

Siglind Bruhn

J.S. Bach's

Well-Tempered Clavier

In-depth Analysis and Interpretation

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INTRODUCTION

from Siglind Bruhn
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"Das Wohltemperirte Clavier" is the title that Bach chose in 1722 for his first collection of twenty-four preludes and fugues, and which he applied again, twenty-two years later, to his second collection. This title may have been an expression of joy and triumph during Bach's time. Today it strikes many – musicians and the concert public alike – as too technical, unimaginative, even austere. This description can certainly be said to be true for the long subtitle which, in its English translation, reads:

*The Well Tempered Clavier,
or
preludes and fugues in all tones and semitones,
in the major as well as the minor modes,
for the benefit and use
of musical youth desirous of knowledge
as well as those who are already advanced in this study.
For their especial diversion, composed and prepared by
Johann Sebastian Bach,
currently ducal chapelmaster in Anhalt Cöthen
and director of chamber music,
in the year 1722.*

The conspicuous term is obviously "well-tempered". The word "to temper", when used in a musical context, refers to a slight artificial lessening or enlarging of natural intervals. Why would this have been necessary? To understand this we must begin by recalling exactly what a natural interval is.

a) The "well-tempered" scale

In nature, intervals are created through simple multiplication of an original frequency. This can happen in one of two ways:

- On a string instrument, the number of vibrations per second can be doubled by placing a finger (or an object) in the middle of the tight string and letting each half vibrate separately; similarly, the frequency will be tripled or quadrupled if we cause one third or one fourth of the string to move independently.
- With wind instruments, the process is basically similar: while the length of the tube remains unchanged, increasing wind pressure modifies the vibration of the air-column not by degrees but by multiplication.

The subsequent higher frequencies or pitches created in both processes show simple numeric relationships not only to the original frequency of the bare string but also with each other. Among these related pitches, the degree of consonance is greatest where the relation is simplest. Thus 1:2 represents the interval in which the higher note vibrates at twice the speed of its root: the octave.

By tripling the frequency of the root we arrive at the next largest "natural" interval, the compound fifth. Therefore, the numeric relation of a perfect fifth (which is the interval between the 1:2 octave and the 1:3 octave + fifth of a root) is 2:3. Similarly, 3:4 results in a perfect fourth, 4:5 in a major third, and 5:6 in a minor third. (Of the intervals caused by higher frequency combinations not all are used in occidental music.)

Imagine C had a frequency of 64 vibrations per second. The numerically related notes (or overtones) of this C would then be as follows:

1=C	2=C	3=G	4=C	5=E	6=G	8=C	9=D	10=E	12=G	15=B
64	128	192	256	320	384	512	576	640	768	960
1:2	2:3	3:4	4:5	5:6		8:9	6:10		8:15	
octave	fifth	fourth	major third	minor third		major second	major sixth		major seventh	

It is from these *natural* intervals that we derive our scales. Difficulties arise with the notion that each note entertains a variety of relationships with the others: B is not only the seventh degree of the C major scale, but also the fifth of the fifth on A, the triple fifth on D, etc. It is this latter relationship, that of superimposed fifths, which generally determines the tuning of instruments -- just as the *natural* fifth is still the setting interval for string instruments.

This method of tuning, however, is not flawless: it assumes notes as identical which are in truth, i.e. in terms of physics, slightly dissimilar. While a string player is expected to train his or her ear to achieve such subtle differences by intonation, an equivalent process is obviously not accessible on a fixed pitch instrument. At the same time, a keyboard cannot possibly have enough alternative keys for a single letter name note to allow for such subtleties. The result was that such not-quite identical notes ended up sharing a key which sounded perfectly in tune with a small number of its relatives but out of tune in several other of its "natural contexts". This compromise is the reason why most works written before the 1720s were confined to keys close to C and G major.

A way out of this predicament was found in the late 17th century when the organist and organ manufacturer Andreas Werckmeister suggested sacrificing the natural fifth in the tuning of keyboard instruments in favor of dividing the octave into twelve exactly equal semitones. This compromise meant to "temper" the perfect intervals, all of which would now sound slightly imperfect. In turn it had the huge advantage of guaranteeing equally acceptable results in all tonalities. It was this "well-tempered" tuning of keyboard instruments which first enabled the use of such keys as C# major and D# minor in pieces for keyboard instruments. And it was this new possibility of composing equally on all semitones of the chromatic scale that inspired Bach to compile this collection. (For more details on this topic, refer to volume I of this book.)

b) The clavier

Another question frequently asked is: what did Bach and his contemporaries mean by "clavier"? This name, while nearly identical to the modern German word for "piano" ("Klavier") and closely related to the word "clavichord", did not originally include any specification other than that the action of the instrument should contain "claves" or keys. Thus "clavier" could refer to an organ or a spinet, to a clavichord or a harpsichord, as well as to the instrument that was to become our modern piano.

This vagueness regarding the choice of the instrument reveals a very important aspect of the "Well-Tempered Clavier": its music is meant as absolute music. This means that it is the absolute, artistic *idea* expressed in the music that counts, not the technical way in which it is performed. Whichever instrument might seem, in a particular situation and at a particular time, to be best suited to the content and character, message and spirit of a piece would be considered appropriate.

It is interesting to know that Mozart, undoubtedly guided by this insight, transcribed several of the "Well-Tempered Clavier" fugues for string ensemble. Others have followed his example. Far from diminishing the value of the original composition, each such arrangement bears new revelations. However, the question remains: nowadays that the "original" instruments are once again more easily available, but may still not be the ones we have spent time and effort to learn, which keyboard instruments should we choose?

Today's performing musicians seem to adopt different approaches. In comparing these approaches, four prevalent attitudes can be observed:

1. A first group of artists, often referred to as "purists", will interpret music only on the instrument for which it has originally been composed – regardless of the distinction between instrument-specific and absolute music. This is an attitude to respect so long as it does not neglect two considerations:
 - * One is that Baroque keyboard instruments, such as the harpsichord or the clavichord, need as much special training as the piano and can therefore not simply be *chosen* for certain pieces by performers who have acquired their skills on the modern piano only.
 - * The other is that Bach, given the choices available in his time, preferred many of his pieces to be played on the clavichord with its wider possibilities of subtle shading. Forkel, one of Bach's earliest biographers, tells us that Bach himself was not too happy whenever he had to perform particularly his polyphonic pieces on the harpsichord. Therefore, even additional training on the harpsichord is frequently insufficient.

Thus, choosing to play on the "original" instrument means, in the case of almost all pieces from the Well-Tempered Clavier, that a performer has to have undergone considerable extra clavichord training. It also necessitates the acceptance of playing only in chamber music halls of the smallest size, to ensure that the playing can be heard beyond the first ten rows. If a performer agrees to submit to all these requirements, then the performance has a good chance of becoming an unforgettable experience for the audience.

2. A second group of performers seems to prefer a compromise: they will play on a modern grand piano, but touch their instrument only in such a way that its sound may resemble that of a harpsichord as closely as possible. Apart from the above mentioned fact that for most of the pieces in question the harpsichord was not even the "originally" intended instrument, such compromise is likely to deprive the listener both of enjoying the sound of the music and of understanding the structure. All his attention will probably be captured by the unusual way in which the performer is treating his piano. Such is certainly not the idea of music making.

For a performer who feels that the sound of a modern piano fails to do justice to the composer's intention, it would be preferable to adhere to the principles of the first group.

3. A third group of musicians distinguishes between instrument-specific and absolute music. They believe (as did Mozart when he wrote his transcriptions) that much of Bach's musical language is not confined to a very special type of instrument.

This view is based on the fact that many a piece in the Baroque epoch bears a title which destines it for various instruments of equal tonal range e.g. "for violin or flute or oboe"; "for violoncello or bassoon"). One can conclude from these titles that such music is in reality "absolute music", not dependent on the specific tone color and technique of an instrument but

deriving its significance from within the musical structure alone.

The keyboard performers of this group will therefore shape their keyboard technique according to the musical ideas they perceive in a piece, concentrating their studies on how other instruments of the era would have articulated a line or proportioned a dynamic development, and transfer this style to their instrument with as much nuance as possible.

4. Finally, a fourth group of performers appear to focus mainly on the manifold possibilities of the modern piano, particularly those added to its range of expression in the late 19th century. They will freely use dynamic and agogic means engendered by the Romantic period because they feel the necessity to meet the emotional needs of today's public -- needs which, without doubt, were developed primarily through music of the Romantic style.

However, one should be permitted to ask: if it is true that today's audience cannot appreciate music which lacks Romantic attributes, would it not be easier (and better for both the audience and the music) to give them the "real thing", i.e. original Romantic compositions?

As can easily be assessed from this presentation of performance approaches, this book refers to performance along the lines of "absolute music" – as introduced above in the third approach. It may also be valuable to performers in the first group who are prepared to undergo thorough training on the clavichord.

c) The preludes in Bach's Well Tempered Clavier

Bach's Preludes feature among those musical works which, by their very title, give no indication about what can be expected in the piece. While headings like *Fugue* or *Invention* comprise a clear definition of the polyphonic texture to which the piece will submit, and titles like *Gigue*, *Bourrée*, *Allemande*, *Sarabande* etc. indicate the meter as well as the character of the dance, the word *Prelude* reveals nothing whatsoever about the structure, the texture, the melodic / harmonic / metric organization or character of the music. The only implication of the word "Prelude" is that it originally served as some sort of an introduction to a subsequent, generally more important piece.

Socio-historically, it is of some importance to recall the venue in which any instrumental (non liturgical) music at Bach's time would have been heard. Such performances would not take place in a hall or building specifically destined for this purpose – for instance a concert hall where the "audience" could be expected to attend with due respect for both the music and the performing artist. On the contrary, it was the musician who would set out to the home of a patron where he might be granted the honor of being listened to.

Imagine the situation. As soon as the musician arrives at such place, he has to assure himself of three very different preconditions: that he is acquainted with the tricks and traps of the instrument on which he will be performing; that his hands feel warm and flexible enough for the task ahead; and, last but not least, that his audience (who are in many cases not educated to truly appreciate newly composed music) have finished their ongoing conversations, have put down their glasses and are prepared to listen to him. It therefore seems most adequate that he play some brilliantly arpeggiated or meditatively rolling broken chords, perhaps even improvise on a little musical figure or motive, and thus prepare himself and his audience for the expected main composition.

Such was, for many decades, the expected and agreed purpose of a prelude. In the course of time, however, this attitude gradually changed, and the prelude rose in esteem. After having long been regarded as a musical organism which needed little prior meditation and was hardly worthy of being written down, it now became the integral part of an entity – as in "Prelude and Fugue" or "Prelude and Toccata"

combinations. There can be no doubt that the preludes in Bach's "Well-Tempered Clavier" all enjoy this distinction.

Besides this socio-historical background of the entire species of preludes, there is another interesting aspect regarding some of the preludes from volume one of the Well-Tempered Clavier. Their immediate source can easily be traced back to Bach's own earlier writing. A considerable number of the pieces have actually originated from preludes (mostly shorter pieces) written by the composer himself for the keyboard instruction of his eldest son Wilhelm Friedemann.

Several of those Well-Tempered Clavier preludes which derive from this source fit the same description: they appear determined primarily by broken chord patterns and a motion in equal note values, appropriate in this case for the training of Wilhelm Friedemann's pianistic skills. When integrating these compositions into what was to become the Well-Tempered Clavier, Bach enlarged many of them considerably; yet their origin remains clearly discernable. (Examples for this type include the WTC I preludes in C major, C minor, D major, D minor, B^b major, G major, and E minor).

A second group of preludes seems to originate from the practice mentioned above: that of attracting an audience's attention through improvisation of some little figure or motive. Finally, there is a third group which contains intricate, highly sophisticated compositions which often rival their ensuing *main piece* both in beauty and artistic weight.

d) The fugues in Bach's Well-Tempered Clavier

The word "fugue" can be traced back to two origins. On the one hand, the Latin word "fuga" denotes "flight, escape" and thus seems to describe the imitative process from an unusual angle: that of the opening voice running away from its followers. On the other hand, the German verb "fügen" signifies "to assemble, to put together meticulously", with the corresponding noun "Fuge" designating a joint in a parquet floor or tiles or bricks in a particularly well-ordered pattern; you may find that this explanation fits the musical "Fuge" quite appropriately.

