BACH 711-714 - J.S. BACH: The 48 Preludes & Fugues *Vols. 1-4* - *Books 1 & 2 of the "Well-Tempered Clavier"*

"Das Wohltemperierte Klavier" was once seen in the English edition of a small German record company's catalogue translated as "The Good-tempered Piano". It could also be termed "The Equally-tuned Keyboard". For many people, the question reasonably arises: if the instrument we know today as a "piano" – from the venerable rosewood upright with brass candle-holders in the Antique Shop to the opulent Grand on the concert stage – is equally tuned, what would it sound like if it were unequally tuned?

To answer this, we must go back to the basic definitions of pure sound and how it is created by the plucking of a taut string. If a string is of the right length and tension to produce the note C, that same string divided into three equal parts will produce the fifth: G. The perfect fifth is a very important interval, in that every ear feels it naturally as an accompaniment to the basic note. Early mediaeval harmony was based simply on notes and their respective fifths.

By the same method of mathematical division of a string, other notes in the scale of C can be deduced, until the final complete scale of C with its twelve semitones has been created. At this stage, we have a board with 12 strings of different lengths mounted on it. These can be plucked (as with a zither), or they can be hit at high speed with a pair of hammers (cymbal or dulcimer) as can be seen in the folk orchestras of Hungary and Bulgaria. The next step is to fit a keyboard (clavier) to the cymbal, thus producing the *clavi-cymbal* or *clavicem balo* - the harpsichord. In this instrument the strings are now plucked by plectra operated from the keyboard.

So far so good. But now confronted with a keyboard the player is tempted to play in keys other than C, and here the problem arises. For the precise mathematical arrangement of intervals between the notes has been created specifically for the C scale, and in the B-flat scale for example, where the interval between the second and third notes is, in C terms, the interval between the first and second notes, discrepancies appear. The result is that on a keyboard tuned to the C scale, one can play in C and a few harmonically related scales; but in any other more distantly related scales, the whole piece will sound out of tune.

Although this problem, and the solution of equal tuning, had been known and considered much earlier in isolated cases, this was nevertheless the generally prevailing situation in Europe around 1600: the natural tuning based on C major was the norm, and the tonalities would become more and more "false" the further one went from that norm. The tonalities with many accidentals were wholly impractical, and the freedom was thus severely limited, not only in the choice of base-key, but also in the possibilities of modulation - temporary key-change - within the piece.

The first generally applied solution was a compromise. Adopted widely from the middle of the 1600s, the "mean-tone" system relied on making the major thirds accurate, and the rest a compromise. In this system about six major keys and three minor were good, with a limited number of marginal possibilities. Based on this system, Pachelbel felt able to write Suites for harpsichord in seventeen different keys with up to four accidentals before 1683.

The ultimate step was taken in 1691, when the organist Andreas Werckmeister proposed the solution of equal temperament, dividing the octave into twelve equal intervals. Those who feel that this is the obvious answer anyway must be reminded that with this system virtually none of the notes are musically "pure", and there are many professional and amateur musicians today who, endowed with the faculty of musical perception known as "absolute pitch", feel instinctively ill at ease for this reason. Taken overall, and with the very problematical alternatives in mind however, the system of equal tuning is probably the best way out, and certainly the acceptance of this system was celebrated by the composers of the time with a wealth of chromatically modulating pieces in every possible key.

All the tonalities were now available and practicable, and within the short space of a single generation, the conquest of tonal-chromatic space became a reality, formalized at the hands of J.S. Bach. Bach's most important predecessor and inspirer in this field was Johann Caspar Ferdinand Fischer (1665-1746) with his *Ariadne Musica,* a collection of twenty small preludes & fugues using nineteen different keys. As compared to Bach's 48, Fischer's pieces are much shorter and more modest in scope, but very concentrated and unified, and in many cases comparable to some of Bach's *Inventions*. Another result of Werckmeister's revolution was the sudden flowering of so-called Harmonic Labyrinths, in which the composer takes his listeners through all the major and minor keys in the shortest space of a single piece, possibly using bold and unexpected transitions. Bach's Little Harmonic Labyrinth BWV 591is an example of such a piece, probably written during his earlier years.

Bach had himself always advocated equal temperament, and tuned his own keyboard instruments on this system. In 1722 he completed a collection of 24 Preludes and Fugues in all major and minor keys, which he called "The Well-tempered Clavier". It should also be appreciated that so many of Bach's works, whether instrumental, keyboard or choral, feature a wealth of modulation within the piece itself; for this, too, equal temperament is essential.

