

## WTC I/10 in E minor – Prelude

This is another prelude developed from a forerunner in the *Notebook for Wilhelm Friedemann*. The original, only 23 measures long, displays a 16th-note bass line below block chords in recitativo style (1/8-note chords followed by 3/8-note rests, sounded on the first and third beats of each measure). In this earlier setting, the prelude is harmonically determined. The version Bach developed for the *Well-Tempered Clavier* comprises 41 measures. The first 22 measures rest on an almost unchanged 16th-note bass line.<sup>1</sup> The recitativo-style block chords appear now in the middle layer and are often reduced to only two notes. The two strands are topped by an elaborate cantilena reminiscent of a violino-obbligato part in a baroque oratorio aria. This line sounds so unique that it may make listeners overlook that it is only an ornamented variation of the treble in the original block chords. In other words: in its initial half the E-minor prelude is a harmonically determined piece luxuriantly adorned.

The prelude's second half is marked *Presto*. Although the word hints primarily at a changed pace of the prevalent pulse, it leads performers and listeners alike into expecting entirely new material. It may then come as a surprise that these 19 measures rest on a 16th-note figure that, on close inspection, proves strikingly related to that of the first half. What is new is that here, the right-hand part also appears in 16th-notes. For the most part, these move in parallel motion to the bass, but they nevertheless create the impression of ornamented broken chords. Although the final nine-measure portion features several details that will deserve special mention later, we can safely maintain that this part of the prelude is also, above all, harmonically determined.

<sup>1</sup>The *Wilhelm Friedemann* version differs little from the *Well-Tempered Clavier* version: The G in m. 9<sub>1</sub> avoids the seventh jump downward by appearing one octave higher; the line is thus smoother, but the bass-note descent from m. 6 to m. 9 is less satisfactory without its expected target in the lower octave. In m. 13, the re-sharpening of the F already occurs in the second half of the measure and not, as in the later version, only in m. 14. In the second half of m. 15, the original version features G-B-C-D-C-D-C-B, the harmonically logical figure that, in the adaptation, is modified to G-A-B-C-B-C-B-A in favor of an assimilation with the ensuing measures. Finally, mm. 21-22 were originally erected on a repeated tonic pedal. As the reworked prelude for the *Well-Tempered Clavier* is destined to continue with a weighty second half, these measures are changed to support the intended modulation.

The first cadence ends in m. 4 (m. 1 = i, m. 2 = ii<sup>7</sup>, m. 3 = V<sup>9</sup>, m. 4 = I; the chords on ii and V sound in inversion over a do-si-do bass line). The close should be marked with a melodic caesura after m. 4<sub>3</sub>. On the last three eighth-notes of m. 4, a melodic upbeat prepares the beginning of the ensuing phrase. The next harmonic progression modulates to the relative key G major, which is reached at m. 9<sub>3</sub>. This progression coincides again with a melodic phrase.

Throughout the entire prelude one can distinguish 8 structural sections. They are grouped in a proportion of 5:3 into two encompassing sections: I = mm. 1-4<sub>3</sub> (E minor cadence), mm. 4<sub>3</sub>-9<sub>3</sub>, 9<sub>3</sub>-15<sub>1</sub>, and 15<sub>3</sub>-21<sub>1</sub> (modulations to G major, on to A minor, and back to E minor), and mm. 21<sub>3</sub>-23<sub>1</sub> (new modulation to A minor); II = mm. 23-26<sub>3</sub> (A minor cadence), mm. 26<sub>3</sub>-28<sub>1</sub> (modulation back to E minor), and mm. 28-41 (E minor affirmed). The initial four-measure cadence recurs, transposed to the subdominant, at the beginning of the *Presto* with a corresponding bass line. The diatonically descending bass line of mm. 14-17 is taken up in mm. 27-30, surrounded by an analogous harmonic pattern. Moreover, the return modulation from the end of the first half is used to close a phrase in the middle of the *Presto* (mm. 19-21 ≈ 31-33). In other words, the final eight measures aside, the *Presto* presents a recapitulation in a chain, without links, of three separate passages from the first half of the prelude: mm. 23-26 ≈ 1-4, mm. 27-30 ≈ 14-17, and mm. 31-33 ≈ 19-21.

