

WTC II/10 in E minor – Prelude

This prelude is written in polyphonic two-part texture. It is based on a single motif and its variations. This motif is imitated, sequenced entirely and partially, and developed in different ways. All these features point at a familiar genre: the invention. A perfunctory glance reveals that the prelude consists of two halves, both of them repeated. The first half counts forty-eight measures, the second is longer with altogether sixty measures. Within the first half there are no outstanding closing formulas that would immediately hint at structural sectioning. We must therefore consider harmonic processes in conjunction with particularities of the thematic development. The second half, by contrast, features two traditional closing formulas that aid the performers' and listeners' orientation. The following list mentions only the harmonic steps, leaving an investigation of the thematic details for later. There are six sections:

I	mm. 1-11 ₁	i-v	E minor to B minor
II	mm. 11-23 ₁	v-VI	B minor to C major
III	mm. 23-48	VI-v	C major back to B minor ¹
IV	mm. 49-72 ₁	v-iv	B minor to A minor ²
V	mm. 73-103	VII – (i)	interrupted cadence
VI	mm. 103-108		return to i: perfect cadence

The prelude's two halves are related by means of several structural analogies. The following passages of the first half recur in the second half in a transposition one fifth down or one fourth up:

mm. 26-29	≈	mm. 82-85 (voices inverted)
mm. 30-36	≈	mm. 86-92
mm. 41 ₃ -47	≈	mm. 96 ₃ -102

In addition, sections IV and V (the first and second sections in the second half of the prelude) begin with analogous passages:

mm. 49-53 ₁	≈	mm. 73-77 ₁ (voices inverted and varied)
mm. 53-57 ₁	≈	mm. 77-81 ₁ (voices inverted, mode changed)

¹The first ending continues with a link to the repetition in m. 1. As a representative of the dominant chord, this link uses the major third and the leading-note D#.

²This section-ending cadence is followed, as was the end of section III, by a one-measure link that modulates to D major, the (major-mode) relative of the (minor) dominant.

Equally analogous are the first and second sections of the prelude's first half, but here we are dealing not with literal transpositions but with structural correspondences:

mm. 1-11 ₁	≈	mm. 11-23 ₁
motif, imitation		motif, imitation + sequence
motif + 2 sequences		motif + 2 sequences

To sum up: Both halves of the prelude feature inner correspondences between their first and second sections. These are not literal but structural; they concern primarily the leading voice in each measure. The latter parts of the two halves display a very close analogy. The correspondence mostly involves both voices and uses literal transposition.

The prelude is based on a simple rhythmic pattern with a predominance of 16th- and eighth-notes. Exceptional 32nd-notes occur only in mm. 3, 4, 12, and 22 where they represent written-out ornaments (“inverted slides”) and in mm. 77 and 97 where they spell out the pitches of the trill suffixes. The basic character of this “invention” is thus rather lively. The tempo may be fairly swift; sensing whole-measure beats is preferable to counting in eighth-notes. The corresponding articulation consists of a light non legato for the eighth-notes, a crisp quasi legato for the 16th-notes, and legato only for the ornamental 32nd-notes. One exception to the non legato in eighth-notes is indicated by a slur (U: m. 51). It is possible to interpret the following m. 52 as a varied sequence, in which case one would play it with a similar two-note slur.

There are a host of ornament symbols to be considered: mordents, inverted mordents, turns, compound ornaments and trills. Mordents occur in mm. 18, 20, 51, 52, and 71. In mm. 18 and 20, they form an integral part of a melodic figure. In both cases they begin on the upper auxiliary and comprise four notes. The mordent in m. 51 is approached in stepwise motion and thus begins on the main note; a three-note shake is sufficient in the swift tempo. The remaining two mordents are printed in brackets. As the circumstances differ, the two cases must be decided independently. In m. 52, the 16th-note figure C-B-C is itself a written-out ornament, so that an additional mordent might cause congestion.³ Conversely, the mordent in m. 71 appears in a typical cadential formula that, in Bach's time and style, would always have been played with an ornament, whether or not this is indicated. Inverted mordents appear in mm. 37-41, 92, 95, 96, 102, and 107. In all cases, the lower neighbor notes are taken from the E-minor scale. As

³A further consideration for omitting this mordent is that this would be the only case in the entire prelude where a 16th-note is ornamented. All other ornaments decorate longer notes.

this ornament is used twice in closing formulas (see mm. 102 and 107), it may be a good idea to play the corresponding note in m. 47 (C \sharp) with the same inverted mordent.

