

THE ART OF FUGUE: THE LESSON OF THE KEYSTONE

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Certain famous musicians and noteworthy composers have been either documented Freemasons or have attended concerts where certain aspects having to do with the fraternity were also conducted, thus they could not have attended these events without being members of the fraternity. This list is impressive and includes such names as Johann Christian Bach (the youngest son of J.S. Bach), Haydn, Mozart, Beethoven, Mendelssohn, Liszt, Brahms, Mahler, Sir Arthur Sullivan, Sibelius, Sousa, Gershwin, and Berlin, among many others. No evidence however has survived to link J.S. Bach directly with the institution. Forkel, for example, the first biographer of J.S. Bach, makes no mention of it. Whatever Bach might have known about its tenets and cardinal virtues could have been learned from his youngest son. However, there is indirect evidence that J.S. Bach not only understood the principles of Royal Arch Masonry with respect to the keystone but that he enlisted its form in some of his very last compositions.

It's believed that around 1740-42 he began the composition of a monumental project of canons and fugues based upon only one theme and its variations. Bach never penned a title to this work in the original autograph, which was written in score. It was evidently conceived not only as a beautiful cycle of polyphonic music but, more importantly, as a theoretical instruction manual of examples for those who wish to learn how to write it. The project displayed the possibilities of exactly what could be done with a ten second theme using the craft of counterpoint. Death overtook the composer before he was able to finish the collection, but, even in its unfinished state, Bach succeeded in producing an hour and ten minutes of beautifully intricate music.

Before his death Bach sent to the engraver in an exact order about half of the pieces, and some he retained in manuscript form. Another son, Carl Phillip Emanuel Bach, oversaw the printing of the first edition which was published in September, 1751 under the title *The Art of Fugue* ("Die Kunst der Fuga"). Finding among his father's papers at his death an unfinished fugue having 3 subjects, he also decided that it belonged with the collection, entitled it "fugue with 3 subjects," and it was placed at the end. As an apologetic compensation to the purchaser for the incomplete state of the work, the last piece of the first edition included a chorale prelude (known as the "deathbed chorale") on *When We Are In Utmost Need* (Wenn wir in hoechsten Noten sind), which was purportedly dictated by the aging composer to his son-in-law J.C. Altnikol during Bach's last illness. Curiously, within a few months a second edition appeared (in April, 1752) which differs only in its cover, preface, and paper type. Everything else, including misprints, remained identical. Therefore, for all musical intents and purposes, the second edition *was* the first edition.

The autograph and the original 1751 edition therefore differ significantly in content and internal order, and so, the question arises as to whether the ordering in the first edition preserved or obliterated the hidden symbolism behind what old Bach was writing. A great deal of ink and paper has already been expended studying this issue by writers and musicologists in uncovering new information and theories regarding the exact ordering of the pieces Bach may have had in

mind. Many scholarly discoveries and hypotheses have been put forth, including an impressive group of completions of the last fugue. Some of these questions may never be fully answered, and it seems almost superfluous to add to what's already in print about it unless one can offer something fresh and new, a different twist on an old subject.

But then, back in 1982, this writer discovered a few new things that would do just that. Four years later, in 1986, this writer learned of the study done by Dr. Gregory Butler of the University of British Columbia in 1979 which gave scientific backing to this new scheme that suggested itself. Dr. Butler had shown (through examination of the erasures of the pagination markings in an original edition of the work) that a previous pagination scheme was planned, and the unfinished fugue was to come *after* the pair of mirror fugues (as Contrapunctus XIV) rather than at the end, that it was to be followed by the four canons, and that the augmentation canon was to have been the final composition of the cycle (Butler, Gregory, Abstracts Of Papers Read At The Forty-Fifth Annual Meeting Of The American Musicological Society, meeting jointly with the Society For Music Theory, New York City, Nov. 1-4, 1979, Edited by Richard Taruskin, Columbia University, p. 11. AMS paper entitled "Ordering Problems in J.S. Bach's Art of Fugue Resolved," Gregory Butler, University of British Columbia, Vancouver, B.C.). This paper was later republished in The Musical Quarterly, 69/1 (1983): pp. 44-61 under the same name. Much later Dr. Butler revised some of the principal ideas of this paper and presented his new views in "Scribes, Engravers, and Notational Styles: The Final Disposition of Bach's Art of Fugue" in About Bach by Butler, Stauffer, and Greer (eds), Urbana and Chicago, 2008, pp. 111-23.