A fugue is a strictly contrapuntal composition for a given number of parts or "voices". (The terms "part" and "voice" are interchangeable, whether the work is vocal or instrumental; hence "fugue in three voices" or "three-part fugue").

The fugue had two main forerunners: the *ricercar* – a contrapuntal instrumental composition of the 16th-18th centuries in strict imitative style, and the medieval motet – a vocal composition based on a given melody and wording to which one or more separate lines (with different texts!) were added in counterpoint. All these highly intricate polyphonic forms were natives of the Renaissance, reflections of Renaissance philosophy and religious attitude. At the beginning of that era which was to become known as the "Baroque", the religious movement of the Counter-reformation originally set out to abolish all obsolete forms and replace them with more immediately accessible patterns. However, as we all know, the counter-reformation did not succeed in Northern Europe whose inhabitants remained Protestants. By the same token, North German composers were much more reluctant than their contemporaries in France and Italy to give up those serious and complex forms. For these pious men, the intricate and superbly organized forms in which each little detail had its place and meaning seemed to reflect their aesthetics and beliefs. This music was composed in the first place "for the greater glory of God"; of secondary importance was Man, his enlightenment, instruction and diversion. It is to this artistic attitude that we are indebted for the masterpieces of the species.

QUESTIONS REGARDING A PRELUDE

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1.1 Can you place your prelude in one of the following categories?

- a) Harmonically determined compositions
- b) Motivically determined compositions
- c) Compositions adhering to the principles of *invention* or *fugue*
- d) Rhythmically determined compositions
- e) Metrically determined compositions

1.2 What is the overall design of your prelude?

- a) Where does the first harmonic progression conclude?
Has Bach composed this cadence as a structural break,
or does the flow of the piece continue uninterrupted?
- b) Where does the next harmonic progression conclude?
Does this seem to coincide with a structural caesura?
- c) How many such structural sections can you distinguish?
- d) Does the prelude contain any structural analogies?
Does any portion recur, repeated or varied?
Does any portion recur in transposition?
Does any portion show a corresponding structural progression to an earlier portion?

1.3 Practical considerations for performers:

- a) What is the basic character of this prelude, and what tempo and articulation are therefore most appropriate for the material?
- b) If the score contains any ornaments, how should they be executed?

1.4 (Answer those questions from the following choice which apply to your prelude:)

1.4a What is happening in your harmonically determined prelude?

What kind of dynamic development does the harmonic progression represent?
Are there any secondary features?

How do they relate to the harmonic progression?

1.4b What is happening in your motivically determined prelude?

What are the relevant motives?

What is their basic character and their dynamic shape?

How are they developed?

What does the way in which they are developed express?

What is the overall dynamic outline in the prelude?

1.4c What is happening in your "fugue"- or "invention"- type prelude?

What is the material on which Bach built this composition?

What is the design of the piece?

1.4d What is happening in your rhythmically determined prelude?

What are the rhythmic patterns?

Are some of them interrelated?

In which different melodic guises does each rhythmic pattern appear?

What means of motivic development does the composer deploy when playing with these patterns?

What kind of dynamic build ups and releases can you detect in the single parts as well as in the whole piece?

1.4e What is happening in your metrically determined prelude?

What is the predominant pulse?

What are the secondary features beyond this pulse?

Are there any dynamic build-ups?

If so, by what means are they created?

**QUESTIONS
REGARDING A FUGUE**

2.1 What is the subject of this fugue like?

- a) How long is it?
How does it commence -- with a strong beat or an upbeat?
Where does it end?
- b) Is it made up of one indivisible phrase, or does it consist of several subphrases?
- c) What kind of pitch outline does it show?
Does it contain mainly small intervals, or many leaps?
Does it feature any special intervals,
i.e. intervals of particularly high tension?
- d) What is the rhythm within the subject?
Does it contain many different note values?
Are there dotted notes, tied notes, syncopations?
Are these rhythmic features also prevalent
throughout the entire fugue?
- e) What is the subject's harmonic background?
- f) Considering harmony, melody and rhythm, where is the climax within the subject and what kind of dynamic outline is expressed?

2.2 What is the importance of the subject in this fugue?

- a) How many subject statements does the fugue contain altogether?
In which part (or voice) and in which bars do they appear?
- b) Does the subject remain basically unchanged, or are there modifications, of detail, shape or length?
- c) Does the subject ever appear in stretto or parallel?

2.3 How many counter subjects does Bach use in this fugue?

Answer for each of them:

- a) How long is it?
- b) What is its phrase structure?
- c) Considering the melodic and rhythmic features,
where is the climax and
what kind of dynamic outline is expressed in the counter-subject?
- d) Can you draw a sketch showing the phrase structure and the dynamic outlines in both subject and counter-subject(s)?

2.4 What happens in the episodes of this fugue?

- a) How many subject-free passages are there? Where?
- b) What material is used?
Is any one of the episodes closely related to the subject?
Are there any significant episode motives? Which are these?
What is their character and dynamic outline?
Are any of the episodes in reality no more than cadential closes?
- c) What is the relationship between the episodes?
Is any of them a varied, transposed or otherwise altered repetition of another?
- d) What role in the development of the composition does each particular episode play?

2.5 For interpreters: Consider the main aspects of performance practice:

- a) What is the character expressed by the material of this fugue?
Look at each component of the material -- the subject, its counter subject(s) and the episode motive -- and consider the details of their appearance: Would you conclude that this fugue constitutes a *rather lively* or a *rather calm* basic character?
- b) What tempo and articulation are most appropriate for the material in this fugue?
- c) Which tempo proportion for the prelude and fugue seems most appropriate?
If the composition contains any ornaments, how are they to be executed?
Should any one of them be transferred to analogous notes which, in the score, appear unornamented?

2.6 What is the design of the fugue?

- a) Can you detect any indicators which would help reveal the structure of this piece?
Does the entering order of the voices show any obvious grouping?
Does any subject statement appear in reduced ensemble?
Which episodes seem to conclude a section?
Do any two stretches of the piece show analogous design?
- b) What is the harmonic outline of the whole piece?
In what progression of keys does the subject appear?
Which subject entries belong harmonically together?
Are there any significant cadential closes in the fugue?
- c) Can you draw a sketch showing
all the subject statements (S),
the counter subjects (CS1, CS2 etc.),
the silences in any voice
the episodes (E1, E2 etc.; special mention for "cadential close")?

2.7 What is the overall dynamic outline in this fugue?

- a) What kind of dynamic development can you detect in each of the sections you have found?
- b) How do the sections relate in this respect?

In case you are not quite sure what a question means, here is some

ADDITIONAL INFORMATION

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1.1 What features in your piece help you to determine the prelude type?

Music is often defined as a sequence of sounds which are arranged chiefly on three levels:

- on the horizontal level, the up and down in a tune, called pitch pattern;
- on the vertical level, several pitches forming ensembles, called harmonies;
- on the level of time, with longer or shorter, regular or irregular time spans from the beginning of one tone to that of the next, called rhythm.

Within the context of this very general setting, each of these levels is usually carefully organized.

- The *horizontal* level distinguishes melodic units, phrases and sections. This is what we are after if we analyze *structure*.
- The *vertical* level distinguishes the ways in which simultaneous voices relate to each other. This is called *texture*.
- Finally, on the level of *time*, the multitude of rhythmic values is packed into bars of usually equal length in an orderly way, with a definite hierarchy between their beats. This is called *metric organization*.

Although any piece of music will obviously feature most if not all of these components, a composer usually seeks particular expression of his artistic idea by molding these components in such a way that a certain design is recognizable. For such a design there is one basic choice to make: does he want to compose along the lines of a standard model which can be recognized as such, or does he want his piece to sound more like a spontaneous improvisation?

In the case of established form. models there are certain rules by which a composer must abide – e.g. dances require certain metric and rhythmic features, a canon requires a specific texture, sonata form requires a particular sequence of material. In the case of a composition sounding more like an improvisation, he may choose one or two of the six components mentioned above and shape his piece primarily according to these. In a prelude, i.e. in a composition carrying a name which does not reveal anything about the content of the piece, discovering this determining force is therefore of vital importance for both listeners and interpreters.

a) Pieces determined mainly by harmonic processes

Whenever melody and rhythm are negligible or neutral, harmony is the ruling factor this rule of the thumb sounds simple enough. But are melody and rhythm not *always* present?

Of course that is true. Yet, while rhythm is never actually "absent", it can be described as neutral if all rhythmic values are of the same length, or if different note values in different voices are arranged in such a way that their combined pattern amounts to completely regular motion. (This is called a *complementary rhythm*.)

Similarly, pitch will Of course never be absent – but it does not necessarily build melodies. A broken-chord pattern, whether created by one voice alone or jointly by complementary voices, is not primarily a melodic feature. (It could turn out to be melodic – as it often does in themes of the Viennese Classical style – if it gives way soon enough to a more lyrical continuation. However, if the same broken-chord pattern is carried through many bars, these will be judged as lacking genuine melodic features.)

b) Pieces determined mainly by processes of motive or figure development

Motive is the name for a small melodic unit which is individual enough to be immediately recognized when it occurs again. (By common agreement, such a unit is actually only called a motive if it does appear more than just once.)

Figure is the term preferred whenever such a unit is "unsingable", i.e. with a rhythm so fast or a pitch pattern so unmelodious that, while we might recognize it as a whole, we may not necessarily become aware of each single detail contained in it.

Motivic development occurs whenever such a unit is taken up repeatedly and under varying circumstances which prompt it to adjust some of its features. A composition would be described as "determined mainly by motivic development" if its material relies predominantly on a (usually small) number of motives, i.e. if, in a major part of a piece, there is always at least one voice which can be seen to derive from those melodic units.

c) Pieces following the outlines of "invention" or "fugue"

Both invention and fugue are standard form models which commonly appear bearing the heading "fugue" or "invention". A prelude, undeterminable in form and texture from its title, can be composed in such a way that it abides by the rules of these models.

How can we distinguish between "motivic development" and these established forms?

- Whenever a prelude is conceived as a strictly contrapuntal composition (i.e. in a texture of two or three voices all of which are independent from each other and all of which are continued consistently throughout the piece); and whenever it relies mainly on one melodic idea, then it is probably either an invention or a fugue.

If we wish to investigate further, how can we distinguish between the two standard models? In both cases, the "main idea" may occur accompanied by a "counter" idea; in both forms, the "main idea" may retreat for a while and then return. We are therefore looking for other features which might aid distinction.

- If the "main idea" enters in all voices successively, and if these imitations commence alternately from the tonic and the dominant, we can speak of a fugue. This is particularly the case whenever there are counter-subjects which, like the subject, wander through all voices. (Where a "prelude in the style of a fugue" may differ from a "real" fugue is at the beginning: instead of commencing with an unaccompanied subject statement it may introduce its main idea surrounded by a few harmonizing notes or chords.)
- If none of the above-stated conditions is given, we can speak of an invention. This is particularly the case whenever the "main idea" appears not only in imitation but also in sequence.

d) Pieces determined mainly by a small number of rhythmic patterns

There are preludes which seem determined by a few small motives – of a particular kind. These motives constantly change pitch, so that we may recognize the composition as being based on rhythmic patterns. It is consequently this little repertoire of rhythmic models which should find its way into the listener's memory.

e) Pieces determined mainly by metric organization

Whenever a piece appears determined mainly by its metric features, we can be sure that it is meant to convey a certain undefinable atmosphere, rather than the impression of an intricate play with structures or material development. In such a piece it will be the regular pulse – or any very simple, fairly monotonous variation on this pulse – which dominates anything else.

Such music was traditionally used (and is still being used in this way in many non Western cultures) to instill in the audience a meditative mood, if not to create a mesmerizing effect in the listener's mind. In the context of western music, such a meditative piece often precedes a composition which its author regards as too profound to be grasped immediately by an unprepared mind. The metrically-determined prelude thus serves to relax the listeners and empty their minds of too much activity.