The tempo should accommodate the change in the middle of the piece in such a way that the second half develops naturally from the first. The most balanced way of achieving this is to play the *Presto*'s 16th-notes twice as fast as the initial 16th-notes. With regard to the articulation one may assume that the prelude's first half, with its cantilena in highly complex rhythm, represents a rather calm basic character. The 16th-notes should therefore begin in legato and only change to a crisper touch in the *Presto*. The melodic line in the first half is also legato (Bach's paired slurring in m. 3 and the uncommon interruptions of the trills just before the suffixes in mm. 10 and 12 add variety). The original block chords in the middle strand are separated by rests and best played in a neutral tone color. In the *Presto*, as in any lively piece, longer note values would have to be detached. Yet apart from the leap in U: m. 24 and the half-notes in M: mm. 36-37 and U: 38-39, there are no notes to which this would apply.

The first half of the prelude features five ornaments. As all of them are long trills, the paramount concern will be the tempo of the shake. The immediate choice of performers familiar with the rules of ornamentation in Baroque polyphonic music would be to shake in notes twice as fast as the

shortest appearing values (i.e., with four notes to a 16th-note). For pianists who find this technically too demanding or musically too congested, there are, in this particular piece, indicators why a trill speed in slower values might be not only acceptable but, some believe, even advisable: The fastest occurring note values, the 32nd-notes, all appear in a strictly ornamental context. These groups could thus be interpreted as spelled-out unaccented ornaments and embellishments (see e.g., m. 1: an upbeat turn, m. 3: an embellishment of the step A-G, etc.). It would therefore make sense to play the ornaments appearing as symbols in the same motion. Moreover, four of the five trills end in suffixes that are spelled out. This is either because an interrupted trill is normally not expected to conclude with a suffix (as in mm. 10 and 12), or because Bach desires a suffix differing from the common shape (as in m. 14). Note, however, that the very regular suffix in m. 1 is also written out. These suffixes appear in 32nd-note notes, a fact that supports the rendition of the entire trills in 32nd-notes.

The four trills that are approached in note repetition (mm. 1, 10, 12, and 20) start on the upper neighbor note. The fifth (m. 14), preceded by stepwise motion, begins on the main (16th-) note. Regarding their ending, only the trills in mm. 1 and 14 feature regular motion up to the written-out suffix. The others are either interrupted by a sudden rest (cutting out one 32nd-note pair but leaving the remainder intact; see mm. 10 and 12), or they end in an anticipated resolution, requiring a point d'arrêt stop before the anticipation (see m. 20). The example shows the complete rendition of these trills in the slower of the two possible speeds.

The image displays five musical trills from a piece in E minor. The first line shows measures 1 and 10. Measure 1 features a trill starting on the upper neighbor note (F#) and ending with a written-out suffix. Measure 10 shows a trill starting on the upper neighbor note (F#) and ending with a sudden rest. The second line shows measures 12, 14, and 20. Measure 12 shows a trill starting on the upper neighbor note (F#) and ending with a sudden rest. Measure 14 shows a trill starting on the main note (G) and ending with a written-out suffix. Measure 20 shows a trill starting on the upper neighbor note (F#) and ending with an anticipated resolution.

The question of dynamic development in the prelude's first half needs to be addressed separately and in detail for the harmonic background and the cantilena because of occasional contradictions of harmonic progression and melodic features. Inside the completed cadences, the harmonic climax falls on the beat that first manifests the subdominant harmony (in mm. 1-4 on m. 2<sub>1</sub>, in mm. 23-26 on m. 24<sub>1</sub>). In mm. 23-26, both hands support this design. Conversely, in mm. 1-4 this is presented by the left-hand line and the chords in the middle strand while the cantilena is headed independently toward a melodic climax on the middle beat of m. 3.

In passages where the original prelude featured sequences, separate rules apply, which override those of the harmonic relationships. Such a sequential pattern can be found in mm. 5-8 (B: E-D, D-C, C-B, B-A and the paired pattern of the double thirds in the middle strand). In the model, the chord in the first half of the measure relaxes toward the chord in the second half (the inverted F $\sharp$ <sup>7</sup> resolves into the inverted B-minor chord). Throughout the four-measure descent, this pattern of tension/resolution should be repeated, each time on a slightly softer level. The final harmony of this section, the G-major chord in m. 9, thus emerges as a soft ending. The cantilena enhances this by preparing each of the seventh chords with an elaborate upbeat while sustaining a long note into the ensuing moment of resolution. Another succession of sequences appears in mm. 9<sub>3</sub>-13<sub>3</sub>. Here the model is two measures long; the bass line G-G-F $\sharp$ -E is sequenced as E-E-D-C, and the harmonic progression of a modulation from G major to E minor is sequenced as a move from E minor to C major. The climax within the model falls on the step that actively leaves the momentary tonic, i.e., on m. 10<sub>1</sub>, after which the tension subsides gradually up to m. 11<sub>3</sub>. This dynamic pattern is then taken up in the sequence, where it sounds slightly softer because of the generally descending direction. The cantilena supports this pattern again by approaching these climax points in large leaps (see mm. 9-10 = octave, mm. 11-12 = minor sixth).