Dr. Butler's original 1979 study provided physical evidence that Bach had some definite reason to embed the unfinished fugue on three subjects within the interior of the architectonic structure of the cycle rather than place it at the end. The position this piece was to occupy becomes significant when we take into account Bach's preoccupation with numerical symbolism.

History records that old Bach sent to the engraver the following pieces: 1) four single fugues (372 measures), 2) three stretto fugues (230 measures), 3) two double fugues (250 measures), and 4) two triple fugues (372 measures). Evidently Bach wished for these first eleven pieces, in this order, to be the front end of the cycle. In manuscript at the time of his death were found the following: 1) a variant of one of the double fugues (98 measures), 2) an arrangement for two claviers of one of the mirror fugues (142 measures), 3) two mirror fugues (254 measures), 4) an unfinished fugue with 3 subjects (238 measures completed), and 5) four canons (372 measures), all based upon the original melodic idea or some variation of it.

It struck this writer as curious that the number 372 appeared in all this material three times. Bach often used a system of substituting numbers for letters of the German alphabet to convey meanings, and the sum of these numbers represented to him a non-musical word or phrase. This also explains his interest in certain numbers, such as 14, his favorite number. In his number alphabet the word BACH = B(2) + A(1) + C(3) + H(8) = 14. This preoccupation even influenced his behavior with others, as we know from his stubborn refusal to join the Mizler Musical Society in Leipzig until nine years from his first invitation, until he could become the Society's 14th member.

Since the surname Bach is also expressible as a four digit number (2,138) he could have decided to write 14 fugues totaling 2,138 measures (this may have been his first thought) and stuck to this plan through the whole cycle, but he didn't ... he also composed 4 canons to be squeezed into the scheme somehow (with the 2 mirror fugues and the unfinished fugue) making 18 pieces in all. This led this writer to ponder what the composer was trying to symbolize with these 4 canonic extensions to the cycle, and he made an important discovery.

Bach was of the Lutheran faith, and it's a well known historical fact that the Thomaskirche (St. Thomas' Church) in Leipzig became the center of his life and work beginning in the 23rd year of the 18th century (1723) at which time he was appointed cantor and director musices and first received his official titles and duties there. He was proud of those titles, and it's also known that, when he conceived his music, he preferred symmetrical forms having clearly defined centers flanked by evenly balanced sides. The word "Thomaskirche" would have suggested to him the number 130, and the 9th fugue in the cycle contains 130 measures. Assuming that the 14 fugues and 4 canons were to add up to 2,138 measures of music, and taking up where Bach left off in the ordering of the pieces, the structural center of the collection of 18 pieces would have to be located on the bar line at the end of the 23rd measure in the 9th fugue.

It may have been that Bach was wanting to describe in musical terms the fact that by arriving at measure 23 in the 9th fugue one would have reached the center point, the "key stone," that held together the symbolism in which he encoded his official titles in all the other pieces ... just like a stonemason's keystone would complete both sides of a semicircular arch of stones. The idea is not farfetched that he contrived The Art of Fugue with the intent to incorporate in numerical camouflage all of his official titles connected with his Leipzig post which he assumed in 1723. This critical year in his life symbolically represented by the 23rd measure of the 9th fugue, if it was indeed the keystone which Bach identified as the exact middle of the cycle, would have functioned as a link to connect all the other components together into a very stable, balanced structure and by its symbolic presence in Bach's mind would have braced the entire structure that he was erecting. Whether this was consciously or unconsciously planned, this architectonic structure is plainly a reference to the teachings of Royal Arch Masonry. When the Scripture says, "the [key]stone which the builders rejected has become the head of the corner," this was not an idea that any man of the Lutheran faith would have rejected, and Bach in particular.