1.2 What factors determine the overall design of a prelude?

Every piece of traditional music is horizontally structured, i.e. it consists of several sections each of which is determined by a rounded harmonic progression. Simple forms, like some dances and songs, may be made up of only two sections which may be more or less analogous ("binary") or contain a recurrence of the first *A B A* ("ternary"). They often feature repeat marks which clearly indicate at least one of the part endings. Preludes, however, are very often designed as a chain of phrases. The length of these phrases tends to be much more irregular than in simple forms where even-numbered bar patterns are preferred.

a) Where does the first section end?

When trying to determine the first structurally relevant cadential close, one is looking for a dominant (V) immediately followed by a tonic (1). This combination should be preceded somewhere by a chord on either IV or II. While the dominant may appear with various additions (e.g. with a seventh or even a ninth) and may then sometimes come without its root (vii⁷), the tonic is less volatile: it never lacks its basis and is not normally mixed with additional notes.

Whether this first cadence indicates a separate structural section, or whether it serves only as an introduction to a larger portion, depends mainly on the melodic design so far. This can be easily determined by considering the following:

- If the first cadential progression supports a single melodic unit complemented by an "answer" in the following bars, a more encompassing structural portion must be assumed.
- If melodic design is either absent or arbitrary, the first cadence qualifies for the closure of an independent structural section. (Exception: In cases where one of the main voices – the top line or the bass – fails to truly take part in this initial phrase, e.g. by sounding a pedal note, and thus suspends the real beginning, a larger context is again implied.)

b) The second cadential progression

The second cadential progression in a piece usually departs from the home key of the composition towards a new tonal center which will again be confirmed by a perfect cadence. This modulating passage is nearly always more prolonged than the initial harmonic progression. Its end usually marks the conclusion of a structural section, irrespective of the function of the previous cadence.

c) The sections

The number of structural sections in a prelude is theoretically not restricted, although finding more than six parts is rare. Their boundaries are always delineated as described above: a conclusion in the harmonic progression coinciding with a conclusion in the melodic line if there is one.

d) What exactly constitutes a "structural analogy"?

Structural analogies recall the simpler binary and ternary designs and are therefore a very popular building principle in preludes. Such an analogy may consist of as little as two or three bars, or it may extend to the length of a complete section which is in some way recapitulated.

The simplest, but also least frequent, manner of creating an analogy is by literally repeating several bars. More ingenious and more widely used are variation, transposition and analogy.

i Variation

In a variation, a number of bars recur with modified features. Several details may be altered:

- One or several of the voices may be written in a more elaborate pitch and/or rhythmic pattern;
- the main tune may transfer to another voice;
- an accompanying voice may present a different pattern.

The features which will always remain exactly the same in literal variation are the key, the overall harmonic progression and the length of the analogous segments.

ii Transposition

The simplest form of transposition is that which keeps all the original details intact but merely transfers them to a new tonal environment. If there are, in addition, more than arbitrary changes in the details, we would speak of a transposition + variation.

iii Analogy

In an analogy, the structural design is taken up in principle rather than literally. The changes on the surface may be so considerable that they make it difficult to spot the analogy at first sight. For a good understanding of the structure, however, analogies are just as important as other correspondences, especially as they are much more frequent. Imagine, for instance, the following structural pattern in an early section:

"two-bar model with sequence + modulation to a new key
+ cadential close with two bar closing formula".

Let us assume that the analogous segment at a later stage of the piece is initiated by a different two-bar model, which is then sequenced, that the modulation takes an extra bar to get where it is heading, and that the closing formula, although of equal length, also uses a different melodic design in the treble voice. This is a very subtle way of creating an analogy – and very rewarding to detect. Understandably, such analogies only make sense if the surface design – pitch pattern, rhythm and texture – is neutral enough to draw sufficient attention to structural processes.

1.3 How do you express the character of the prelude

a) What features help you in determining the basic character of the prelude?

The character of a composition (often called the basic character) is obviously conveyed through its material. Determining this basic character may at first seem a difficult task since Bach's scores contain almost no indications of dynamics, touch or articulation, or tempo. There are very few exceptions in the Well-Tempered Clavier. Single wedges and slurs occur occasionally (see e.g. the subject of the fugue in D minor, vol. 1), and tempo is designated three times (both the fugue in B minor from vol. 1 and the prelude in G minor from vol. 11 are marked *Largo*, and the prelude in B minor from vol. 11 is headed *Allegro*.)

In the absence of verbal hints we must assume that musicians of Bach's era were capable of deducing the character from the basic information contained in the music itself – i.e. from the rhythmic patterns used and from the design of pitch. If we try to imagine ourselves in their place, we would therefore ask: what kind of rhythmic and intervallic structure distinguishes a rather calm character from a rather lively spirit? The answer is simple enough and worth remembering:

- On the one hand, the predominance of steps or leaps helps distinguish the contrasting characters; leaps are regarded as more energetic and stepwise motion as more emotional.
- On the other hand, the character is expressed in simple or complex rhythm; a complex rhythm requires time to unfold whereas a simple rhythm invites virtuosity and might even sound less interesting when played too calmly.

The rule of thumb is therefore:

- * A predominance of stepwise motion and a complex rhythm indicate a *rather calm* basic character.

- * Frequent leaps and a fairly simple rhythmic pattern indicate a *rather lively* basic character.

Once you have established the basic character, you need to translate this fairly abstract concept into practical performance features. Here are some hints concerning the conclusions to be drawn regarding tempo and articulation:

- Whenever the material of a composition represents the *rather calm* basic character, the tempo can be anywhere between moderate and very slow. The general articulation is legato. Exception: non legato for cadential-bass patterns and any occasional consecutive leaps (more than one at a time).
- Whenever the material of a composition represents the *rather lively* basic character, the tempo can be anywhere between moderately flowing and very fast. The appropriate articulation is legato (or correctly: quasi legato) for the shorter note values, non legato for the longer values'. Main exception: an appoggiatura is always inseparably linked to its resolution, and the keynote leading note / keynote (*do si do*) formula is always legato. (These so called longer notes in a *rather lively* piece need further specification whenever we are dealing with notes prolonged by a dot or tie while certainly "longer" are played detached only whenever the prolongation (i.e. the value of the dot or tie) is itself of "longer" duration. If the time value of the prolongation equals one of the "shorter" notes in this composition, the note will be linked to the following one in quasi legato. Thus in a composition where non legato quarter-notes and quasi legato eighth-notes are a rule, a half-note prolonged by a dot or tied into a quarter-note would be detached from the following note; but a dotted quarter-note or any note prolonged in an eighth-note tie would not be detached.)

b) How do you make decisions regarding ornament realization?

Ornaments in polyphonic compositions of the Baroque era are, more often than not, decisive features in the material which they decorate. Their convincing execution depends on a smooth beginning, a motion which relates to the rest of the piece, and an appropriate ending.

The most common ornament in Bach's fugues is the long trill, indicated by one of several symbols: the abbreviations *tr* or *t*, the mordent symbol or one of the signs for compound trills). Here is how the long trill is played:

- It *regularly* (i.e. according to the basic rule for ornaments) commences on the *upper neighboring note*. However, there is a very frequent exception:
 - * Whenever the trill note is *approached stepwise*, i.e. whenever the main note is preceded by the interval of a second, from above or below, the trill will begin on the *main note*.
 - * Another exception, although much less frequent, applies whenever an ornament decorates the *first note of a phrase* (see e.g. the initial note of the G minor prelude from Book 1). In this case, too, the ornament commences on the *main note*.
- The trill motion is related to the general motion in the composition in such a way that
 - the speed of the trill notes is
 - twice as fast as that of the
 - fastest written-out note values.

While trills beginning on the upper neighboring note enjoy regular motion throughout, those which begin on the main note (and which therefore contain an uneven number of notes) hold the first note twice as long as the other trill notes, i.e. in such a way that all further upper auxiliaries fall on the stronger pulses within the trill (thus evoking the effect of a long appoggiatura).

- Whenever the note following the trill, the harmonic resolution, falls on a strong beat, the end of the trill should include a suffix, i.e. a turn to the lower neighboring note and back to the main note.
 - * Exceptions: There are three cases in which no suffix is needed or even desirable: if the resolution appears too late, or too early, or not at all. The first is the case if the trill is prolonged with a tie; in this case the shake stops short on the last main note before the end of the bar, so that the tie can be fully appreciated. The second case occurs in dotted note patterns; here the shake stops preferably shortly before the dot. Finally, if the trill is succeeded by a rest, the shake should continue up to the very end of the ornamented note value, ending again on the last main note.

Any ornament which appears in the subject or one of the counter-subjects must be regarded as integral to this component of the material. Regardless of whether or not the composer repeats the ornament symbol with each entry of this material, the performer should retain such a trill throughout the work (provided the subject or counter-subject does not appear in drastically modified shape).

1.4a How do you deal with preludes determined mainly by harmonic processes?

i Harmonic progressions and the development of dynamic tension

When trying to find a valid interpretive concept in pieces determined primarily by harmonic processes, the basic facts to be considered are the tension generated by each of the chords, and the dynamic relation in consecutive chords. There is quite a simple rule for defining such relations:

- The tension increases with every active step, i.e. with every step moving away from the relevant tonic.
- The tension decreases with every passive step, i.e. with every step moving towards a resolution.

Thus, in the simple harmonic progression with perfect cadence, the subdominant chord (or its substitute) as the active step represents the highest harmonic tension; the dominant chord with its clearly determined tendency to resolve follows with less tension, and the tonic is most relaxed. This natural design is enhanced whenever a function appears as a seventh or ninth chord (i.e. a IV^7 carries even more tension than the simple IV; a V^7 tends even stronger towards its resolution. Last but not least, the degree by which the harmonic tension (and with it the dynamic level which depicts this tension) increases is related to the "audacity" of the harmonic step.

ii Secondary features

Beyond these basic considerations of chord relationships there are two secondary features which must be given special attention since they will regularly repeal the rule mentioned above: the

sequence and the *pedal note*.

The term *sequence* describes the process by which a model – this can be a melodic unit or, in the case of a harmonically-determined composition, a group of chords – is repeated once or several times on different pitch levels. In such a case, the dynamic process between the chords is always established in the model. The sequential groups can but follow the same pattern, or else the relationship would not be comprehensible. The model thus sets an example which will be observed in each sequence, regardless of the actual harmonic relationships there.

The *pedal note* also creates a law of its own. It consists of a bass note, usually entering on the dominant of the home key, which is sustained (or – more common on instruments other than the organ – reiterated) for several bars, while the harmonies made up by the other voices seem reluctant to surrender to the truth that the piece is soon to come to an end. Pedal notes obviously have their roots in Baroque organ music. Yet, while a sustained or reiterated note on the organ will, without doubt, objectively maintain a constant dynamic level, subjectively or psychologically it will work its way deeper and deeper into the listener's consciousness. This is how a basically simple event – that of a sustained or reiterated note – insinuates a gradual, smooth but persistent increase of tension.

Finally, any truly melodic event suspends the processes of tension in pieces determined by harmonic relationships. If a melodic unit, however small, has enough character of its own, it may create motions that are momentarily independent from the underlying harmonic process.

1.4b How do you deal with preludes determined mainly by motivic elements?

i The relevant motives, their character and dynamic design

Finding the motives on which a piece is built would seem fairly easy. However, their scope should be determined carefully to guarantee a correct idea of structure and phrasing.

Remember that at the beginning of a motive, occasional variations in subsequent appearances may occur. The ending may also include some pitfalls: on the one hand, the final note may appear in various versions but still belong, as a rhythmically necessary element, to the motive; on the other hand, notes repeatedly succeeding the motive may still be no more than an extension – and thus not generate anything of their own. They may not belong to the motive at all, and should then be clearly separated in color and/or phrasing.)

