

Fugue No. 4

C-Sharp minor

Well-Tempered Clavier Book I

Johann Sebastian Bach

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Subject: Fugue No. 4, *Well-Tempered Clavier*, Book I

In this unusual work Bach has used musical and mathematical symbols to express religious belief. It is both complex and fascinating. In it we shall meet J. S. Bach the man who, by signing it with his musical signature, revealed himself to be as complex as his music. In this analysis we shall consider how the fugue represents: a lament, Christ's passion, the sign of the cross, three motives, Bach's name in tones, a crown, and Bach's numbers. I shall summarize these thoughts in a short conclusion.

A Lament

Should you wonder, as I have often wondered, why such a sad fugue follows upon such a happy one (C# Major), we may have stumbled upon Bach's state of mind in writing this great work. Let us begin with the saddest part. Please listen to the high voice of mm. 70-73 and mm. 101-105. Yes they are very much alike. In both passages the high voice descends chromatically from c# to g#.

On the timeline I have called these two passages *lamenti*, a word that the Italians of Bach's day used to describe descending chromatic melodies in general. Obviously this fugue is a lament.

But what has Bach lamented? This analysis will be devoted to answering that question. Should we decipher the meaning of this lament we will have found the key that will unlock our understanding of all that matters in this fugue.

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Let us begin by considering two other compositions where Bach used the same lament. The first is the *Crucifixus* of his [Mass in B Minor](#) where the choir sings, "He was crucified under Pontius Pilate." Here Bach has repeated the *lamento* thirteen times! In fact this is all that the bass line does--it continuously laments. In Bach's *Crucifixus* the object of his lamentation is obvious; the one being crucified was Jesus.

The other composition is a little-known canon for five voices that Bach wrote for Johann Gottlieb Fulda. He was a theology student in Leipzig who sometimes played in Bach's orchestra. Fulda's canon, like the *Crucifixus*, uses the same lament.

The lament in the Fulda canon is especially important for what Bach wrote beneath it: *Symbolum, Christus Coronabit Crucigeros*. Translation: "This is a symbol of Christ who will crown those who carry his cross." So the laments of both the *Crucifixus* and canon are associated with the crucifixion of Jesus.

Christ's Passion

A second reason for the importance of this lament is that it descends five semitones. These are the intervals between the six pitches c#-b#-b-a#-a-g#. What are more significant about *five* semitones than any other number? Lutherans of Bach's day associated five with the wounds that were inflicted upon Jesus by the nails in his hands and feet, and a soldier having thrust a spear into his side.

When marks resembling Jesus' wounds have been impressed upon a person, or a work of art such as this fugue, Christians call them *stigmata*. As a symbol of unassuming meekness, *stigmata* are a reminder to accept suffering without complaint.

So a strong argument can be made that this lament, therefore this fugue, may be identified with the suffering of Jesus. When music has this particular connotation we call it *passion music*. But we do not mean passion in the sense that we use it today--as in someone is passionately in love with somebody else. The Latin root, *passio*, means suffering. It is the same root from which we get *compassion*.

Christians place a great emphasis upon Jesus' passion. The highest season of the Church year--Holy Week--is devoted to thinking about his suffering. This is done because suffering and compassion are at the center of Christian belief. It is (or so Christians believe) in times of suffering that God often shows a person great compassion and helps him to show it to others. Because the suffering of Jesus is considered to be the model, Christians reflect upon his passion in order to become more compassionate people.

Johann Sebastian Bach was fully committed to this belief. This dimension to his personal life is beyond dispute. He himself suffered greatly. Both of his parents died when he was ten. His wife Maria Barbara died and was buried while he was required to be out of town because of his employment. Ten of his children did not survive to adulthood.

By now you must think that we have ranged pretty far afield from this fugue. But I have not forgotten that we were discussing the *Well-Tempered Clavier*. It is only now that we are ready to continue that discussion. We began it by observing that there is sadness in this fugue. Now we know why. While there are many points that we could make about the structure of this fugue, making them without considering the object to which they point would have missed the point. We may not be interested in the religion of Bach, but if we are interested in his music then we ought to acknowledge how it was influenced by his faith. While that faith was not specifically musical, insofar as it sometimes shaped musical structure, it is important for us to consider.

Why for example does this fugue, like the Fulda canon, have five voices? Why not? There was no rule against five voices. But five-voice fugues *are* somewhat of a rarity; of the 48, only this and the fugue in b-flat minor (WTC I) are in five voices.