Turns are found in mm. 47, 57-59, 78, 102, and 107. The first begins on the upper neighbor B and uses the sharpened lower neighbor note G \sharp . Structurally identical turns occur in mm. 102 and 107. Both also begin on the upper neighbor, and the first also requires a sharpened lower note (see m. 102: D \sharp -turn with C \sharp). The turns in mm. 57-59 all appear in the context of scalar motion and therefore begin on the main note. Within their five-note figures, the lower neighbor repeats the pitch of the preceding eighth-note (e.g., in m. 57: G \sharp). As this ornament is integrated into a motivic figure that continues in sequences, it should be transferred to the second eighth-notes in mm. 60 (L), 61 (U), 62 (L), and 63 (U). The turn in m. 78 repeats the same five-note ornament once again.

Trills are required in mm. 29-32 and, correspondingly, in mm. 33-37, 86-88, and 89-92, as well as in m. 97. The four earlier trills serve to prolong the sound in a sustained pedal note rather than taking part in a melodic line. They had therefore best begin on the main note and launch their shakes in 32nd-notes right away, so that the main note and not the auxiliary meets the melodic notes in the other voice.⁴ These extended trills all end either with a tie or before a rest. None of them requires, or even allows for, a suffix. Instead, they all come to a halt on the last main note before the bar line. The remaining trill in m. 97 is most straightforward as it is an ornament with melodic content: it begins on the upper auxiliary E, shakes in regular 32nd-notes and ends with the suffix as marked by the composer.

Compound ornaments appear in mm. 43 and 77. The former begins (as indicated by the vertical stroke at the symbol's left) with an appoggiatura E that resolves after an eighth-note, i.e., against the B in the lower voice. The shake that follows is that of an interrupted trill: it consists of four fast notes and stops short in a metrically weak position. This ornament may be transferred to the corresponding note G in m. 98. The second compound

⁴18th-century style distinguished melodic and non-melodic trills: The purpose of melodic trills is to heighten the interest of the ornamented note by repeated appoggiaturas; thus an approach from the upper neighbor note is generally the rule. Wherever the melodic surroundings bring about a beginning on the main note, the initial note is lengthened so that all other beats in the measure are met by the upper neighbor note, giving the impression of a repeated appoggiatura. The purpose of non-melodic trills is usually, as in this piece, to sustain the sound of a note that, on a keyboard instrument, would otherwise fade far too early. In this case the sound itself, i.e., the main note, is the issue. It thus falls *on* the beats.

ornament begins, as the convex curve preceding the symbol indicates, from the lower neighbor C#. As it is followed by a written-out suffix, it should be interpreted as a note-filling trill. It therefore shakes in regular 32nd-notes (C#-D#-E-D#-E-D#-C#-D#).

The main motif of this “invention” spans two measures. It begins after a downbeat rest and ends at m. 3₁. The motif can be regarded as consisting of two symmetrical halves: the first, from G to B, contains a four-note ascent, a skip in the opposite direction, and a final ascending step; the second half, beginning again on G, correspondingly encompasses a four-note descent followed by a skip in the opposite direction and a final descending step. In terms of tension, the motif’s first half presents an increase with the climax at m. 2₁. The second half adds the complementary decrease. In its complete and unvaried shape (but including inversions), the main motif recurs fifteen times:

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|----|-----------|---|-----|-----------|-------------------------------|
| 1. | mm. 1-3 | U | 9. | mm. 17-19 | L |
| 2. | mm. 3-5 | L | 10. | mm. 19-21 | L |
| 3. | mm. 5-7 | U | 11. | mm. 21-23 | L |
| 4. | mm. 7-9 | U | 12. | mm. 49-51 | L _{inv} ⁵ |
| 5. | mm. 9-11 | U | 13. | mm. 53-55 | U _{inv} |
| 6. | mm. 11-13 | L | 14. | mm. 73-75 | U _{inv} |
| 7. | mm. 13-15 | U | 15. | mm. 77-79 | L _{inv} |
| 8. | mm. 15-17 | U | | | |