The basic character of any such motive results from the same ingredients as it does in all other polyphonic compositions in this style:

- A predominance of stepwise motion (interrupted, if at all, only by a "high tension interval") evokes a rather calm basic character; so does a complex rhythmic structure with a variety of note values, including syncopations, dotted and tied notes.
- Frequent leaps (of a fourth or more) or broken chords as part of the motive indicate a rather lively basic character; so does a melodic pattern in simple rhythmic structure. Spelled out ornaments are another indicator for 'lively' basic character.

Within each motive or figure, any of the following details can trigger a rise in tension:

- an active harmonic step
- an appoggiatura

- a leading-note
- a high-tension interval
- a syncopation or other rhythmic feature

As far as the development of motives or figures is concerned, the most frequent processes are:

- sequence a unit is repeated on a different step of the scale, usually with some of its intervals adjusted;
- imitation a unit is repeated in another voice, starting on any degree of the scale;
- inversion a unit sounds upside down;
- partial sequence the original idea (or a recognizable fraction of it) recurs but has been
varied sequence changed in shape and/or length.
extended sequence

The overall expressive value created by each of these processes can be very generally described as follows:

- Rising sequences usually cause an increase of tension and falling sequences cause a decrease;
- imitations, variations and inversions have in themselves no influence on the increase or decrease of intensity;
- stretto formations and parallels represent heightened emotional intensity;
- abridged and extended sequences tend to represent a loosening of the grip of tightly organized material, thus a relaxation.

ii The development of tension

For the overall dynamic design, You would consider similar factors as in a fugue. The development of tension is determined above all by the density of Prominent material. This density can be achieved horizontally or vertically. (For more details refer to the in depth discussion below under 2.7.) Another factor is the change of mode or, rarely, the change of character due to inversion.

1.4c How do you deal with Preludes which follow the outlines of "invention" or "fugue"?

If you find that your prelude contains the determining features of a fugue, refer to questions and information nos. 5 11 for further guidance. You can actually also use most of this information if your prelude is an invention. However, the following differences between the two standard models exist, either in terminology or in design.

i The material

The "main idea" of an invention is commonly not named a subject but a motive – although either name will serve its purpose in furthering your understanding. (Also, possible contrapuntal "companions" could then be referred to as "counter-motives", a term which, though consistent, does not seem to have found its way into common usage.)

ii The design

The rules concerning an accepted order and grouping of entries in a fugue do not apply to an invention. The initial motive, after being stated clearly (with or without accompaniment) at the very beginning of the composition, is followed by a number of sequences and imitations. It may then be shortened to leave a less individual figure, or engender new combinations of its two halves. It may or may not give way to secondary motives. Most certainly, in the course of this neutralizing process, it will modulate to either its dominant or (if the home key is in minor mode) to its relative major key and come to a transitory halt in a full cadence.

The second section commences in this new key, often with the same or similar presentation of material in inverted voices. In terms of structure, almost every possible continuation seems acceptable if we want to take Bach's own fifteen inventions as a guarantor.

As far as the material serving as accompaniment to the main motive is concerned, everything is possible – from notes or chords representing nothing but a harmonic pattern, through simple quasi-independent yet not very individual lines, and up to counter motives with all the characteristics of what would be the counter-subject in a fugue. Even stretto imitations, although infrequent, could occur.

1.4d How do you deal with preludes determined mainly by rhythmic patterns?

i The rhythmic patterns and their interrelations

Rhythmic patterns can be analyzed in a way similar to motivic ones: whenever a particular sequence of note values is

- * significant enough to be easily recognized,
- * independent from other sequences, and
- * repeatedly taken up,

we can call it a rhythmic pattern. It should usually come in varying pitch arrangements otherwise we might just as well identify it as a "motive".

The sequence of note values which combined provide a rhythmic pattern is, in addition, determined by two factors: by its metric position (i.e. it may commence on a downbeat or be conceived as from weak to strong beat), and by its length. Whenever both the metric position and the length of two patterns within a composition are identical, we call them interrelated.

ii Modifications and developments of the material

The different melodic guises in which a rhythm pattern appears can usually best be described in terms of motion e.g. "leap up, four steps down, last note up" to allow for easy identification of minor variations. Whenever even such a very broad definition does not apply we should start distinguishing between pattern I a and pattern I b.

The means of development which the composer may use when playing with these patterns are basically the same as those used for melodically determined motives: variation of detail, inversion, abbreviation and extension, augmentation and diminution, stretto and parallel.

iii Tension curves

Build ups and declines of tension are initiated mostly by either the pitch level of sequences (rising sequences increase tension, falling sequences diminish tension) or the density of texture. In addition, dynamic climaxes can also be created by features beyond the main rhythmic patterns, especially by an unusual harmonic step.

1.4e How do you deal with preludes determined mainly by metric organization?

i The pulse

The dominant pulse can be any note value other than the fastest one appearing in the piece. You can usually find it by checking whether any one of the other rhythmic values is constant in one of the secondary voices, or whether it is given additional emphasis by double stems. (E.g. if the first note in each group of four sixteenth-notes carries a second voice stem, the pulse of the piece is most likely to be one of quarter-notes.)

ii Secondary features and the development of tension

The secondary features beyond this pulse include, above all, melodic lines, harmonic progressions and texture. These are also the only elements which can bring about tension buildups. Climaxes, however, tend to be fewer and more gradually prepared than in other pieces (not surprising in view of the "meditative" mood these compositions generally have). Particularly in pieces with a quarter-note beyond sixteenth-note structure, as described above, the ornamental nature often allows the piece to flow without too much change in sound intensity.

2.1 What exactly is the "subject"?

"Subject" is the term used for the leading idea of a fugue. This idea is always introduced at the very beginning of the piece. At this opening, it regularly appears unaccompanied, i.e. there are rests in the other voices so that the listener can gain a very clear and distinct understanding of this most important component of the thematic material. Throughout a fugue, the subject sounds many times. These appearances are called "statements", "subject entries" or "entrances".

a) How long is the subject?

If we compare the musical language with the verbal idiom, as we do e.g. when we talk about "statements," then the structure of a musical phrase would have to meet a corresponding set of

requirements as does a verbal phrase. In any complete sentence, we expect a certain number of components without which the message would appear incomplete; and while there are many options how a clause may begin, we usually expect it to end with a full stop. Corresponding processes determine a musical phrase – here: the subject.

- A subject can commence at any point of a bar. When interpreting a fugue it is worth establishing whether the beginning falls on a weak or strong beat (or between beats) because this may influence the character of the entire piece.
- While the melodic details to be found in a subject abide by no rule (just as the choice of words in a sentence is not prescribed), the functions these melodic steps represent in terms of the harmonic progression follow a certain order (as would the grammatical components of a clause).
- The equivalent in music to a full stop in language is the perfect cadence. The conclusion of a complete musical phrase – such as the subject in a fugue – is therefore represented by the harmonic resolution from dominant to tonic (or from V to I).
In addition, you may consider the metric position. While the conclusion of a phrase could theoretically fall on any beat in a bar, subject endings on a down beat or middle beat are strikingly more frequent than others.

If you have always looked for the end of the subject by comparing the first bars of the piece with two or three later entries of the subject – seeing how many notes remain the same – you should know that this method is not entirely safe.

- The final note may sometimes appear varied and therefore seem not the same in all entries; e.g. an original ending on the third degree may later be replaced by a conclusion on the keynote.
- The notes immediately following the end of the subject but do not actually belong to it may appear similarly after some of the later statements and thus mislead you.

b) What is a phrase, and what are sub-phrases?

Continuing our comparison of a phrase in music with a clause in verbal language, we can state: Just as a sentence may consist of a single clause or contain sub-clauses of different order, so can a musical statement be of simple or more complex structure.

The existence of sub-phrases can most often be detected by looking for one of the following three features:

- sequences
- changes in pitch level
- changes in rhythmic pattern

It also helps to think of singers or wind instrumentalists. If they would breathe somewhere during the course of the subject, then this breathing is most likely to represent the point of "phrasing".

Whenever a subject consists of a single indivisible phrase, the musical tension unfolds in a single, unbroken rise and fall. Whenever a subject contains sub-phrases, the message is only correctly transmitted if the musical line is structured.

Generally speaking, a fugue subject is always conceived as a unity, a oneness. Thus even if it does consist of several sub units, these should never appear as equally important, rivaling segments. Instead, a subject will always have one predominant center: the focusing point or climax. In a structured subject, this climax may either be reached in several consecutive sweeps each of which brings about higher dynamic tension, or the resolution of tension after the climax may occur in several gradually descending curves. In other cases, a "main clause" is preceded or followed by a "side thought" or "afterthought".

c) When you report the pitch outline in the subject, what are you looking for?

The pitch outline in Baroque polyphonic pieces usually fits in one of two categories:

- A piece may either be distinguished by a variety of intervals including several larger leaps and occasional broken chord patterns; in this context, groups of shorter note values often represent written out ornamental figures (turns, mordents, inverted mordents).
- Or there may be a predominance of small intervals (stepwise motion) combined with only an occasional single "high tension" leap. These high tension intervals include especially the minor sixth, the minor seventh, the tritone (augmented fourth / diminished fifth) and the diminished fourth.

d) When you analyze the rhythmic pattern, what are you looking for?

The rhythmic features of polyphonic pieces can be roughly grouped into two categories:

- The rhythmic pattern of a piece may be simple, with two predominant note values in the relevant material.
- Or it may be rather complex, including a variety of note values, dotted and tied notes and syncopations.

e) What is most important in a harmonic progression?

When asked to investigate into the harmonic background of a subject you can proceed in two ways: you can either limit yourself to the essential details which you know to be relevant to the build up and decline of dynamic tension, or you can thoroughly analyze each harmonic step underlying the subject. As the second option is fairly complicated and needs some experience, let us begin with the first. There are actually only two "essential details" in a harmonic progression:

- Where is the active harmonic step that is the step from the tonic – that is the step from the tonic chord to the subdominant or its substitute, i.e. I – IV or I – ii?

Look out for any conspicuous fourth or sixth degrees of the scale. (In C major, e.g., you would try to

find any F or A falling on a strong beat or on a syncopation.)

- Is this active step followed directly by the passive step V – I (dominant – tonic), or is there a modulation to another key?

In the case of a modulating subject, you will find a raising accidental suddenly cropping up, most often before the fourth scale degree. So, if the first unaccompanied bars of your fugue show a sharpening accidental (i.e. an additional sharp in any key signature with sharps, or a neutralized final flat in any key with flats) then this is where the shift is taking place.

In this situation, when determining the end of the subject you are not looking for your original tonic chord but for the tonic in the new key. (This is almost always the dominant.)

In case you choose the second option and decide to undertake a more detailed analysis, here is some help: Most subjects are built on the steps of a simple progression, i.e. on tonic / subdominant / dominant / tonic in the setting I IV (1) V I or I11 (1) V 1; you would therefore do best to take note of those chords first. (In C major, these would be: C-E-G, F-A-C or D-F-A, G-B-D, C-E-G.)

Now identify in your subject all those notes which fall directly on a beat and determine their harmonic background. You will realize that, apart from the first and fifth degrees of the scale (i.e. C and G in C major), all notes can be clearly attributed to one of the harmonic steps.

The following peculiarities should be noted:

- The dominant often appears as a seventh chord (e.g. G B D F).
- The basic progression may appear harmonically ornamented; in this case, a function builds something like a "harmonic inverted mordent" with the chord normally preceding it, e.g.:

I-V-I-IV-V-I or

I-IV-I-IV-V-I.

- In a minor key cadence, both the tonic and the subdominant (I + IV) are in minor mode. The dominant, however, uses the note of the harmonic minor scale, particularly the leading note. It is thus regularly a major chord and will therefore feature an accidental (e.g. in C minor: C-E^b-G, F-A^b-C, G-B-D, C-E^b-G).

f) Which are the features likely to increase tension within a phrase?

Several features in the three areas of harmony, melody and rhythm may contribute to heightened tension.

- Active harmonic steps

These are above all the steps from the tonic to the subdominant (I-IV) and tonic to supertonic or relative minor of subdominant (I-II or I-ii).