But if five voices seem coincidental, you may be more curious to know why the subject of this fugue is so short. In fact it is the shortest in Book I of the *Well-Tempered Clavier*. Had you noticed that it has five pitches? No other fugue has a five-note subject.

Does it seem plausible that there is a relationship between the five voices, five-tone subject, and five-semitone lament that we discovered earlier? The crimson thread that seems to tie all of these together is the passion of Jesus. And that is one reason why I have called this fugue *passion music*.

The Sign of the Cross

The subject of this fugue quotes the Advent chorale, *Nun komm der Heiden Heiland* (Come Savior of the Heathen). Both melodies move from the starting pitch do down to ti then *cross* above the starting pitch to me and descend twice (re-do) to the starting position. The melody is universally recognized to be *chiastic*. This word comes from the Greek letter *Chi* (χ), a Christological symbol since Roman times. Athanasius Kircher, a near contemporary of J. S. Bach, had described the *chiastic* melody as a *circulatio* (circle). Bach's cousin Johann Walther wrote that the *circulatio* could represent, among other things, the rising and setting of the sun.

This fugue contains 41 tiny *circulatio*s that inform our understanding of its meaning. I have identified them as X's emanating from Bach's monogram as the music plays. By the end of this analysis you will understand their importance. You may want to take a moment now to find them in the score and train your ear to hear them: *down a step, up a skip, then down a step*. This is the *chiastic contour*: in Bach's music a Christological symbol of great power and force.

When Bach set the word *Kreuz* (cross) to music he often assigned the *circulatio* melody to it. His setting of the word *kreuzigen* (crucify him) in the *St. Matthew Passion* is a case in point.² At other times he assigned the motive to *Jesum* or *Christus*. Interestingly Bach's own name in musical tones is another

² The subject of this fugue and that of the "crucify" choruses in the *St. Matthew Passion* are identical in their contours, albeit in different keys and rhythms.

variation of the *circulatio*. We shall consider this fascinating musical signature in more detail momentarily.

But first, as a musical representation of the cross the *circulatio* can be likened to a reverent gesture that Christians make upon the forehead and shoulders. One occasion where Christians often make the *sign of the cross* is upon the words from the Creed, "He was crucified under Pontius Pilate."

You recall these words from our discussion of the lament in the *Crucifixus* of the [Mass in B Minor](#). Not only does that movement contain a lament (five descending semitones), but its musical high point also contains two *circulatio*s upon the word *Crucifixus*. One of them is Bach's name in musical tones. It is as if Bach has signed the cross at the appropriate liturgical moment!

So the subject of this fugue is the melodic sign of the cross. For this reason I shall call it the *Cross motive*. Notice that the Cross motive contains an unusual and almost painfully dissonant interval between its 2nd and 3rd pitches. This is the interval of the diminished fourth (d4). Of all the subjects in the *Well-Tempered Clavier* this is the only one that employs the d4, an interval that, if not composed carefully, would draw red marks from your composition teacher. Bach's reason for using this dangerous interval was to communicate anguish and distress.

Three Motives

The received wisdom about this work is that it is a *triple fugue*. This implies that it has three subjects. I have represented the 1st subject in solid red, the 2nd subject in diagonals, and the 3rd subject in little squares. I say, "received wisdom" because this is the consensus of most commentators. But you should know that there is a problem with this interpretation. The problem is that only the 1st subject (the Cross motive) receives exposition. An exposition occurs when the subject is successively stated, in all voices, in an alternating tonic-dominant relationship. The 2nd and 3rd subjects meet neither condition.

Whether this is a triple fugue (with three subjects) or a simpler fugue (with one subject and two subsidiary motives) is a semantic distinction. What matters is that there are three musical ideas. There can be no denying that. To please all parties in this debate I shall refer to the primary motives in both ways--as subjects and motives.

The second subject waits to make its entrance until m. 36 where it is heard in the high voice. This melody reminds me of the gentle music that water makes when it flows between the stepping-stones of a brook. I shall call it the *Brook motive*. You will recognize the Brook motive as a sequence. Unlike the sequences that we have studied before, the Brook sequence does not modulate. It is a *diatonic sequence* that stays in one key.

I am struck by the peacefulness of the Brook motive. Its peacefulness is attributable to its continuous eighth notes and lack of chromaticism. It seems to be an unsuitable partner for the Cross motive with its agonizing d4.