The initial statement of the main motif is accompanied by the octave leap E. This does not form part of the polyphonic pattern but only serves as a harmonic support. It should therefore be played in neutral touch. Later statements of the main motif are accompanied by various counter-motifs (CM). The unifying feature in all of them appears in the second measure: CM1 accompanies the climax of the main motif with an “inverted slide” followed by an ascending seventh leap. Preceded by varying figures, it occurs exclusively in the upper voice: see mm. (3)-4, (11)-12 and (21)-22. CM2 features three ascending eighth-notes followed by a cadential step (fifth down or fourth up) to the final downbeat. Equally preceded by varying upbeats, it occurs exclusively in the lower voice; see mm. (5)-7, (7)-9, (9)-11, (13)-15; also, inverted and with varied ending, in mm. (53)-55, (73)-75. CM3, the only melodically distinct companion of the principal motif, appears only twice, in U: mm. 17-19 and 19-21.

⁵Each of the four inversions is followed by two partial sequences; see L: mm. 49-53, U: mm. 53-57, L: mm. 73-77, U: mm. 77-81.

Beginning in m. 23, the central motif forms five distinctly identifiable variants, M1a-M1e.⁶ Their dynamic impact is determined both by their textural density and by the direction of their sequences. The picture is quite simple: M1a, M1c and M1d appear exclusively in stretto texture and in ascending sequences. Their dynamic value is therefore that of tension increase. (The fact that the final upper-voice sequence of M1d sounds an octave lower is owed to the limited range of the 18th century keyboard.) M1b appears accompanied by pedal notes, thus in a polyphonically sparse setting. All sequences move in descending direction, so that M1b induces a decrease in tension. M1e plays a special role both because of its extended scope and because of the almost homophonic effect created by the mirrored parallels. The overall dynamic movement is a very slight increase in the first statement and an equally gentle decrease in the second.

The tension develops in the prelude's first half as a large crescendo–diminuendo curve (sections I + II) followed by two smaller curves (III: mm. 23-29/29-37 and 37-41/41-48). Section IV combines a concave (mm. 57-63) with a convex curve (mm. 63-72), while section V resembles section III. The prelude ends with a final dynamic curve (mm. 103-108).

WTC II/10 in E minor – Fugue

This subject is long and multifaceted. Spanning nearly six measures, from the upbeat to the middle beat of m. 6, it stretches over more than an octave and includes a surprising number of distinct little motivic patterns. When examining its phrase structure, one quickly discovers a rough division into two contrasting segments. The first ends on the middle beat of m. 2 with a return to the keynote. Its outline can be described as a slightly leaning curve (leaning because it ascends slowly but falls back in less than half the time). The second segment is characterized by three syn-copations that describe a gradual descent (see m. 2: C, m. 3: A, m. 4: F#). After some suspension, they also resolve into the keynote (m. 6: E). Within

⁶ M1a in mm. 23-25₁ (U), 24-26 (L), 25-27 (U), 26-28 (L), 25-27 (U), 81-83 (L), 82-84 (U) as well as divided between mm. 28-29 + 23 and mm. 84/85 + 81;
 M1b in mm. 29-32, 32-33 (U), 33-35, 35-37 (L); 85-87, 87-89 (U), 89-91, 91-93 (L);
 M1c in mm. 37-39 (L), 38-40 (U), 39-41 (L), 40-42 (U), 94-96 (L), 95-97 (U) as well as modified in mm. 93-95 (U);
 M1d in mm. 57-59 (L), 58-60 (U), 59-61 (L), 60-62 (U), 61-63 (L), 62-64 (U); and
 M1e in mm. 63-67₁ (L) and 67-71₁ (L) as well as inverted in mm. 67-70₁ (U).

The musical notation shows a single melodic line in E minor, starting with a treble clef and a key signature of one sharp (F#). The melody consists of eighth and sixteenth notes, with several triplet markings. Below the staff, a series of Roman numerals indicates the harmonic structure: i ii V i iv V i V i ii V⁹ i V⁷ i. A large V⁷/V symbol is positioned below the final 'i' numeral.

The subject appears nine times in the course of the fugue.

1	mm. 0-6	U	6	mm. 41-47	L
2	mm. 6-12	M	7	mm. 49-55	M
3	mm. 12-18	L	8	mm. 59-65	U
4	mm. 23-29	U	9	mm. 71-77	L
5	mm. 29-35	M			



Bach invents one counter-subject for this fugue. It proves a faithful companion to the subject. CS is introduced against the subject's answer, in the upper-voice part of mm. 7-12. The last five eighth-notes of m. 6 recur more often than not (see M. m. 12 and 41, L: m. 49, and U: m. 71), so that one might ask whether they do not form the upbeat of CS. Yet, as they sequence the sixth subphrase and are also widely used as episode material, their connection with CS cannot be ascertained. We therefore prefer to regard the descending scale as a link between the end of the subject and the beginning of the counter-subject.