- Appoggiaturas

These are notes which "withhold" or "delay" the melodic resolution into the main harmonic step. Whenever the unaccompanied subject seems to imply a change of harmony on a weak beat, it is wise to double check the harmonic background compare with that in later subject statements. You will probably find that the harmonic change occurs on the strong beat, but that there is a melodic note purposefully lagging behind thus creating extra tension.

- Leading-notes, particularly artificial ones

A natural leading-note is a degree of the scale which is a semitone neighbor to a tonic chord note; it thus has a tendency to "lead" into it.

(In a major scale the leading-notes are: the 7th leading up to the octave and the fourth degree leading downwards to the third; e.g. B-C and F-E. In a minor scale they are: the harmonically raised 7th leading up to the octave and the sixth degree leading down to the fifth; e.g. B natural-C and A^b G.) Artificial leading notes are semitones created with the help of an accidental (e.g. in C major: F[#] G).

- High-tension intervals.

These include above all the minor sixth, minor seventh, tritone and diminished fourth.

- Syncopations or other rhythmic prolongations

Syncopations are deliberate distortions of the metric order: a weak beat is prolonged (by a dot, a longer note value or a tie) in such a way that it "swallows" the following stronger beat and its accent.)

2.2 What is the importance of the subject in the fugue?

It has often been observed that it would seem wrong to say a fugue has a subject; one should rather say there is a subject which has generated a fugue. The perfect little musical entity which we call subject is in fact at the origin of the fugue. Its 11 companions" are dependent on it to the largest imaginable extent: were the subject any different, they too would not be what they are. The subject is responsible for the feelings of density and relaxation in the fugue, and it is the main force in creating structure. Whenever it rests for a while, its absence is distinctly felt.

Although this basic truth is valid in all fugues, the degree of impact exercised by the subject on its surroundings may vary slightly in each piece. Some of the common constellations are:

- The subject can be spread regularly across the piece and always come accompanied by other prominent musical ideas. Thus, although leading, it will appear as "one in a group".
- As the subject retreats momentarily, other characteristic motives may develop. Thus, the subject may appear as the leader of one "team" which is contrasted by another (admittedly less important) "team"

representing a different color

- Last but not least, the subject may not have the same importance at all times but, e.g., demand more and more attention as the fugue develops. It may do so by presenting its statements in more powerful variations, or by appearing in several voices almost at once.

a) When you discuss the subject statements, what are you looking for?

A fugue can contain any number of subject statements the twenty four entries in the first fugue of the Well Tempered Clavier represent by no means the largest number. These statements are usually named after the voice in which they sound. The following conventions are practical:

- In a four-part fugue, the established names for the voices are those of the vocal ensemble: *soprano, alto, tenor, bass* (abbreviated S A T B).
- In a three-part fugue, since using a selection from this four-part combination would seem arbitrary, a good solution is to refer to the voices as *upper voice, middle voice* and *lower voice* (abbreviated U M L).
- In the few five-part fugues, the least problematic choice is to be to count them from *v1* for first or uppermost voice to *v5* for fifth or lowest voice. (The attempt made by some analysts to retain the vocal terms by introducing *alto I and alto II* or *tenor I and tenor II* has led to lengthy arguments among scholars. Such a quarrel seems somehow quite beside the point, and the *v1 to v5* option may prevent further disputes.)

b) What kind of changes can you expect to occur in the subject?

In the course of the fugue, the subject may appear in various guises. This is important to remember when trying to locate all the subject statements.

- One of its intervals may be modified to adjust to a different harmonic background. In many fugues, this is the case in the second and fourth entries, i.e. in the answer, the entries beginning on the dominant. An entry with such an interval adjustment is called a "tonal answer" – as opposed to the "real answer" in which all intervals remain exactly the same.
- The end or the beginning of the subject (or both) may feature variations in pitch and rhythm. Frequent are prolonged or shortened first notes and delayed final resolutions.
- Part or all of the subject may appear in rhythmic variation (e.g. showing dotted note figures where the original was in regular motion) or in metric variation (e.g. beginning on a weak instead of a strong beat – or vice versa – and continuing slightly "off beat").
- The subject may appear upside down. This is called an "inversion".
- Finally, the speed may appear changed in such a way that all note values are doubled and the subject is twice as long. This modification is called the "augmentation". Also possible, although less frequent, are entries in "diminution" where the time value of all notes is decreased and the subject therefore takes only half the time it did originally.

c) *What are "stretto " and "parallel"?*

There are certain rules dictating the way in which subject statements follow each other. These are stricter at the beginning of the piece perhaps to guarantee the opportunity for the listener to distinguish all aspects of the material. Thus in the first section of a fugue each voice is expected to wait for the conclusion of the previous statement. Only then is it allowed to launch a new entry. Later in the fugue, however, it may occur that a voice becomes "impatient" and embarks on a subject statement while another is still in the middle of it. This is called a "stretto"; it always indicates heightened tension. Strettos may occur between two or more voices, and between original and varied statements of the subject.

As polyphonic compositions stress the independence of all voices, a "parallel" where the subject sounds simultaneously in two voices is a very special feature. A parallel statement indicates a very high state of exaltation. Like the "stretto", it can also involve different versions of the subject.

Talking of grouped entries, a final means of intensification is the "repeated entry" in which one voice, after having stated the subject, does not give way to another voice but immediately launched the subject all over again. It usually does so either on a different harmonic step or by using any of the above mentioned variations – as if to add a new side or aspect to its argument.

2.3 What exactly are counter-subjects?

A counter-subject is a more or less consistent companion to the subject. It may enhance the character of its leader or rival him. But, like a faithful companion, it is bound to the subject in such a way that it will not usually appear in its entirety at times when the subject is resting. (There are fugues in which a prominent musical idea is introduced only after one or more sections have already passed, and then sounds both against the subject and on its own. This is called a "second subject", and in very special cases you may even find a "third subject". A fugue featuring more than one subject is called "double fugue", "triple fugue" etc.)

In a regularly built fugue, the first counter-subject will be introduced in the voice which launched the piece, and sound against the subject entry in the subsequent voice. Similarly, the second counter-subject (if the fugue has one) can be expected to appear first against the third subject entry, etc. One possible beginning of a four-part fugue is therefore (S = subject, CS = counter-subject):

soprano:	--	--	--	S
alto:	--	--	S	CS1
tenor:	--	S	CS1	CS2
bass:	S	CS1	CS2	CS3

(Don't forget, however, that there are fugues with no counter-subject at all; this happens if the subject is so dominant that it does not accommodate any rivaling ideas. In other cases, a counter-subject may come in later than expected, or it may accompany only a few subject statements.)

When trying to find out whether a line qualifies as a counter-subject you should ask yourself the following questions:

Is it independent?	A line which duplicates part of the subject in either rhythm or pitch pattern is not regarded as independent.
Is it melodic?	A scale segment in regular motion or a melodically meaningless group of notes would not be recognized.
Does it recur?	A melodic detail which only sounds once will not be given a formal name.

a) How can you determine the length of a counter-subject?

The length of a counter-subject will always roughly correspond to that of the subject. Where exactly it begins and ends can best be decided when compared with later appearances.

b) What phrase structure can you expect to find ?

The phrase structure of a counter-subject can vary considerably. We might find anything from an indivisible unit to complex phrases with sequences or other combinations of sub-phrases. Note particularly that the phrase structure of a counter-subject will often not coincide with that of the subject in answer to the demand of independence.

c) When determining the dynamic tension, what features you are looking for?

The development of tension represented in a particular counter-subject can be initially determined along the same lines as that in the subject. However, one important aspect to be kept in mind is that, given the request for independence, the climax of one will, in most cases, not coincide with that of the other. (For performers, this is very important to remember. It is vital to play each element with dynamic independence, despite the seeming difficulty of the task. Parallel dynamic movements, although easier to perform, often make it hard, if not impossible, for a listener to distinguish the elements of a fugue. This is a pity since "helping the audience to understand" is the essential task of the interpreter.)

d) What should a sketch featuring the phrase structure and the dynamic tension in the primary material of the fugue show?

Sketches, though certainly rather tedious to draw, are an invaluable help for two reasons: designing them makes things clearer in your head, and the visual image is a much better guide during the performance than some intellectual concept.

- Write out the subject juxtaposed with all its counter-subjects, using a separate staff for each.
- If any part of the material does not consist of a single unit, add a little hook or tick after the last note of each sub-phrase.
- Now draw underneath each staff the opening and closing "hairpins" which in music represent the increase and decrease of tension.

2.4 How do you find the episodes in a fugue?

Those bars in a fugue where the subject is temporarily resting are called "subject free passages" or "episodes". A good way of marking them is by numbering them throughout the fugue (E1, E 2 etc.). Where their range is to be determined outside the score, "bars 5-7 may sometimes be clear enough, whereas in other case you may wish to specify "bars 5m-7d", meaning "from the middle of bar 5 to the downbeat of bar 7".

a) How many episodes can you expect?

The number of episodes in a fugue is not restricted. Theoretically, there could be an episode after each subject entry, although this is not often the case. Also, there are some very special episodes which, from their material, appear divided into two or more distinct segments. In such cases the composer will often use episode patterns which have already been clearly established. Whenever this occurs, special attention should be given as such subdivisions are frequently of importance to the structural design of the piece.

b) When ascertaining the material of an episode, what are you looking for?

There are basically three types of episodes:

- The first type is directly related to the subject in terms of the material it draws on. It uses either the "head" or the "tail" of the subject and then plays with it in patterns of sequence (same voice, different pitch) or imitation (different voice, any pitch). Such episodes are often virtually inseparably linked to the preceding or following subject entry.
- The second type of episode is characterized by one or more unique motives which set it distinctly apart from the main material. Such an episode motive is usually a rather short melodic figure which recurs several times and is characteristic enough to be easily recognizable. As with all other material in a polyphonic composition, it can move through all the voices and may even be varied or inverted. The character of such an episode motive is determined by the same features as that of the subject and its counter-subjects: by its design of pitch and its rhythmic features. If a motive is closely related to any part of the primary material, its character and dynamic curve will convey this. On the other hand, motives which are clearly independent should sound as different as possible from the main portions of the fugue.
- The third type of episode fulfills a different function. In some instances, the stretch of music between the end of one subject entry and the beginning of the next conveys no message whatsoever of its own. Instead, it merely extends the cadential close of what happened before. Often it will be recognizable either by the typical cadential-bass pattern, or by a closing formula in one of the other voices. Typical patterns for such closing formulas are shown under ex. 1. (Some experts deny such cadential extensions the term "episode". Whatever you call it, remember that it indicates the end of a major segment of the fugue.)

(ex. 1)



c) *In which way can one episode be related to another one?*

Episodes in analogous sections of a fugue are often very closely related. An episode may

- take up the material of an earlier episode, either literally, varied, transposed, or in exchanged voices;
- feature an additional voice added to a previous thinner texture;
- extend or shorten the material of an earlier episode, or develop it freely.

d) *What are the possible roles of an episode in the overall development of tension?*

An episode can establish three crucial relationships to its surroundings:

- it can link two subject statements by leading from one towards the next;
- it can be conclusive by resolving tension that was built up by the preceding subject statement;
- it can represent a different register, appearing basically independent of its surroundings and serving as a color contrast.

The two former types usually feature material which is closely related to the subject. The contrasting type may contain independent episode motives or motives related to one of the counter-subjects.

2.5 Performance practice in Baroque polyphonic style

a) *The basic character*

The basic character of a fugue, just like that of a prelude, is conveyed through its material; you will therefore find a detailed discussion of this aspect above under 3a). Let us recall here only the rule of thumb:

- A predominance of stepwise motion and a complex rhythmic pattern indicate a *rather calm* basic

character.

- Frequent leaps (intervals of a fourth or more), possibly combined with ornamental figures in the faster note values, and a fairly simple rhythmic pattern indicate a *rather lively* basic character. (You have, actually, already collected all the necessary information under 2. 1 c and 2. 1 d above.)

Let us assume that your performance already portrays most aspects of structure. How do you express abstract aspects like character, mood, intensity in a way which every listener will be able to grasp?

The predominant means by which a performer conveys character are: tempo, articulation and touch. All three work together in shaping and shading the character; they may do so in different combinations but should obviously not appear to contradict each other.