Except for one entry, the Brook motive descends. Accordingly the timeline represents it as diagonals that descend from left to right. In m. 41 the Brook motive is heard in its melodic inversion; its diagonals ascend. Unlike every other

statement of the Brook motive the inverted statement is highly chromatic. Look at all of those accidentals in the bass voice! By the end of this discussion you may sense that this passage emanates from the heart of J. S. Bach.

Amazingly the Brook motive contains numerous diminutions of the *circulatio*. Listen to these in measures 36, 37, 38, 39, and 40. Notice that the d4 of the Cross motive has been contracted to a third.

Now that we have agreed that Bach's 1st subject is a sign of the cross, would you think it beyond the realm of possibility that the Brook motive commences with five quick signs of the cross? Because the Brook motive replicates the contour of the Cross motive it seems to carry the cross like the Latin words that Bach inscribed on Fulda's canon: "Christ will crown those who carry his cross."

The third subject is not heard until m. 49. If you are following the score, you will see it in the tenor voice as a rising perfect fourth (P4) from c# to f# (thrice repeated) followed by a decorated suspension. The repeated notes of this subject impress my ear the most. After the fluidness of the Brook motive these repeating pitches seem like the tolling of bells or the gonging of a clock in the town square. I shall call it the *Tolling motive*.

Unlike the Brook motive it is difficult to hear a connection between the Tolling motive and anything prior to it. It is possible that this subject was generated by the rising perfect fourths (P4) created by each new subject entry in the exposition. Listen to these P4 intervals in m. 3, m. 7, m. 10, and m. 14. The resemblance of the Tolling motive to m. 10 is especially apparent. The perfect fourths of the Tolling idea may be a musical solution to the dissonance inflicted by the diminished fourth of the Cross motive.

So the Cross motive creates a musical dilemma. This dilemma awaits the arrival of new motives for its resolution. Its dissonant d4 is contracted to a consonant third in the Brook motive and expanded to a perfect fourth in the Tolling motive.

Had you noticed how each subject is grouped? The Brook motive is heard with the Cross motive in mm. 36-48. All three subjects are heard together in mm. 49-87. After having completed *fourteen statements* plus one inverted statement, the Brook motive is heard from no more. In mm. 94-99 Bach has composed a pronounced stretto upon the Cross motive with condensed entries of the Tolling motive. By the end of this analysis you may sense that the grouping of these motives is more symbolic than structural.

Bach's Name in Tones

Earlier I alluded to Bach's name as a unique variation of the *circulatio* described by Kircher and Walther. Now I would like to discuss Bach's name in more detail. The reason is because, in three places, Bach has signed his name in tones. I must warn you that the argument I am about to make is complicated. But I will make it as simply as I can. If this theory does not interest you then you should feel free to skip it. To appreciate the beauty and sadness of this fugue it is not necessary to know what I am about to explain.

Bach's name in musical tones consists of the pitches b-flat, a, c, b-natural. How did he get his name out of that? Well the Germans of Bach's day

designated b-flat as "b" (without the word "flat"). To avoid confusing "b" with b-natural, they identified b-natural as "h". This custom allowed Johann Sebastian to spell BACH in tones.

But what count more than literal pitches are the intervals of Bach's signature melody. When transposed, they still sound like BACH. This is because the intervals are the same even if they are produced by different pitches. The intervals of Bach's name are down a semitone, up a minor third, then down a semitone. These are the intervals of BACH as found in the high voice of m. 48. I have marked it in the score.

It may surprise you to learn that Bach's melody is still recognizable in *retrograde* (backward). Soon you'll understand why Bach sometimes retrograded his signature: up a semitone, down a minor third, and up a semitone. The same result can be achieved by writing the melody upside down (inverted).

I shall symbolize the retrograde of BACH by writing HCAB. This is his signature motive as it is heard in the low voice of m. 41. Again, I have highlighted the score. Surprisingly, the a-natural in the bass voice of m. 42 is, from a music-theoretical point of view, a "mistake." The theory says that it should have been an a-sharp. It is a mistake that one of Bach's students, probably Kirnberger, took it upon himself, in later sources, to "correct." But the edited versions obliterated Bach's name. Thankfully, the most authoritative sources, the ones closest to Bach, contain the a-natural.