Similarly, in passages where a bass-note pattern creates a line, this line should outrank any small-scale increases and decreases in the harmonic tension. In mm. 14-17 and mm. 27-30, the bass descends in diatonic half-measure steps. The superimposed harmonies suggest an increase, except for one definite resolution at the respective ends of the short modulation (onto A minor at m. 15<sub>1</sub>, onto E minor at m. 28<sub>1</sub>). The bass line Bach composes reflects this break in the dynamic development by a break in the straight pitch line (in m. 15 the A appears an octave higher than expected, and in m. 28 the same holds true for the E.) The descent is prolonged with chromatic steps that create an even stronger increase in tension as they surpass the boundaries of the home key and bring about harmonies of high tension. The resolution onto E minor then provides a relaxation.

The corresponding phrase in the *Presto* features an extension over a diatonic bass line that reaches its climax on the chord corresponding to the one mentioned above (i.e., that at m. 32<sub>1</sub>). The ensuing relaxation is not quite as complete, both because the dominant appears in minor mode (thus lacking the leading-note) and because the A-minor chord in m. 33 is inverted. In all these developments, however, the right-hand part supports the general harmonic design.

This leaves only the final measures of each half of the prelude to be discussed. In the first half, mm. 21-22 modulate actively toward A minor, thereby suggesting an increase in tension. In mm. 33-41, a rather abrupt initial increase is followed by the considerably softer beginning of the pedal note B. For the duration of this pedal (mm. 34<sub>3</sub>-39), the dynamic growth is smooth and gradual. However, it manifests itself here not only in the obstinate repetition of the bass note but also in an intensification of the texture from three to four voices (compare m. 34 with m. 38. Note that this increase of texture does not change the essential figures in the least). The logical target for this crescendo is the interrupted cadence in m. 40, after which the tonic of the home-key is approached in an overall diminuendo. The simplified outline of the prelude in E minor given in the following music example tries to capture these processes.

mm. 1                    5                    10                    14

sequences                    sequences

mm. 23                    27                    34

### WTC I/10 in E minor – Fugue

This is the only two-part fugue in the *Well-Tempered Clavier*. As its subject modulates a fifth up to B minor, the closing cadence sets out with the dominant of this target key, i.e., the F#-A#-C# in the latter part of m. 2. Harmonically, the resolution falls on the first beat of m. 3. Structurally however, the subject's indivisible phrase ends properly only on the second eighth-note of m. 3. The reason why this second eighth-note must be

regarded as the final note, thus creating an unusual overlapping of the end of the first subject statement with the beginning of the subsequent entry, lies in the subject's melodic structure. The pitch pattern is unusual in that it is composed in hidden two-part structure. In an attempt to determine which notes belong to the melodic strand and which to the harmonic background, the following layers can be revealed: The melodic strand comprises an initial E (represented by either or both of the key notes in the first chord), followed by a chromatic descent to the B on the downbeat of m. 2. The end of the line is then provided by the A# on the second beat in m. 2



and the two upbeat groups G-F#-G and F#-E-D. The harmonic background is represented first by the third and fifth of the tonic and then by a keynote pedal in an offbeat repeated-note pattern. This

segment of the backdrop is concluded by the ornamented keynote pedal (E-D#-E) after the downbeat of m. 2. The modulation to B minor manifests in this strand with the offbeat notes C# and A# in m. 2. And these find their resolution onto the target key on the equally offbeat B in m. 3. The example above spells out this hidden

two-part structure. Consecutive notes hardly ever belong to the same strand, thereby transcending the concept of intervals.

The rhythm in the subject comprises only 16th-notes and eighth-notes. These two basic values remain predominant throughout the composition, and even the third rhythmic unit, the tied-over quarter-note in the counter-subject, does not change the fundamentally simple rhythmic pattern. The subject's harmonic progression, too, is very simple. Aside from the initial tonic and the two chords representing the modulation it only contains a rudimentary subdominant in m. 1<sub>3</sub>.

