs a pure interval C–E.

⁴ Marc-Antoine Charpentier, *Règles de Composition par Monsieur Charpentier and Augmentations tirées de l'original de Mr le duc de Chartres* (Bibliothèque nationale de France, ms. n.a. fr. 6355, fols. 1–16), ed. and transl. Jon Quentin Kuyper, Masters' diss., University of Iowa, 1971.

⁵ Johann Mattheson, *Der vollkommene Capellmeister* (Hamburg, 1739). See Joshua L. Dissmore,

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- 'Baroque Music and the Doctrine of Affections: Putting the Affections into Effect', *The Research and Scholarship Symposium*, 2017, Cedarville University, Ohio, no. 18, especially pp. 7–12.
- ⁶ David Ledbetter, *Bach's Well-tempered Clavier* (New Haven: Yale University Press, 2006), p. 146.
- ⁷ Ledbetter, *Bach's Well-tempered Clavier*, pp. 45–50.
- ⁸ Johann Nikolaus Forkel, *Über Johann Sebastian Bachs Leben, Kunst und Kunstwerke* (Leipzig: Hoffmeister und Kühnel, 1802).
- ⁹ In his *Kritik an Kirnbergers Temperaturvorschlägen* (or 'Critique of Kirnberg's temperament suggestions') of 1766, Marpurg wrote: *Mr Kirnberger told me and others several times, how the well-known Joh. Seb. Bach entrusted him with the tuning of his harpsichord while he [Kirnberger] had lessons with him [Bach]. And how this master expressly required him to tune all major thirds a little sharp, i.e. since they all beat, it is impossible to tune a just major third; and since no just major third is tuned, no major third tempered 81:80 is possible.*
- ¹⁰ Although Neidhardt was a composer, he was better known for his theoretical treatises, all of which concern temperaments. They include: *Beste und leichteste Temperatur des Monochordi* (Jena, 1706); *Sectio Canonis Harmonici, zur völligen Richtigkeit der Generum Modulandi* (Königsberg, 1724); *Gänzlich erschöpfte mathematische Abteilungen des diatonischchromatischen, temperirten Canonis Monochordi* (Königsberg, 1732; Latin translation, 1735); *Systema generis diatonico-chromatici, ex numeris serie naturali procedentibus evolutum* (Königsberg, 1734; German translation, 1734); *Canon monochordus Temperamenta generis diatonico-chromatici omnia arithmetice & geometricè edocens* (Königsberg, 1735).
- ¹¹ See Bakker, 'Andreas Werckmeister', pp. 5–28.
- ¹² Johann Mattheson, *Exemplarische Organisten-Probe* (Hamburg: Schiller- und Kißnerischen Buch-Laden, 1719).
- ¹³ Johann Mattheson, *Grosse General-Baß-Schule Oder: Der exemplarischen Organistenprobe* (Hamburg: Johann Christoph Kißner, 1731).
- ¹⁴ Ledbetter, *Bach's Well-tempered Clavier*, pp. 45–50.
- ¹⁵ Jean-Jacques Rousseau, 'Lettre sur la Musique Française', in *Collection complète des oeuvres* (Genève: Peyrou/Moulou, 1780–89), vol. 8.
- ¹⁶ Herbert Kellat, *Zur musikalischen Temperatur insbesondere bei Johann Sebastian Bach* (Kassel: Oncken, 1960).
- ¹⁷ Harald Vogel, 'North German Organ Building of the Late Seventeenth Century: Registration and Tuning' in *J. S. Bach as Organist: His Instruments, Music, and Performance Practices*, ed. George Stauffer, Ernest May (Bloomington: Indiana University Press, 2000), pp. 31–40.
- ¹⁸ Ledbetter, *Bach's Well-tempered Clavier*, p. 49.
- ¹⁹ *Ibid*, p. 145. It is also striking that in parallel to the harmonic simplicity of the prelude's opening, its fugue begins with the ultimate simplicity of melodic statement: the first five notes of a rising scale of C major.
- ²⁰ *Klavierbüchlein für Wilhelm Friedemann Bach*, ed. Wolfgang Plath (Kassel: Bärenreiter, 1981). J. S. Bach supervised the musical education of his son Wilhelm Friedemann (1710–84) with great attention. The graded course of keyboard studies and composition that Johann Sebastian provided is documented in the *Clavier-Büchlein*, which he began to compile in 1720, when his son was ten years old; it includes entries by both father and son. The collection includes portions of the French Suites, Two- and Three-Part Inventions, the six trio sonatas for organ, and Book 1 of *The Well-tempered Clavier*. Prelude no. 1 in C (BWV 846a) is the fourteenth item in the *Clavier-Büchlein*.
- ²¹ David Schulenberg, *The Keyboard music of J. S. Bach* (New York: Taylor and Francis, 1992), p. 167.
- ²² Four collections of J. H. Kapsberger's collections for theorbo and lute survive, the first being *Libro primo d'intavolatura di chitarrone* (Venice: Giacomo Antonio Pefender, 1604); modern edition ed. Christopher Wilke (Paris: Le Luth Doré, 2015). It includes toccatas, galliards and sets of variations.
- ²³ Ledbetter, in *Bach's Well-tempered Clavier*, p. 144, p. 55ff, maintains that playing and holding the notes within the broken chords of such a piece as Bach's Prelude no. 1 was normal and expected.
- ²⁴ See Anita Heppner Plotinsky, 'The Keyboard Music of Johann Kaspar Ferdinand Fischer', PhD diss., City University of New York, 1979, for an analysis of Fischer's keyboard works.