In contrast to the subject, which remains unchanged throughout the fugue, CS develops certain modifications. In several later statements, it is either split between two complementary voices (mm. 13-18: M+U and mm. 24-29: L+M), or it switches voices halfway through the phrase (mm. 30-35: L/U, mm. 42-47: M/U, and mm. 72-77: U/M). The only CS entry closely resembling the original shape occurs in mm. 50-55 (L), while the entry in mm. 62-64 recalls only a fragment. Such frequent variations of a counter-subject invite examination of what might be regarded as its basic format. To determine its simplified line is not at all difficult if one takes as guidelines the modifications occurring in mm. 13-18, 42-47, and 72-77. The splitting into two voices and the very free variation of the unaccented eighth-notes indicates that the primary line is concentrated in the main (half-note) beats. These half-note beats present a surprise: what appears at the surface as a fairly independent contrapuntal line turns out to be an embellished parallel (in thirds or sixths respectively) of the subject. The

main dynamic outline will therefore have to be drawn in parallel to that of the subject; only within the subphrases is independent shaping possible. The following examples give first the juxtaposition of simplified subject and simplified counter-subject, then a possible interpretation of the tension processes in the two thematic components.

The image contains two musical staves. The top staff is labeled 'CS' (Counter-Subject) and the bottom staff is labeled 'S' (Subject). Both are in E minor. The top staff features a triplet of eighth notes followed by a series of quarter notes. The bottom staff features a similar triplet of eighth notes followed by a series of quarter notes, with some notes beamed together. The bottom staff also includes several dynamic markings (trapezoids) and articulation marks (dots) indicating tension processes.

The E minor fugue encompasses six subject-free passages.

E1	mm. 18 ₂ -23	E4	mm. 55 ₂ -59
E2	mm. 35 ₂ -41	E5	mm. 65 ₂ -71
E3	mm. 47 ₂ -49	E6	mm. 77 ₂ -86

Several of these episodes are divided into distinguishable segments: A change of material and a completed modulation to the tonic relative G major separates E1a (mm. 18₂-20₂) from E1b (mm. 20₂-23). E5a (mm. 65₂-70₂) is followed after the sudden homophonic elements of fermata and general pause by E5b (mm. 70₂-71). The final episode comprises three segments: E6a (mm. 77₂-81₂), E6b (mm. 81₂-83 fermata) and E6c (mm. 83₂-86). None of the episodes can be described as just a cadential close. Instead, all of them use material from the subject⁸ and also develop a motif character-

⁸The subject's final measure is taken up in E1a (L: 2x), E2 (M: 1x mm. 35-36), E3 (L: 2x), E4 (U: 3x and M: 1x), as well as in E5a (M: 1x and L: 1x). The five-note descent alone recurs separately in E1b (M: 3x), E2 (M: mm. 36-37, all voices alternating mm. 37-41), E5a (M: m. 68), E5b (L: 2x), and E6c (U: m. 84). Another derivation, also featuring six eighth-notes in this metric position and in scalar motion, is the ascent with varying endings appearing in E1b (U: 3x), E5a (U/L 3x), E6a (M: mm. 78-79), and E6b (U: mm. 84-85).

ized by a dotted rhythm that comes either in an inverted-mordent figure plus leap (M1a, introduced in mm. U: 18-19) or in a simple ascent (M1b, introduced in M: m. 19). Other noteworthy features include the sequence model in the lower part of E1b (not imitated in another voice or taken up anywhere later in the piece), the three-part complementary pattern over a dominant pedal in E6a (mm. 79-81), and the voice-splitting to a four-part chord in m. 83 and to a four-part texture all through the measure in m. 86. A most obvious relationship exists between E1a and E3.