The swift motion permits no emotional involvement in melodic details. At the same time, neither the simplicity of the harmonic design nor the rhythmic pattern in uninterrupted 16th-notes offers any climax. Therefore, the only feature capable of influencing the development of tension in this subject is the descent in the melodic part of the structure. This leaves the subject with a very straightforward dynamic gesture: an energetic beginning followed by a gradual decrease in tension.

The eight complete entries of the subject appear as follows:

1. mm. 1-3	U	5. mm. 20-22	L
2. mm. 3-5	L	6. mm. 22-24	U
3. mm. 11-13	U	7. mm. 30-32	L
4. mm. 13-15	L	8. mm. 32-34	U

The only modification the subject undergoes is the omission of the unaccented second eighth-note at the end; this shortened form (in which the “background strand” thus does not resolve) occurs in L: mm. 13-15 and in U: mm. 32-34, i.e., in the fourth and eighth statements.

There is only one counter-subject. It is introduced against the second subject statement but is shorter at both ends, beginning after m. 3<sub>2</sub> and ending at m. 5<sub>1</sub>. Its predominant note value is again the 16th-note. The only longer note is a quarter-note on the downbeat tied to an additional 16th-note on beat 2. The counter-subject is not composed in hidden two-part structure but in a contour consisting of various ornamental figures. Each four-note group comprises three neighboring notes, one of which is repeated as an axis. All figures differ from one another. The placement of the climax poses no problem: it falls on the sudden long note value that, in addition, highlights a strong metric position. The two sketches show the phrase structure and dynamic design in the E-minor fugue.

The first represents the two-part result as it is apparent in the written version.

The second is a more accurate depiction of the effect created in a listener.

The eight subject statements in this fugue are very neatly grouped in four pairs, each of which is followed by a subject-free passage.

E1	mm. 5-10	E3	mm. 24-29
E2	mm. 15-19	E4	mm. 34-42

The second half of E4 recalls subject segments (compare U: m. 39 and L: m. 40 with the first subject measure, as well as U: mm. 41-42 with the second half of the subject). E1 and E3 quote the counter-subject, with the expected final note replaced by a large leap downward that is followed by the rising sixth with which the subject concludes. One might describe this hybrid figure as “counter-subject body with subject tail.” Its companion is the first genuine, i.e., independent episode motif (see U: mm. 5-7). M1 consists of two rising broken chords followed by a four-note ornament, a descending scale, and a long closing note. Two dynamic designs are possible in this episode motif. The climax can fall either on the peak note of the broken-chord sequence (e.g., the G in m. 5) or on the rhythmically exposed tied note (e.g., the D in m. 6). The first rendition underscores the motif’s independence while the second, owing to the analogous length of the climax note with that in the counter-subject, makes it sound like a free imitation of the other voice. E2 and E4 provide two more motifs. The lower voice in mm. 15-16 introduces M2, which is characterized by a simple broken chord in eighth-note motion complemented by the repetition of the chord’s third and octave. The upper voice contrasts this with M3, which consists of two descending scale segments in an uninterrupted 16th-note pattern. With these two motifs Bach achieves a very balanced effect by subtle means: the two ascents in M2 are contrasted in M3 by two descents, and while in M2 the four-note broken chord was followed by the shorter two-note leap, M3 begins with the shorter scale segment that is then followed by the longer one.

The combination of M1 and the hybrid motif described above as a “counter-subject body with subject tail” is followed by a descending sequence and rounded off by two measures of almost completely parallel structure in the two voices (see mm. 9-11 and 28-30). Similarly, the combination of M2 and M3, covering only a single measure, is followed by a double imitation and a descending sequence before this episode-type, too, is rounded off by a parallel motion of the two voices (see mm. 19-20 and 38-39). The relationship between the episodes is thus very straightforward: E1 recurs in E3 in inverted voices. Similarly, E2 is recapitulated in inversion in the first half of E4 (mm. 15-19 ≈ 34-38).

The role the episodes play in the development of the composition is only slightly more complex. E2 and the first half of E4, consisting entirely



of material not related to the subject or its counter-subject, provide a certain color contrast. This is enhanced by the fact that M2 is the only component in this fugue to appear in a longer succession of eighth-notes. The descending direction of the sequences and the ensuing twofold descent in the parallel-motion measure create a distinct relaxation. E1 and E3 are more closely related to the primary material of the fugue and thus create less contrast. The descending sequence suggests a tension release, but the ensuing parallel-motion measures build a powerful curve that brings about its own virtuoso climax. Hence this episode type ends on a level similar to that from which it begins. The fugue's three final measures serve as a relaxing coda, owing not only to the decrease in the subject that is partially quoted here, but also to the softening shift toward the conclusion in the major mode and to the graceful ornamental arpeggio that replaces the more austere sixth leap originally ending the subject.