It must not be inferred that Fischer, Werckmeister and Bach were the first to write for or to publicize the concept of equal tuning. There were many earlier examples of tuning and composition. But these examples are isolated, and it was only around 1700 that the system of equal tuning caught on generally. Indeed, the compositions featuring this system must be seen against a background of daring and exciting musical-scientific exploration and innovation!

Bach also no doubt saw an opportunity for another musical "Cycle". He was very fond of the idea of writing collections of pieces, such as Cantatas or Chorale Preludes for the Church Year, groups of pieces for educational purposes (such as the Keyboard Partitas), or the Art of the Fugue. Here was a chance to write a "Cycle" of 24 Preludes & Fugues; in fact he wrote another 24 some twenty years later, making the present total of 48.

Many of these 48 Preludes and Fugues go back to earlier versions, composed for example, for Anna Magdelina or Wilhelm Friedemann. If we chart the dates of composition of the original versions, of the re-workings, and of the final inclusion in the two collections, we find that work on the 48 spans almost the whole of Bach's working life. Certainly the 48 Preludes and the 48 Fugues go far beyond the mere illustration of well-tempered tuning, to become an almost complete study of the musical possibilities in keyboard preludes and fugues. It is little wonder that the Fugues especially have formed the artistic basis for numerous counterpoint textbooks.

The Preludes fall into three formal organizations: *continuous* preludes, *binary* preludes, and *ternary* preludes. *Continuous* preludes are those which flow in an uninterrupted manner to the final cadence. Almost half the 48 Preludes (14 in Book 1 and 9 in Book 2) are of this category. *Binary* preludes contain two related themes, sometimes a theme following another in imitation, or else the original theme returning with a change of key, or even as a two-part *Invention*. Likewise *ternary* preludes contain three alternating themes or subjects, such as in No.7, where the first subject is treated in close imitation as the second theme, followed by a Fugue evolved out of the first two themes.

Within these three basic procedures of structuring, Bach composes Preludes which have the essential stylistic characteristics of the following Baroque types: Two-part Inventions, Three-part Inventions, Fantasias, Toccatas, Fugues, and early Sonata-allegro movements. Similarly, amazing variety and inexhaustible musical wealth permeate the Fugues.

As with much of Bach's work, it may be felt that the instrumentation is almost immaterial. Bach thought so often in abstract terms of musical form, and while much of his music must in practice be tied to a particular instrumental or vocal performance mode, it may be felt that the “48” are in this respect closer to the Art of the Fugue, for which instrumentation was not specified. Preludes and fugues from the 48 have been successfully performed on the harpsichord, organ, clavichord, electronic synthesizer, and by string quartet, brass group, and full orchestra. And each in its own way reveals some new facet of the work hitherto unseen. The only qualifications relate to objective, absolute qualities: in the case of the Preludes, performance must be measured and respectful of the Baroque spirit; and with the Fugues, performance must above all be clear.

In this recording Malcolm Hamilton plays his two-manual harpsichord built in 1962 by Kurt Wittmayer of Wolfratshausen, Bavaria, pictured in our color presentations. It has two manuals: upper manual 8', 4'; lower manual 8', 16' with lute/buff stops on both lower registers, and a range of 5 octaves, F to F. The manuals can be coupled. The casework is of teak.

Both performer and producer felt that the demands imposed on performance by the inherent strength of the Preludes and the need for the utmost clarity in the Fugues, can best be satisfied with the pure sound of the plucked string. It is also our firm contention, for which we believe there is substantial historical evidence, that the instrument recorded on this disc with its strong ‘Germanic’ character resembles far more closely that which Bach would have used, than the lighter, thinner sonorities of those currently dubbed as “authentic”, and is particularly suitable to express the seriousness of purpose inherent in these works.

The choice of instrument leads to the central approach guiding these performances. Each Prelude, each Fugue is a complex structure with a wealth of detail; and it is the performer's object to take the listener slowly and quietly around each piece in this great exhibition, ensuring subtly but firmly that as much as possible of the fine detailing is transparently clear. For the music of Bach is such that only after a number of years' repeated listening to interpretations which are measured in pace and demonstrative of detail, can one begin to appreciate just a small part of the Composer's invention.

Michael Meacock

For a short biography of Malcolm Hamilton, see: www.BaroqueMusic.org/MalcolmHamilton.html