While touch may enhance slightly different nuances in each composition, tempo and articulation are directly connected with the basic character of a piece and can thus be determined more objectively.

b), d) Tempo, articulation and ornament realization

For all details regarding the adequate choice of articulation and execution of ornaments, please refer back to the discussion of these aspects under 1.3a).

c) How do You decide which relation to choose between the tempo of the prelude and that of the fugue?

All through the Baroque and Classical era, pieces of music which together form a larger work (i.e. the movements of a sonata or suite, or prelude and fugue, Prelude and toccata, etc.) were conceived as being related in their metric organization. This concept is comparable to the much more familiar demand of "rhythmic relationship" in architecture. Imagine a group of buildings constructed in the same style but to the order of different patrons and therefore with unrelated measures (height and width, angle of roof, pattern of windows and doors, etc.). Such buildings will appeal to the eye as individual houses, each of them a unit in its own right. A complex of related buildings, however, such as a castle, temple district or similar structured ensemble, will display a subtle yet very definite relationship between all the measurements.

As music unfolds in time which is measured in pulsations, the equivalent factor of "rhythmic relationship," is created by proportions of the metric values. For this purpose, any of the several pulses which are conveyed in a piece of music can be used as a point of reference: the actual metric value indicated in the time signature, the larger unit of a half or whole measure, or the smallest note value appearing in the piece.

A tempo proportion is then created in such a way that one note value of the first piece relates to Any value of the next by being either equally fast, or half or twice as fast (1:2 / 2:1), or three times as fast or slow. Even an implied but not actually sounding value, like the triplet fraction in a piece not featuring triplets, can be related to a pulse in another movement; this may be preferable particularly in the case of successive pieces of the same time signature and rhythmic organization which might otherwise present too little distinction. To give a few examples (out of many possible ones):

The quarter-note beat of a fugue may equal

- a quarter-note in the prelude

- an eighth-note in the prelude,
- a half-note in the prelude, etc.
- an entire bar of whatever duration in the prelude
- three eighth-notes /three quarter-notes /three sixteenth-notes in the prelude an assumed (not occurring) triplet eighth-note or triplet quarter-note in the prelude.

2.6 What determines the design of a fugue?

As you will have already found out, the subject statements of a fugue can appear one after the other, or they can be divided by episodes. Whatever the pattern, obviously these elements do not simply pass by as a shapeless, disorganized chain of events.

On the contrary, Bach's fugues are all constructed with very carefully balanced "sections". Since this design or structural layout is slightly different in each fugue and of vital importance to an understanding of the composition, it is useful to develop some secure method of analysis.

a) Which of the structural features are basic traits of a fugue? Which help to determine the particular design?

Remember the nursery explanation of the structure of a fugue?

It's like a conversation: one speaker brings up a topic and his friends pick it up one after another. The "first round" ends after each of them has added his comment. It is, however, possible for one of them to make a "sum up remark". (In the fugue, this is called a "redundant entry".) After a relaxation, with or without some contrasting talk, the discussion of the main topic resumes.

In each consecutive round, these are the rules:

- The minimum number of speakers is two. (A monologue is no conversation!)
- Nobody should speak twice unless he sums up one round. (Exceptions occur in intensifications where an additional entry reinforces another without making a "statement" of its own. Thus "stretto", "parallel" or "repeated statement" are counted as one "group entry".)
- The maximum number of speakers is again "all plus one" (e.g. with four friends it is $4 + 1 = 5$, one being allowed to comment twice).

This rule of thumb will almost always help to determine the length of the first section (or "exposition"); it often even enlightens the entire plan of the composition, with all its consecutive rounds. Concerning the number of "rounds", you can expect at least two. As for the maximum, there is no established rule. (There was a time when people, influenced by theories of the late nineteenth century, tried to detect a three section structure in every fugue. Despite the fact that this has long since been unmasked as a misconception originating in sonata and ternary forms, these theories still seem to abound.)

As soon as each voice in your fugue has entered with the subject, the full ensemble is reached. However, while the "musical debate" relaxes (as in an episode) or embarks on a fresh start (as at the beginning of a new section), one of the voices often takes a rest. A subject statement which sounds accompanied by less than the full number of voices may therefore indicate the beginning of a new section.

Analogies in a fugue are not necessarily obvious at first sight, although some are. What is required is that a sequence of events (like a number of subject entries, accompanied by other material, perhaps including an episode) recurs later in the piece in the same or very similar order. This similarity does not refer to the position of the material in the ensemble; so the order may be the same with different voices being used to present the material – which is why some analogies are hard to find.

b) What do the harmonic features tell us about the design?

While a larger part of the piece will always appear closely related to the main key, there are usually passages which show a harmonic digression to either a different tonal area and/or to the opposite mode (to minor in a major fugue and vice versa).

To determine the harmonic background of a subject entry, it is best to look at both its beginning (i.e. the first two or three notes, to avoid misinterpretations in tonal answers) and its end. Subject entries within one section often appear in tonic / dominant / tonic / dominant progression. A change in this pattern is worth noting. Significant cadences are usually those which appear as obvious formulas or cadential-bass patterns outside the main material of the fugue.

c) How to sketch the design of a fugue?

Such a design is usually sketched using a horizontal column for bar numbers and corresponding horizontal columns for each of the voices. Here, "bricks" (which can be of different thickness or shade, according to the hierarchy of material) represent the subject and counter-subject entries, e.g.:

b.	1	2	3	4	5	6	7	8	9	10
S							S		epi-	
A					S		CS1		so-	
T			S		CS1		CS2		de	
B	S		CS1		CS2		CS3		(rest)	

2.7 Which factors determine the development of tension

The development of tension is the way in which the intensity, density and dramatic vigor develop, between the first and the last note of the composition.

Here are some of many possible patterns:

- Some fugues begin by presenting their material in a very condensed manner. Later, however, the

subject takes frequent rests, appears in a weaker mode (i.e. where the subject sounds less dramatic) or in weaker surroundings (e.g. with the other voices resting or sounding neutral lines, instead of counter-subjects).

- In the first sections of other fugues, the material is introduced in more of a matter of fact way. It is only after the exposition that more and more intensity starts building up.
- Yet other fugues are conceived along symmetrical lines.

a) What do you take into consideration when trying to decide whether or not (and how much) the tension rises within a section?

The development of tension within any segment of the fugue is determined above all by the density of prominent material. This density can be achieved horizontally or vertically as follows:

- Horizontally, a group of subject statements in which the entries follow each other without delay will create more urgency than scattered statements interrupted by episodes. Even more so, both the rare but very effective "repeated entry" and the subject "augmentation" invite special attention since the statement is doubled in length.
- Vertically, a subject entry which comes accompanied by characteristic counter-subjects in each of the remaining voices creates more intensity than one which has only one serious contestant, or one which is surrounded merely by neutral lines. Particularly effective in the build up of tension are strettos and parallel entries; they create an effect of breathlessness or of forces joined in battle respectively.

b) When discussing how the sections of your fugue relate to each other in terms of tension, what are the relevant factors?

The way in which the sections within the whole composition relate to each other depends above all on the factors mentioned above the density of prominent material and secondly on the harmonic progression. Note, however, that the minor mode does not always soften the character of the material, just as the major mode does not necessarily convert an introverted atmosphere into one more extroverted.

WTC I/1 in C major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/1.1.1 The prelude-type

The first prelude in the Well-Tempered Clavier consists of nothing but broken chords. It must therefore be described as determined purely by processes of increasing and decreasing harmonic tension.

Effects – such as creating an echo in every repeated chord, or emphasizing the chord peak-notes and thus drawing attention to an imaginary melodic line – are obviously not the intention of the composer. Such attempts would misguide the listener rather than communicating to him the true meaning of the piece.

I/1.1.2 The design of the prelude

The sections of this prelude are clearly discernible by their simple cadential patterns. The first cadential closure is in bar 4, the steps leading to it being:

bar 1 = I, bar 2 = ii², bar 3 = V⁶₅, bar 4 = I.

As all structural breaks in this prelude are harmonically defined, this cadence must be interpreted as the end of a first (short) section.

The next harmonic progression concludes in bar 11. As the F# accidentals from bar 6 onward clearly demonstrate, Bach modulates to G major. The final steps of this cadence are:

bar 9 = ii⁷ of G, bar 10 = V⁷ of G, bar 11 = I of G.

For the reasons mentioned above, this harmonic close must also be regarded as a structural caesura. There are altogether four structural sections in this prelude:

- I bars 1-4 full cadence in C major
- II bars 5-11 modulation to G major
- III bars 12-19 modulation back to C major
- IV bars 20-35 complex, extended cadence in C major

While no portion ever recurs – either note for note or in variation – there is a transposed passage which, in fact, forms part of an analogy. Bars 15-19 are an exact transposition of bars 7-11: see the progression I⁶, IV², ii⁷, V⁷, I in bars 7 - 11 in G major, in bars 15-19 in C major. In connection with this transposition we also find:

Bars 7-8 are composed as a sequence of bars 5/6, and bars 14-15 are conceived as a sequence of bars 12/13.

In both cases, a two-bar model appears repeated one diatonic step lower. The only structural difference between these two patterns lies in the different amount of overlapping with the transposed portion. We can thus confirm the following analogy:

section II (bars 5-11) corresponds with section III (bars 12-19):
 both consist of a 2-bar model + descending sequence
 + analogous cadence-ending.

I/1.1.3 Practical considerations for performers

All aspects of performance in this prelude reveal themselves by means of this very basic analysis. As the composition contains no melodic elements whatsoever, there are no open questions about articulation or single-voice phrasing; all notes should certainly be sustained for the exact length of their written value. Phrasing between structural sections should be made transparent by varying the degrees of tension. A performer who works on a modern piano will achieve this through dynamic means. (The phrase-ending *ritardando*, so important on early keyboard instruments, can be restricted to a minimum on instruments capable of expressing phrasing through dynamic shading.)

The dynamic development between consecutive notes poses the biggest problem. What should be heard in a piece determined by harmonic processes is the relationship between chords – not between sixteenth-notes; the notes forming each chord must therefore sound as equal as is humanly possible, and greatest care should be taken to avoid any emphasis on the upper pitches.

A very important factor for any sensible performance of the C major Prelude is tempo. This should again be chosen with a view to best convey the harmonic processes. Too fast a rendition easily diverts the listener's attention towards an apparent display of virtuosity; too slow a tempo makes it difficult to hear more than just a chord at a time.

The only ornament in this prelude derives from an early copy. It appears in bar 34 and serves to emphasize the final cadence. It is a simple mordent which, since it is approached stepwise, must be played from the main note: E-F-E.

I/1.1.4 What is happening in this prelude?

As was stated above, the prelude in C major derives its expression from its harmonic progressions. In two instances, however, these are overshadowed by secondary processes. One case is given in the sequences

mentioned above, the other is a protracted pedal note. The development of tension as represented by these features is as follows:

- In the course of the first simple cadence (bars 1-4), it is the subdominant function which commands the greatest tension; this tension will subsequently find a stepwise resolution through the dominant function towards the tonic. The dynamic equivalent to this process might be described as

$$p - mp^+ - mp^- - p$$

- The following section (bars 5-11) brings a modulation to G major which is reached in bar 11. As the beginning of this section contains a sequence, the pattern of mere harmonic relationships between consecutive chords is temporarily suspended.

Within the first two bars, the harmonic relationship between the inverted A minor chord (bar 5) and the inverted D⁷ chord (bar 6) constitutes a rather strong decrease in tension. (This can easily be experienced when listening to the two harmonies, preferably when played as block chords). In keeping with the laws valid for sequences, the same relationship must apply to the following two chords – on a generally softer level because the sequence is descending. From the last chord of the sequential pattern onwards there follows a gradual release of tension. The dynamic equivalent to the process in this portion of the prelude could be expressed in these terms:

$$mf^+ - mp^+ - mf^- - mp - mp^- - p^+ - p$$

- A very similar development occurs in the third section of this prelude. Like the preceding one, it starts with a sequence, and again, the relationships between the first and the second chords in the model constitutes a resolution of tension. This resolution is even stronger here than in the earlier sequence as bars 12 and 14 each consist of a diminished seventh chord resolving onto an inversion of the supertonic (bar 13) and of the tonic itself (bar 15). At the end of this sequence the harmonic tension therefore appears already abated to something very close to the softest shade used in this piece.