So you can see that BACH in tones is very chromatic and most unlikely to have been accidentally composed. It requires care to render this intentional "mistake" as something tolerable to the ear. I have discovered that m. 41 of this fugue contains the first instance of HCAB in the *Well-Tempered Clavier*. Likewise m. 48 contains the first instance of BACH. In m. 64 Bach has composed his name one more time. I shall call this instance BACH #2.

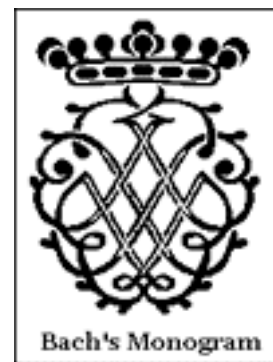
A Crown

Now I need to tell you about Bach's monogram: a seal that he used on his correspondence and legal papers. The monogram contains his initials JSB in florid calligraphy. Its superimposed mirror BSJ creates numerous crosses.

These crosses are representations of the Greek letter χ (*Chi*), the first letter in the Greek spelling of *Christ*. In some of his manuscripts Bach substituted χ for the word *Kreuz* (cross). Above the *Chi* symbols there is a crown. Within the crown there are five jewels.

Bach's monogram bears a strong resemblance to the inscription that he wrote on Fulda's canon: "Christ will crown those who carry his cross." The monogram makes its crosses by superimposing Bach's initials JSB upon their retrograde BSJ. This symbolizes Bach himself carrying the cross. It also explains the crown.

Now we understand why Bach has paired his name in tones (BACH) with its retrograde (HCAB). He must have conceived of his musical signature as another representation of the cross. He also considered his life-long ambition to



write well-crafted music to the glory of God as another way to carry the cross. This explains why he ended many of his cycles, including Book I of the *WTC*, with the Latin words *Soli Deo Gloria* (To God alone be the glory).

We have come now to the heart of this fugue. Bach has signed his name three times: once in m. 41 backward (HCAB), a second time in m. 48 forward (BACH), and a third time in m. 64 forward (BACH #2). The first two signings are especially significant; they mark something. The marking is symbolized by the rhetorical device, known as *chiasmus*, where a motive is represented forward and later backward. In Bach's day (as even today) this type of framing was engineered to draw attention to what falls between. The Germans even have a word for what falls between; they call it the *Herzstück* or "Heart Piece." So the most important part of this fugue lies between Bach's two signature motives. That passage begins in m. 41.

So mm. 41-43 is the passage of which I wrote that emanates from Bach's heart. I'm able to make this observation because these measures fall between the *chiasmus* that Bach created by signing his name backward HCAB and forward BACH.

But why is this passage so important? That is the million-dollar question. Upon examination we discover that it contains the only instance of melodic inversion in the fugue. The inversion of the Brook motive is notable for yet another reason; it is a chromatic inversion of an otherwise un-chromatic melody.

Recall that we began by observing that this fugue is sad and that the sorrow was found in the chromaticism of mm. 70-73 and mm. 101-105. We called these passages laments. Well now I have something very interesting to show you. The inverted Brook motive of mm. 41-43 contains the same pitches of each lament but it moves them in the opposite direction. In both of its occurrences the lament is heard in the high voice and descends c#, b#, b, a#, a, g#. But in m. 41 we hear a backward reading of the lament g#, a, a#, b, b#, c#. These pitches can be heard to ascend on the strong beats of the low voice.

So here is what is so important about the *Herzstück* of mm. 41-43 and why it comes from Bach's heart. The melodic inversion of the lament is Bach's musical symbol for a crown that has been generated out of the cross. We can be very confident of this interpretation. The evidence for it is found in the canon that Bach wrote for Fulda. Remember that Fulda's canon also contains a five-semitone lament in the leader voice and the inscription "Christ will crown those who carry his cross."

The follower voice of Fulda's canon is generated out of the leader by *melodic inversion*. Likewise mm. 41-43 of this fugue have been generated from its lament by melodic inversion. In both cases the product of that inversion is an ascending chromatic melody of five semitones. They represent the opposite of lamentation: the crown that Christ gives to those who share his passion.

Bach's Numbers

So let us review. Bach wrote his name in tones forward BACH and backward HCAB. His monogram contained his initials forward and backward. I now propose to explain how Bach also represented his name in numbers forward and

backward. Bach was fascinated with two numbers, 14 and 41. Notice that they are retrogrades. When 14 is read backward it is 41 and vice versa.