- ²⁵ Fischer's *Musikalischer Parnassus* is a collection of nine dance suites for harpsichord, each named after one of the nine Muses in ancient Greek mythology. The word 'Parnassus' in the title refers to Mount Parnassus, the home of the Muses. The nine Muses (Clio, Calliope, Erato, Euterpe, Melpomene, Polyhymnia, Terpsichore, Thalia, and Urania) were said to be the nine daughters of Zeus. They respectively represent History, Epic poetry, Love poetry, Song and Elegiac poetry, Tragedy, Hymnody, Dance, Comedy and Astronomy. Suite no. 7 represents Hymnody because the seventh Muse was named Polyhymnia. There is no evidence that Fischer composed *Musikalischer Parnassus* as programmatic music, but his selections of keys and dance forms for each suite reveal his intention to make the music relate to each title.
- ²⁶ One of the purposes of Bach's Prelude no. 1 can be seen as the cultivation of the skill of executing a simple form of arpeggiation to achieve a naturally beautiful 'continuum of sound' (Ledbetter, *Bach's Well-tempered Clavier*).
- ²⁷ Johann Kaspar Ferdinand Fischer, *Sämtliche Werke für Klavier und Orgel*, ed. Ernst von Werra (Leipzig: Breitkopf und Härtel, 1901).
- ²⁸ This elementary sequence encourages beginners to change the positions of the fingers of the right hand neatly and with economy of movement, and encompasses the basic modulations inherent in many simple pieces of music.
- ²⁹ Ledbetter, *Bach's Well-tempered Clavier*, p. 139, points to the collaboration between Bach and his pupils which often echoes Bach's own development of pieces from their beginnings in improvised form towards the finished work. While describing Bach as more liberal in his approach than previous composers, J. N. Forkel in his biography of Bach, *Über Johann Sebastian Bachs Leben, Kunst und Kunstwerke* (Leipzig: Hoffmeister and Kühnel, 1802), stresses that he was a hard taskmaster who left nothing out, and that he did not teach the techniques of composition until all the other aspects of musical theory had been covered.
- ³⁰ The term (more clumsily referred to by some as 'the hierarchy of the measure') is used by Bruce Haynes, *The End of Early Music* (Oxford: Oxford University Press, 2007), p. 49ff.
- ³¹ The concept can be simplistically regarded as associated with the Romantic period in music, and the general availability of a vast repertoire through publication. But it surely began earlier than this – perhaps even before the end of the eighteenth century.
- ³² In those works which he prepared carefully for publication, Bach was unusual in his prescriptive approach to ornamentation, and was taken to task for this by his contemporaries. One important (and valid) concern expressed by some, including Bach's pupil, the music critic Johann Adolph Scheibe, in his anonymous letter of 1737 in *Der Critische Musikus*, was that since notation was such an imperfect and unobvious means of indicating such details, too much specification risked stultifying a melodic line rather than enhancing it.
- ³³ Johann Mattheson, *Kleine General-Baß-Schule* (Hamburg 1785), facsimile ed. Sven Hiemke (Laaber: Laaber-Verlag, 2003). See, for example, pp. 374–5.
- ³⁴ *The Art of Strict Musical Composition by Johann Philipp Kirnberger*, transl. David Beach and Jürgen Thym (New Haven: Yale University Press, 1982), p. 377.
- ³⁵ *Ibid.*, p. 391.
- ³⁶ See, for example, Robert Donington, *Baroque Music: Style and performance, a handbook* (London: Faber, 1982), p. 11.
- ³⁷ Johann Nikolaus Forkel, *Über Johann Sebastian Bachs Leben, Kunst und Kunstwerke* (Leipzig, 1802), transl. Charles Sanford Terry, as *J. S. Bach: His Life, Art and Work* (New York: Harcourt, Brace and Howe, 1920), e-version 2011, ch. 3. See *The New Bach Reader: A Life of Johann Sebastian Bach in Letters and Documents*, by Christoph Wolff, Arthur Mendel, Hans T. David (New York: W. W. Norton, 1999), p. 436.
- ³⁸ Johann Mattheson: *Der vollkommene Capellmeister* (1739), transl. Ernest C. Harriss (Ann Arbor: University of Michigan Research Press, 1981), final paragraph.

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