The question arises as to why Bach incorporated a double fugue of 120 measures into The Art of Fugue and discarded the 98 measure variant which is equally well written and instructive. The answer can be deduced from what has already been given. If he had substituted the 98 measure variant for the 120 measure double fugue, then the structural center or keystone would have been shifted 11 measures anteriorly. The result would have had no relationship to what Bach may have wanted to express numerically at the structural center.

NOTE: The two clavier arrangement of the 3-voice mirror fugue is generally excluded from the architectonic structure of The Art of Fugue due to general agreement that Bach wrote it for the instruction of his children during an interlude when he was sidetracked from his main purpose. At the heading of the manuscript another hand (probably Bach's son, Carl Phillip Emanuel)

designates "a 2 Clav." indicating a second keyboard, presumably harpsichord, to be added to the one which is already playing, thus diluting the formal rigor of the cycle obtaining in all the other specimen pieces. Many times a composer begins writing with a certain goal in mind and as the music develops he discovers that it takes a different turn, this in order to bring out everything that's contained within the theme. This may have been what happened here.

When we look at Bach's official titles at Leipzig we discover a number of remarkable coincidences ...

The title JOHANN SEBASTIAN BACH, CANTOR VON LEIPZIG would have suggested to him the number 372; the four single fugues, the two triple fugues, and the four canons each contain 372 measures exactly.

The title HERR DIRECTOR MUSICES would have suggested to him the number 230, and the three stretto fugues contain 230 measures exactly.

The title HERR THOMASKIRCHE CANTOR would have suggested to him the number 250, and the two double fugues contain 250 measures exactly.

The title of which he was especially proud was the way he often signed his name on official documents in his later years, JOH. SEB. BACH, DIRECTOR MUSICES, which would have suggested to him the number 254. The two mirror fugues, of which he was also especially proud, have 254 measures exactly.

Another way in which he referred to himself was with the title JOH. SEB. BACH, CANTOR UND DIR. MUSICI, which suggested to him the number 288. When we look at the unfinished fugue with 3 subjects it has only 238 measures completed. Bach may have only planned another 50 measures of development for this piece in order for it to contain 288 measures. If that were the case (and the shoe fits), then the 14 fugues and 4 canons would have added up to 2,138 measures exactly.

Bach signaled the final development of the last fugue by combining his melodic signature with the other 2 themes. This development would have to have contained 55 measures to fit the pattern. On the other end of cycle we find, in the 55th measure of the 1st fugue, that he left a clue to this pattern in the form of another melodic signal ... a dissonant one. He wrote the tonic, supertonic, and mediant scale degrees colliding with each other in the same octave on the same beat. But this 3-voice collision is woven so cunningly into the surrounding musical fabric that the ear accepts it as a consonant chord. Bach must have reasoned that anyone who could slither into and out of such a difficulty and get away with it would be unable to hide his identity from knowledgeable musicians of his day. He reveled in challenging his musical colleagues this way, and things like this would have given him a chuckle or two.

He also included other numerical subtleties: in the 1st fugue an episode of 14 measures precedes the final entry of the subject, which appears after the music proceeds through 73 measures (Joh. Seb. Bach = 73). In the 2nd fugue the first stretto between the outer voices appears after the

music proceeds through 104 measures (Sebastian Bach = 104). In the 3rd fugue the first chromatic counterpoint to the diatonic main theme appears after the music proceeds through 166 measures (Johann Sebastian Bach = 166). And, as if to make sure that there be no mistake about *which* Bach is the Leipzig Cantor, the fifth fugue contains 90 measures (Sebastian = 90).

Bach knew that his family surname B-A-C-H was a melodic signature in German corresponding to the musical notes B flat, A, C, and B natural. It first appears melodically in The Art Of Fugue 3 measures from the end of the 4th fugue, in the tenor voice. But in this inner voice it is disguised so well that it seems to disappear from the ear. Bach must have been amused at how he was thus able to weave this ingredient into the musical fabric at such an early stage and have it go unnoticed by the average listener. It does not appear again until all his ideas have run their course and it is given an exposition of its own in the final 14th fugue.