The role played by each episode in the development of tension largely follows the direction of the sequences. The crescendo/diminuendo in E1a + E1b gives this episode the shape of a closed curve. E2 describes a similar curve, despite some ambiguity in the second half (L: falling, U and M: rising in mm. 39-41), as does E4. E3 recalls only the rising first half of E1 and thus suggests that it serves to connect two subject statements. E5, which features a rhythmic interruption with fermata and general pause, nevertheless also conveys a sense of linking entries. Its short segment E5b effects a compelling rise of tension as a preparation for the final subject statement. E6 is the longest and most diverse episode. It contains true toccata features (mm. 79-83) but is united by the pedal note B supporting the episode's first and third segments (mm. 78-81 and 84-85). The texture and complementary rhythm of the final measure, together with the ending on a weak beat, are reminiscent of the key confirmations found in most allemandes and some courantes of Bach's suites.

As suggested by the *alla breve* time signature as well as the ornamental and broken-chord figures in the surface structure, the basic character of the E-minor fugue is rather lively. That makes the wedges on the quarter-notes all the more interesting. In a lively character, these quarter-notes would be played detached anyway. The wedges transform the otherwise passive, soft detachment into an active, energetic approach to the note values. In all subject statements throughout the fugue this concerns the final notes of the first five subphrases as well as the broken-chord figures and the notes concluding the subphrases in the counter-subject. By contrast, Bach never once marks the broken chords in the episode motif with wedges. They should thus be executed in a distinctly gentler non legato. Legato applies to all longer note values that represent an appoggiatura, i.e., particularly the first note pairs in the subject's fourth and fifth subphrases.

A short word on the execution of the various rhythmic values is in order. Both the four 16th-notes in the written-out turns of the subject's first measure and the triplets in the subject's final subphrase are of course to be played exactly as noted. Throughout the fugue, the two rhythmic figures

never once coincide, thus the problem of polyrhythm does not arise. The dotted-eighth-note figures, however, regularly sound against triplets. As Bach's manuscript displays his writing of note head against note head very clearly (see, e.g., mm. 18ff), these dotted-note figures are intended to be read in gigue rhythm, i.e., in a proportion of 2 + 1 instead of 3 + 1. While most performers intuitively choose this reading in m. 12 and from m. 18 onward, many are unaware of having played a different, strictly dotted rhythm in the three initial statements of the subject. Consistency requires that a chosen rhythmic rendering of a recurring segment should be retained throughout a composition. This means that the dotted-note figure in m. 3 should already be given the rhythmic shape it is going to have throughout the piece. (A slightly odd though basically corresponding case occurs on the final beat of m. 83: the 16th-note upbeat in the middle and lower voices also makes more sense if read in triplet rhythm—with the dotted note here substituted by rests.)

The tempo does not permit much individual variation. It must be fast enough to convey the *alla breve* pace but moderate enough to allow for transparency in the ornaments' 32nd-notes. Thus unhurriedly swinging half-notes give a good measure. The tempo proportion between the prelude and the fugue gives best results if one measure in the prelude's 3/8 time corresponds with half a measure (a half-note) in the fugue. (Approximate metronome settings: prelude beats = 180, fugue beats = 60.)

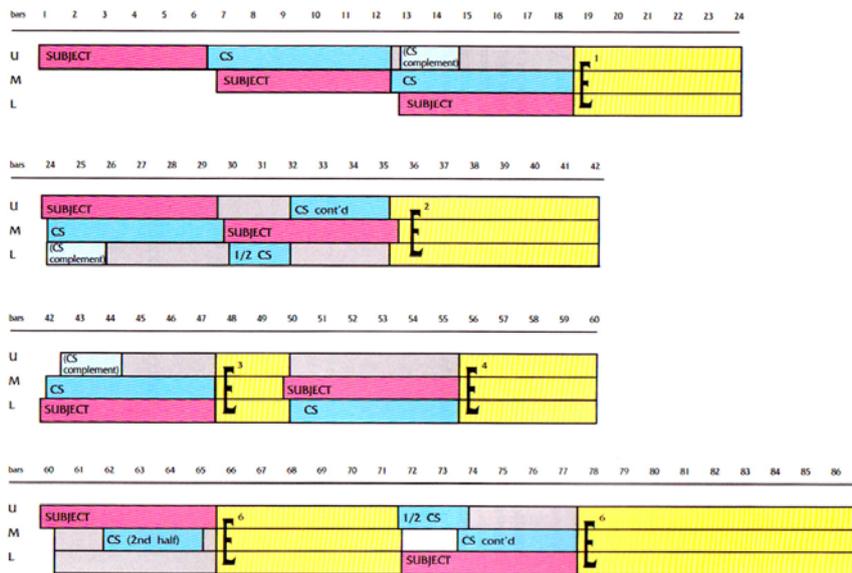
The score contains both thematic and cadential ornaments. The first thematic ornament appears in the subject at m. 1₁. It is an inverted mordent printed in parentheses on three occasions (mm. 1, 7, 13). The question is not so much which notes to play but rather whether or not to play it at all. The three consecutive markings indicate that the ornament is to be treated as an integral part of the subject; omitting the symbol in further subject statements was usual practice. The parentheses mark it as a later addition, the full print as stemming from Bach's own hand. (Additions found in copies by other hands are distinguished in the Urtext by small print.). Performers who can technically master the required speed and middle-voice acrobatics (in mm. 30 and 50) should not forgo this embellishment.⁹ The second thematic ornament decorates the counter-subject. It is printed only once, though without brackets (m. 10). Placed against a half-note, a note that must be sustained and linked, it poses a much bigger problem. The option is therefore to play it only once—or not at all.