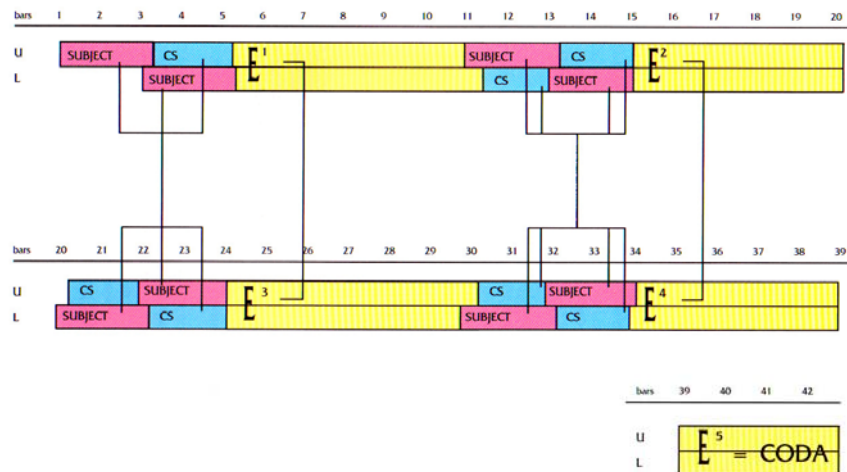
The simplicity of the rhythm, combined with the ornamental structure in the 16th-notes and the leaps and broken chords in the eighth-notes, suggest a lively basic character for this fugue. The tempo requires moderate beats in 3/4 time, so that the eighth-notes will sound swift and the 16th-notes truly ornamental. (Ornaments indicated by symbols do not occur in this fugue.) The articulation encompasses few non-legato notes. These include the final leap in the subject and the equivalent in the hybrid episode figure, the eighth-notes in M2, and the left-hand eighth-notes in the penultimate measure. All 16th-notes as well as the quarter-notes tied to a 16th-note are quasi legato, i.e., played with a technique of basic legato but with "crisp fingers." The tempo proportion between the prelude and the fugue is best determined by the continuity of the 16th-note motion. As the character of the fugue allows for a fairly swift tempo, the pulse of the prelude's *Presto* section can be continued directly into the pulse of the fugue. In other words: an eighth-note in the prelude's initial tempo equals a quarter-note in the prelude's *Presto* and a quarter-note in the fugue. (Approximate metronome settings: prelude basic beats = 60, *Presto* beats = 120; fugue beats = 120.)

The design of the E-minor fugue is reflected unequivocally in its analogies. The analogy of E1 with E3 and of E2 with E4 has already been expounded in detail. In addition, the first two pairs of subject statements are faithfully recapitulated, in inverted voices and different keys, in the last two pairs. This perfectly symmetrical structure with two corresponding sections (mm. 1-19  $\approx$  mm. 20-38) is then complemented by the three-measure coda that, as has been shown above, was the only episode portion to state larger segments of the subject.

The harmonic outline of this fugue comprises a very active movement from one tonal area to another. This is caused by two facts: the subject itself is modulating, and the answer is conceived as a real (not a tonal) one, thus modulating further away from the original tonic. As the modulation in each entry pair thus invariably leads two fifths up, one wonders how and when the music can smoothly find the way back to the home key. Bach solves this ingeniously by launching the two subject pairs in the second half of the fugue from the subdominant (one fifth down) and the double subdominant (two fifths down) respectively, so that the modulations will logically return to the tonic at the end of the very last entry.

The tonal areas as represented by the subject entries are as follows:

- mm. 1-3 (E minor to B minor), mm. 3-5 (B minor to F $\sharp$  major),
- mm. 11-13 (G major to D major), mm. 13-15 (D major to A major),
- mm. 20-22 (A minor to E minor), mm. 22-24 (E minor to B major),
- mm. 30-32 (D minor to A minor), mm. 32-34 (A minor to E major).



The dynamic outline follows the large-scale analogy with two gradual build-ups. The tension continues to increase through the bridging episodes E1 and E3 and is released in the concluding episodes of each half.