Here is how Bach derived these numbers. If you assign each letter of the alphabet a number--A=1, B=2, C=3, then B+A+C+H equals 14. Adding J+S to BACH yields 41. (In the Latin alphabet the letters J and I are both 9.)

We have observed that m. 41 contains the first example of HCAB in the *Well-Tempered Clavier*. Would you agree that the choice of this moment for such a display of symbols was purposeful? Measure 41 also commences the Crown passage--the only instance of five *ascending* semitones in this fugue. Do you hear this musical gesture as the opposite of the lament? If so then we would agree that m. 41 begins the *Herzstück* of this fugue. Notice too that the crown passage ends in m. 43--the CREDO number (C+R+E+D+O = 43). Credo means, "I believe" in Latin.

But what of that other number? Has Bach used 14 in this fugue? Yes, Bach has revealed both of his numbers in the 2nd subject, what we have labeled the Brook motive. Not counting the inverted statement of mm. 41-43 there are 14 statements of the Brook motive. These 14 passages contain 41 little crosses that I have identified as x's tumbling from Bach's monogram.³ Immediately following the 41st *circulatio* the Brook motive is heard from no more.

Earlier in this analysis I identified the 2nd subject as the Brook motive because it reminded me of the sound of water. But I must confess another reason. "Bach" is the German word for "Brook." My purpose was to suggest that the 2nd subject represents Bach himself!

The 2nd subject represents Bach because it contains the first instances of BACH, BACH #2, and HCAB in the *Well-Tempered Clavier*. These three represent every contrapuntal permutation of Bach's name: prime, retrograde, inversion, and retrograde-inversion. The Brook motive is also stated 14 times in its upright position and has 41 crosses. In its fifteenth statement, the Brook motive is inverted and chromatically inflected. These alterations allude to Bach's monogram by transforming the fugue's lament into a crown.

In the beginning I wrote that this analysis would decipher the meaning of the lament. Here is what it means. The five descending semitones represent Christ's passion and his cross. The five ascending semitones of its retrograde (m. 41) represent the crown that Christ gives to those who carry his cross: *Christus Coronabit Crucigeros*. In essence this fugue and Fulda's canon are both musical expressions of Bach's personal creed as represented by his monogram.

³ I have counted only those crosses that have the same contour as BACH (down-up-down), and that are heard within the Brook motive. These *circulatio*s are not identical with BACH because one (or both) of the intervals of the 2nd is major. In the BACH signature motive both 2nds are minor. So there are 41 of these crosses in the Brook motive. As for their melodic inversion (up-down-up), there are five: three in the Crown passage and two elsewhere in the Brook motive.

Conclusion

There are many inferences that one could make about this fugue as they relate to the man who composed it. I have made some but shall leave you to infer others if you wish. We should not draw any conclusions without first having completed a study of the faith culture in which Bach lived. This is the Lutheran faith in which he was born, educated, and employed for most of his career. If you wish to read more on this subject I recommend Jaroslav Pelikan's *Bach Among the Theologians*.

This fugue is a musical representation of Bach's monogram, which expresses a core doctrine of Lutheran belief. Martin Luther himself expressed that belief in what he called *theologia crucis* or, "theology of the cross." *Theologia crucis* can be encapsulated in the words of Jesus himself: "If anyone would come after me, he must deny himself and take up his cross daily and follow me. For whoever wants to save his life will lose it, but whoever loses his life for me will save it." (Luke 9:23-24).

If you remember nothing else from this analysis you should remember the preceding two paragraphs. They are key to understanding Bach's sacred music. To those of you who may have been newly introduced to them, they will unlock new ways to hear Bach. You will never again hear his canons, double counterpoint, melodic inversions or retrogradations without awareness that these compositional devices are *ipso facto* representations of the cross.

In this study we have introduced the first of three passion fugues in the *Well-Tempered Clavier*. In ethos its closest relatives are the excruciatingly chromatic *bm* fugue concluding Book I and the *f#m* fugue of Book II. In each analysis I have taken the view that musical structure was shaped by Bach's desire to create a *Symbolum* of belief. To have limited the discussion to musical structure would have missed their profound meaning.

It has not been my purpose to validate Bach's belief, but to ignore it would have denied the reason these works were composed. We would also have missed another facet of Bach's genius: his ability to use symbols of enduring spiritual substance. Instead my purpose has been to show how Bach subjugated form to a higher pattern of thought. That pattern involved his personal *Credo* without which these fugues would not have existed in the forms we *now* know them.