⁹The statement in mm. 41-47 features the mordent on the first syncopation. This seems somewhat arbitrary and could probably be silently adjusted.

The non-thematic ornaments, by contrast, are straightforward. The mordents under the fermatas in mm. 70 and 83 begin on the main note and can easily accommodate five notes as there is ample time. The same holds true for the turn that, after the rhythmic break caused by the fermata and the melodic break caused by the octave leap, appears as the beginning of a new phrase (D#-E-D#-C#-D#). The mordent in m. 85 is launched from the upper auxiliary as is the turn in m. 37, both comprising four notes.

In the absence of conspicuous cadential closes in episodes and of subject statements appearing in reduced ensemble, the harmonic outline and the detailed use of material must be examined in order to determine the scope of each section. Section I does not pose a problem. Its three entries sound on the tonic, the minor dominant, and the tonic respectively. As the first episode develops from the preceding statement's ending by way of sequences, cutting it off would be quite unthinkable. As a result, section I ends with the conclusion of E1, at m. 24₁, in a brief overlap with the next subject entry. Section II is distinguished from section I by a change to the major mode. It contains two subject statements, in the key of the tonic relative and its dominant respectively, plus another episode. As before, the end of the section (at m. 42₁) overlaps with the upbeat of the subsequent lower-voice statement. Section III returns to the harmonic realm of E minor, with two entries on the dominant and tonic respectively. The linking episode E3 and the concluding episode E4 together make up six measures, thus matching the length of each of the episodes in sections I and II. In terms of structural balance, E3 can thus be regarded as an anticipated segment of this section's concluding episode. Section IV presents the statement on the subdominant and thus truly confirms the return to the home key. There are again two statements but, as expounded above in detail, the episodes are much extended and expose material that might seem alien to the fugue. Yet Bach has composed these 27 measures in such a way that they clearly form one large inseparable unit, despite fermata and general pause. In fact, the entire section represents one protracted cadence in E minor. Shortly after the end of the subject entry on the subdominant in mm. 60-65, the lower voice features a chromatic descent to the dominant pedal (see mm. 66-70: D—C#-C-B—A#-B). Suspended for the duration of the final subject entry, the dominant pedal is resumed in mm. 78-81 and, in mm. 84-85, prepares the final tonic bass.

After an exposition with statements in all three voices, the three subsequent sections present the three possible pairings. In this manner, this fugue is perfectly balanced with three subject statements in each of the parts.



All four sections describe an increase in tension from their initial to the last statements. In sections I and II, these increases are not interrupted by episodes, and E3 in section III with its rising tendency also maintains the drive from one entry to the other. Only section IV reverses these facts. The initial (subdominant) entry appears more intense than the second (tonic) entry because of the harmonic release from subdominant to dominant and tonic, a prevalingly relaxing attitude in E5, and the three-measure thinning of the ensemble in mm. 70₂-73₂, which makes this subject statement the only one in the fugue to appear in reduced surroundings after the full three-part texture has been established. The final episode then describes a full dynamic curve analogous to those in the other three section-concluding episodes.

Among the four sections, the second one in the major mode may be regarded as most outgoing in character. The third section is still on an elevated level, and only the final section returns to the minor-mode level and intensity of the fugue's beginning. The differences, however, are not dramatic. This is another playful fugue in which the thematic material as such captures the attention more than its manifold modifications.