The following four bars, being a transposition of bars 8-11, should portray a dynamic outline exactly like the one in the corresponding bars before, so as to help the listener to grasp this analogy. The concept of the entire section (bars 12-19) is therefore approximately:

$$poco f - mp^+ - mf^+ - mp^- - mp - mp^- - p^+ - p$$

- The fourth section of this prelude is almost as long as the first three sections together. The emergence of the dominant pedal in bar 24 serves to divide it into two sub-sections. The first of these sub-sections, from bar 20 to the downbeat of bar 24, ends in an imperfect cadence. The harmonic development sets out from the C major seventh chord (bar 20) but then leads away from the tonic in bold steps. The harmonic process includes two diminished seventh chords; in addition, there is a hint of an independent bass line which enhances the sense of urgency. Upon closer inspection, the end of this bass line reveals a circular movement preparing the beginning of the pedal note by sounding both the natural leading-note (from the semitone below) and the artificial one (from the semitone above) to the dominant keynote G.

[It is interesting and, at the same time, somewhat strange to note that Carl Czerny, while editing the first volume of Bach's Well-Tempered Clavier, added an extra bar here. His reasons were as follows: firstly, it seemed highly improbable, for a composer as conscious of subtle numeric balancing as Bach was, to have written a piece consisting of the uneven number of 35 bars; secondly, a bass line such as the one between bars 22 and 23 seemed melodically incorrect for it contained the interval of the diminished third, which would therefore require a linking note to create a chromatic line. Czerny therefore inserted a tonic six-four chord to correct Bach's "error", and by doing so destroyed the forceful tension built up here with so much ingenuity!]

The audacity of these harmonic steps can best be conveyed in the following dynamic plan:

$$mp^- - mp^+ - mf^+ - poco f^+$$

After this forceful increase in tension, the next sub-section commences with a sudden hush which

should hardly exceed *piano*. It is from here that the pedal note takes effect. Its typical gradual and smooth dynamic growth continues not only while the bass remains on G but on to the end of the piece, thus concluding the prelude on something like a triumphant *forte* chord. The dynamic balance in this section could therefore be represented more or less as follows:

$p^+ - mp^- - mp - mp^+ - mf^- - mf - mf^+ - poco f^- - poco f - poco f^+ - f^- - f$

The following graph attempts to show the processes determining this prelude (ex. 2).

The image shows a musical score for a prelude, likely from a piano. The score is written in treble and bass clefs. The first system has two measures, with the second measure containing a sequence of notes. The second system has two measures. Below the score, there is a dynamic graph consisting of several triangles and lines that represent the dynamic changes over time. The graph shows a series of peaks and troughs, corresponding to the dynamic markings in the text above. The first system has two peaks, and the second system has one large peak. The graph is drawn with solid lines and dashed lines, indicating the dynamic levels at different points in the music.

WTC I/1 in C major – Fugue

I/1.2.1 The subject

The subject of this fugue is one and a half bars long. It starts unaccented, after what can be called an "implied breath" on beat 1. This creates the impression of a very long upbeat which is smooth and not very strong in its tendency towards the following downbeat.

In its original statement the subject ends on the E which falls on the third beat of bar 2. That this has to be regarded as the final note of the subject becomes obvious when comparing the first entry with later ones: they either end after this E or its equivalent in another key (see e.g. bars 9/10, 10-12), or they continue in a different way each time. This closure is further supported by the harmonic background of the subject: the dominant is reached at the beginning of bar 1 (on either D or G; this varies throughout the fugue) and resolves onto the keynote chord on this E. The fact that the first statement of the subject is written with an extension, made up of two sequences of the last four notes, does not change its basic confines but just serves to grant a smooth transition from this first entry to the next.

Within the pitch pattern of the subject, ten of the thirteen intervals are seconds; predominant stepwise motion also holds true for the fugue as a whole. The few larger intervals, however, slightly modify the picture because of their particular nature. They do not, as might normally be expected in the context of overall stepwise motion, represent "high-tension" intervals – intervals whose expressive gesture is

regarded as blending particularly well with the character expressed by stepwise motion. Instead, the three leaps interrupting the smooth line in this subject are two perfect fourths and a perfect fifth, i.e. simple leaps without particular emotional content.

The rhythmic structure of the subject, on the other hand, is not simple. It contains four different note values: eighth-notes, dotted eighth-notes (or, in bar 2, the same value written with tie prolongation), sixteenth-notes and thirty-second-notes. Syncopations are a regular feature throughout the fugue – in fact there are only six bars (bars 1, 7, 14, 19 and 26/27) which do not display at least one.

The question of phrasing in the subject of the C major fugue allows for two controversial answers, both of which can be supported with evidence from within the composition itself. The choice between them is thus one of individual conviction – or interpretation.

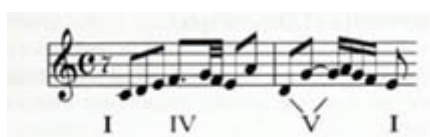
- (a) The overall pitch pattern of the subject, which shows ascending steps at the beginning, descending steps at the end and leaps in the middle, supports the option that this subject is conceived as one indivisible phrase.

The absence of obvious melodic sequences confirms this view.

- (b) For an interpreter who feels that the rhythm plays a crucial role in this subject, there is a pattern which is repeated in slight variation – a sequence-like process which reveals the subject as made up of two halves. The first half consists of four eighth-notes which move upwards in stepwise motion, followed, after a rhythmical prolongation, by shorter note values leading downwards. The second segment starts similarly with four eighth-notes which, this time, move in jumps up and down but are also followed, after the same rhythmical prolongation, by a group of shorter note values leading downwards. The phrased subject would thus be defined by the analogous rhythmic structure of the two halves.

This option finds support in the harmonic progression which allows – although Bach does not always choose to compose thus – for two complete cadences which coincide exactly with the two rhythmically determined halves. (See the harmonic progressions underlying the subject statements in bars 2-4 and bars 5-7.)

The harmonic background is roughly as seen in ex. 3 below. As far as the subtler harmonic progressions from one eighth-note to the next are concerned, there are so many slight variations throughout this fugue that it is not possible to state one unequivocal solution (ex. 3):



Ludwig Czaczkes in his analytical book on Bach's WTC made his own choice by reconstructing what he regarded as the harmonic basis (ex. 4):



When deciding on the subtle dynamic processes in this subject, the aspects to be taken into particular consideration are the two rhythmic phenomena and their respective harmonic functions:

- *rhythmically stronger* is undoubtedly the syncopation which falls, however, on the *harmonically*

rather weak tonic-to-dominant movement;

- *rhythmically weaker* is the dotted eighth-note; yet this is supported by the *stronger harmony*, the subdominant.

The decision on which of the two peaks is predominant would therefore rest on whether the interpreter feels the harmonic process more strongly than the rhythmical one, or vice versa.

If a performer chooses option (a) for the phrase structure and reads the subject as one unit which allows for no further subdivision, only one climax has to be determined which will come smoothly prepared by an increase in tension and be followed by a relaxation. If, however, a performer perceives the subject as made up of two halves (b), a decision has to be made as to which of them is stronger and, consequently, which of the two shorter tension build-ups is more powerful. In the latter case the subject would contain two releases, with the E at the end of the first subphrase as a transitory solution, i.e. almost but not quite as soft as the final E.

I/1.2.2 The statements of the subject

The design of the fugue in C major has often been called programmatic: as the first of a collection of twenty-four fugues it contains twenty-four statements of its subject. These appear as follows:

- | | | | |
|----------------|---|----------------|---|
| 1. bars 1- 2 | A | 13. bars 15-16 | B |
| 2. bars 2- 4 | S | 14. bars 15-16 | S |
| 3. bars 4- 5 | T | 15. bars 16-17 | S |
| 4. bars 5- 7 | B | 16. bars 16-18 | A |
| 5. bars 7- 8 | S | 17. bars 17-18 | T |
| 6. bars 7- 8 | T | 18. bars 17-18 | B |
| 7. bars 9-10 | A | 19. bars 19-20 | T |
| 8. bars 10-12 | B | 20. bars 19-20 | A |
| 9. bars 10-12 | A | 21. bars 20-22 | S |
| 10. bars 12-13 | T | 22. bars 21-23 | T |
| 11. bars 14-15 | A | 23. bars 24-25 | T |
| 12. bars 14-15 | T | 24. bars 24-26 | A |

(ex. 5)



Among these subject statements, three are varied:

- The bass entry in bar 17 begins with a rhythmically doubled first note, annihilating the subject's essential up-beat character.
- The tenor statement in bar 14/15 shows a variation at the end, after the syncopation.
- The soprano entry in bar 15/16 states only the first half of the subject before giving way to a new beginning which now unfolds as a complete statement in this voice.

While parallels of the subject are not used in this fugue, stretto is a very prominent feature. After the first four entrances, i.e. as soon as each of the voices participating in this fugue has entered, subject statements overlap more often than not. The nine stretto combinations which Bach uses are listed below. (The normal-sized capital distinguishes the respective group leader, i.e. the voice which counts as building the "round". This leader within each stretto can be detected by looking for any of the following three criteria: which version is more faithful to the original, which version serves to establish a new key, or simply C in the absence of the two other distinctions C which one comes first.)

strettos beginning in bar voices

7	10		S ^T , B ^A	
14	15	16	17	A ^T , B ^S , S ^A , T ^B
19	20/21		T ^A , S ^T	
24			T ^A	

It is interesting to observe that the first six stretto combinations give a complete account of the six alliances possible between four voices: the soprano is paired with the alto (entries 15/16), with the tenor (5/6) and with the bass (13/14); the alto is further paired with the tenor (11/12) and with the bass (8/9); finally, tenor and bass are also joined (17/18).

I/1.2.3 The counter-subject

The C major fugue does not contain any counter-subject. In view of the immense density of material created by the twenty-four subject entries, this will hardly come as a surprise. In the absence of counter-subjects, this fugue claims our full attention by the use of its strettos. A sketch of the phrase structure and the dynamic design should therefore depict the pattern created in such group of statements.

The entries in bars 14-16 are rendered below in two alternative interpretations:

ex. 6 shows what happens if the subject is seen as an indivisible phrase climaxing on the syncopation;



ex. 7 interprets the subject as consisting of two subphrases, with the climax of the first subphrase assumed as stronger than that of the second.



I/1.2.4 The episodes

The density of the material in this fugue is only twice interrupted for short stretches which, as the subject is absent, qualify as episodes:

- E 1 bar 13 (last three eighth-notes) to bar 14 (first eighth-note),
- E 2 bar 23 (after first sixteenth-note) to bar 24 (first eighth-note).

In addition, the fugue ends with two subject-free bars – the last statement concludes on the first sixteenth-note of bar 26 (E3 bars 26-27).

None of these subject-free bars is even remotely related to the subject; neither are there any episode motives. The two subject-free passages within the fugue are both clearly identifiable as cadential closes. The second half of bar 13 features typical closing-formulas in all three sounding voices C so as to leave no doubt at all that something comes to an end here. In bars 23/24, both soprano and bass again present those typical patterns while the inner voices join in neutral, quasi-chordal style.

Surprisingly, the ending of the composition avoids all these established formulas. Instead Bach, having two bars earlier already started a tonic pedal (and thus making it quite clear that the piece is drawing to its end), allows the other three voices to continue freely – with harmonic and melodic developments independent of both material bounds and pattern restrictions. One after the other the voices then come to a halt: the tenor withdraws first, then the alto becomes less eloquent while the soprano is the last to expound by running up to the high C.

The final note in the soprano, the high C, deserves a mention. This note has not been previously reached in this composition. As we all know, it marks the upper limit of the keyboard instruments in Bach's time

– just as the final low C of the prelude marks the confines at the other extreme. These two tiny details are another hint that Bach, in writing his twenty-four preludes and fugues, aimed to demonstrate all that was possible on this instrument.