By the Italian word “ricercare” is understood to mean a master fugue, i.e., a strict fugue carried out at length with a number of contrapuntal artifices and showing utmost skill. Such are most of the fugues of J.S. Bach, and this word would have suggested to him the number 80. We find that the torso of the unfinished fugue has its first section built on a variant of the main theme over a span of 113 measures ($1 + 13 = 14$, $11 + 3 = 14$, Bach's favorite number). A section of exactly 80 measures follows, during which the 2nd theme appears in an exposition of its own and is combined with the 1st theme. It is at this point, after this second section of 80 measures, that Bach introduces his melodic signature (B flat, A, C, B natural) as a 3rd theme, giving it an exposition of 14 measures. After 41 measures of developing this third theme (the inverse of 14 is 41) Bach began the mighty polyphony in which all 3 themes were written in combination, but after he wrote down only 7 measures of this development his final illness and death prevented him from finishing it. In the 238th measure this remarkable weaving of the voices unravels leaving posterity to wonder forever where he was going with this.

So from this detective work we find certain evidence that the architecture Bach may have had mind was to begin the cycle at the left leg of an arch, from the left base represented by the 4 single fugues, and from there travel clockwise through the 3 stretto fugues and then entering the 2 double fugues in which is embedded the mid-point, or keystone, located in the 23rd measure of the 9th fugue. From there the cycle passes clockwise downward through the right leg of the arch into the 2 triple fugues, the 2 mirror fugues, and the fugue with 3 subjects (leaving an “unfilled” open gap of 50 measures) to the right base represented by the 4 canons. In this hypothetical scheme there is no room for a quadruple fugue in the arch and still preserve the numerical symbolism. All it lacks would be 50 more measures of music to complete the unfinished fugue.

According to Forkel, who obtained most of his information from Carl Phillip Emanuel, the composer intended to include "a final fugue having 4 themes which were to be completely inverted." If such a quadruple fugue was planned, then its combinatory section would have to be conceived first, since this part of the framework must necessarily be an early stage in the construction of a quadruple fugue. All that Bach seems to have left unfinished, i.e., the point where he left off working, are the 3 expositions of the “fugue with 3 subjects” and a beginning of a combinatory section (development) on these. If it was ever written down, no sketch of a combinatory section of a quadruple fugue for inclusion in this cycle is known to have survived.

This could explain why the second edition appeared so close behind the first edition and why its contents were identical. Carl Phillip Emanuel could have commissioned a second edition in anticipation of his locating that hypothetical quadruple fugue for inclusion in the cycle, but instead he came up empty handed after it was too late to cancel the commission. No manuscript for a quadruple fugue could be found. Presuming that he contemplated writing a quadruple fugue based upon the same theme and its variants, and considering that he composed entirely from the mind away from any instrument and that he insisted that his scholars do the same, it's entirely possible that Bach carried the idea of a quadruple fugue only as a mental sketch which he never had time to commit to paper.

It's also possible, though unlikely, that the unfinished fugue which Carl Phillip Emanuel entitled a "fugue with 3 subjects" could have been the torso of the disputed quadruple fugue, but this writer has trouble imagining the intense compression on Bach's pen to force himself to arrive at a well done quadruple fugue in the span of only 288 measures, even though with everything else he had soared playfully above every technical difficulty. Therefore, in light of what has been said, perhaps we should reconsider the fate of this hypothetical quadruple fugue, that indeed its composition could have been in his original plans, but that he found it unsuitable at last, and that its destiny as a separate project was never realized because it was too long for inclusion in the cycle if the numerical symbolism was to be retained.

The following German rhyme will help recall the relationship between Bach's Art of Fugue and the lesson of the keystone:

"Die Welt wurde gekonnt haben,
das Ende der vierzehnten Fuga hoeren,
wenn Bach wurdet gedurft haben,
nur funfzig mehr Takte komponieren."

("The world would have been able
to hear the end of the fourteenth fugue
if Bach would have been permitted
to compose only fifty more measures.")