The role which each of the three subject-free stretches plays in the development of this fugue will have become apparent from what has been said above. The two inner episodes clearly serve as nothing but cadential closes and therefore have a relaxing tendency. The two final bars, on the contrary, succeed in creating something – however small – of their own, thus contributing to a build-up towards a final climax.

I/1.2.5 Character, tempo, articulation, ornament realization

Both the overall stepwise motion and the rhythmic structure with its four different note values and frequent syncopations, reveal this composition's basic character as *rather calm*. Within the overall frame of this character, the chain of three leaps in the subject brings forward an element of contrast which should be felt – and played – as such.

The most appropriate tempo is a calmly flowing one – flowing enough so that the quarter-notes, rather than the eighth-notes, are felt as a pulse; calm enough so that the sixteenth-notes still sound serene. Regarding the relative tempo of the fugue to its prelude, retaining the beat would lead to a somewhat dull results since both the time signature and the sixteenth-note motion are the same in both pieces. Therefore, a proportion of 3:2 or 2:3 seems better suited. [Approximate metronome setting: prelude beat = 80 or 90, fugue beat = 60.]

The articulation in the fugue is mainly legato. One conspicuous (and regular) exception occurs with the three leaps in the subject which, as consecutive jumps, must be taken detached. Similarly, leaps and cadential-bass patterns in non-subject portions of any voice are also exempt from legato articulation.

The fugue contains three ornaments, namely in bars 13, 18 and 19.

- The ornament in bar 18 is indicated in the Urtext as clearly deriving from Bach's own manuscript. It is a mordent which commences on the upper auxiliary note and touches down twice on the main note, thus resulting in four regular notes A-G-A-G.
- The two other ornaments both serve to decorate typical soprano closing-formulas. As the Urtext printing in brackets indicates they do not appear in the autograph but were added in several early copies. Ornamenting this characteristic dotted note in a cadential formula was common practice, and performers should include some kind of embellishment in any case. The simple mordent (as the symbol in brackets in bar 19 suggests) is a more likely solution in both cases than the compound ornament (as recommended by the small-print version in bar 13) because this soprano formula features an anticipation of the final note (see A-A bars 13/14 and D-D bar 19) which normally replaces C and thus excludes C the suffix completion of the trill.

I/1.2.6 The design of the fugue

The design of the fugue appears clear in consideration of the following:

- (a) Bach orders the voices presenting the subject, and the particular sequence of single and stretto statements, in a very consistent pattern:

- entries in all four voices, no stretto; (bars 1-7);

- entries in all four voices, two with stretto partners; (bars 7-14)
- entries in all four voices, all with stretto partners; (bars 14-19)
- two stretto pairs including three of the voices, followed by one repeated (“redundant”) stretto pair in the coda. (bars 19-27)

Within these four groups, the coupling of voices in stretto also seems to follow a plan:

- the second round groups the “higher” and the “lower” voices:
S + T, A + B
- the third round groups the adjacent and the outer voices:
S + A, A + T, T + B, B + S
- the fourth round leaves out the bass completely but uses the next lowest voice, the tenor, in all three combinations.

(b) The density of voices displays a fourfold build-up of the ensemble:

- The first four entries produce the regular assembling of all voices involved. (See bars 1-7: from one to four voices.)
- This full ensemble is consequently reduced to three voices in the first stretto statement. Both the following alto entry and the next stretto sound against one resting voice, so that the next full ensemble is again reached at the fourth statement of this group. (See bars 7-13, from three to four voices).
- After the cadential close in A minor, the ensemble is momentarily reduced to only two voices; this marks the return to C major as a genuine new beginning. The following three strettos then sound in full ensemble. (See bars 14-19, two to four voices).
- Finally, the stretto in bars 19/20 which overlaps with the closing-formula sounds again without the soprano. The full ensemble is restored with the ensuing statement. (See bars 19-27, from three to four voices).

(c) There are several interesting analogies within the four sections of this fugue:

- Both the first and the second sections contain a harmonic progression which starts from the tonic and is followed by the unusual repeated dominant.

bars 1-5	bars 7-12
A (tonic)	S (+ T) (tonic)
S (dominant)	A (dominant)
T (dominant)	B (+ A) (dominant)

- The two initial entries of the first section relate to their counterparts in the second section (counting again the “group leader” of the stretto as the relevant voice) in inversion C as do the

third and fourth entries of these two rounds.

bars 1-7	bars 7-13
A, S – T, B	S, A - B, T

- The first stretto of the third section (bars 14/15) reveals a startling analogy with the first stretto of the second section (bars 7/8): both the pitch level and the distance between the second entry and its leader (two eighth-notes) is identical. The second stretto in the third round (bars 15/16) appears as an intensified variation of the corresponding second entry in the second round (bars 9/10), again with the same pitch level.

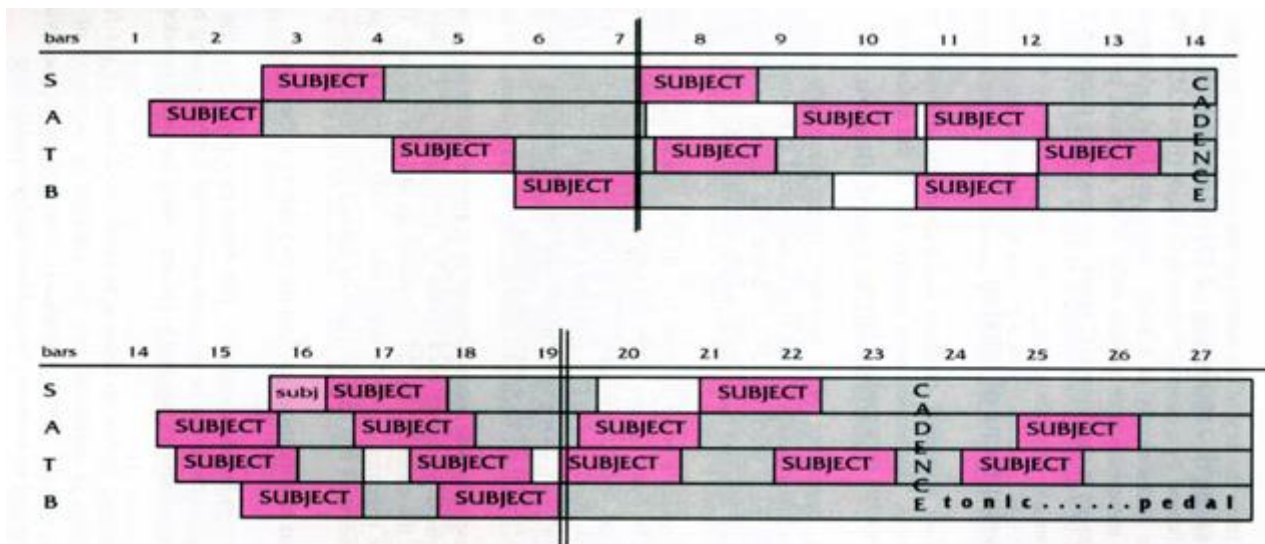
bars 7-10m	bars 14-16m
stretto (S+T, on C+G)	stretto (T+A, on C+G)
distance 2 eighth-notes	distance 2 eighth-notes
single entry (A) on G	stretto (B + S) leader on G

- Finally, the fourth stretto of the third section (bars 17-19) brings a modulation into a new key – as did the fourth entry of the second section (bars 12/13); in addition, both the group leader here and the single entry there (second section fourth entry) are placed on the dominant of the key of their destination.

bars 12/13	bars 17-19
fourth entry of section II	fourth stretto of section III
on V of A minor	leader on V of D minor

The harmonic progression within this fugue leads first from C major to its relative A minor, confirmed by the cadential close of bars 13/14. Following this there is a new start in C major, diverting after four entry pairs to D minor. This key is again confirmed by a closing-formula (bar 19), although this time pursued by the two outer voices only while the two inner parts continue with stretto statements of the subject.

As can be seen both from the key of the stretto group-leaders and from the prolonged bass notes (see bars 19/20: D, 21/22: G and 24-27: C), the fugue then reverts to the original tonality, confirmed by a cadential close in C major (bars 23/24). The last four bars will thus appear harmonically as a coda – since the final cadence has already taken place and the tonic bass note sounds as an extended pedal note. For a sketch showing the design of the fugue in C major, see the graph (ex. 8).



I/1.2.7 The development of tension

The first section shows a gradual, constant build-up of the ensemble, without any interruption by episodes. The tension rises steadily but, in the absence of additional intensifying factors, reaches only medium level.

The second section, consisting of a twofold stretto-plus-single-entry sequence, indicates a slight twofold relaxation. The first is supported at its end by the closing-formula (see soprano bars 9/10: G---F#-G), while the second is enhanced by the modulation to the minor key and the ensuing resolution within the cadential close.

The third section witnesses a build-up from two to four voices in the densest imaginable stretto setting. The dynamic processes are similar to those in the first section but considerably intensified, and tension appears at its height at the end of this round; here the modulation with its final turn to D major (the Picardy-third version of the expected D minor), with the elaborate cadential formulas and the "impatiently" overlapping first stretto of the ensuing section create a supreme climax.

The fourth section resembles the second insofar as it appears made up of two halves. After two entries which modulate back from D through G to C, thus initiating harmonic relaxation, the cadential bar 23 represents an obvious caesura. The following coda replaces the expected stretto + single entry with a stretto over an extended pedal note, but complements this with two bars of subject-free development.

There are thus obvious relationships between the two halves of the fugue.

- The first section builds up tension. This build-up extends into the beginning of the second section but is then not developed further, owing both to the divided layout of this section and to the regressing harmonic development.
- The third section builds up tension towards the climax of the fugue. This elevated tension is continued into the overlapping beginning of the fourth section, after which it subsides gradually, both because of the divided layout of this section and its softening modulation and cadential close.

WTC I/2 in C minor – Prelude

from Siglind Bruhn

*J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation*

I/2.1.1 The prelude-type

Most remarkable in this prelude at first sight are the very striking changes in tempo, texture and material. These unusual features are a result of Bach's decision to "upgrade" a smaller prelude in C minor which he had written for his son Wilhelm Friedemann. The contrasting sections found in the Well-Tempered Clavier version represent those insertions which the composer added later. (A detailed comparison of the original version and with the C major prelude – which is identical in the Notebook for Wilhelm Friedemann and the WTC – follows at the end of this chapter.)

In its attitude and expressive aims, the prelude in C minor is very similar to the preceding prelude. Any attempt to render this piece as a display of virtuosity would certainly be counterproductive to the musical idea; equally, an emphasis on the horizontal process in one or both of the voices would fail to convey the essence of this composition. The main body of the C minor prelude represents the category of pieces determined primarily by harmonic processes; i.e. just as in the C major prelude, each bar stands for a harmonic step whose relationship to the harmonic surroundings determines the "message" and the dynamic representation.

I/2.1.2 The overall design of the prelude

The first harmonic progression ends in bar 4, the steps until there being:

bar 1 = i, bar 2 = iv⁶₄, bar 3 = vii + C pedal, bar 4 = i.

Since structural breaks in this prelude are defined solely by harmonic processes, this cadential close must be regarded as the indicator for the end of a first (short) section. The next harmonic progression – and with it the next structural section – ends in bar 14 where Bach concludes a modulation to the relative key of Eb major. The final steps of the cadence in this new key are (in E^b):

bar 10 = V², bar 11 = I⁶₄, bar 12 = IV⁶, bar 13 = V⁶₅, bar 14 = I.

There are 4 such structural sections in this prelude:

- | | | |
|-----|------------|--------------------------------------|
| I | bars 1-4 | (full cadence in C minor) |
| II | bars 5-14 | (modulation to E ^b major) |
| III | bars 15-18 | (modulation back to C minor) |
| IV | bars 18-38 | (complex, extended cadence in C) |

I/2.1.3 Practical considerations for performers

As in the preceding prelude, this harmonically-determined piece does not allow for any melodic articulation or single-voice phrasing since it is not the melodic element which counts here: all notes are to be sustained for the exact length of their written value. Phrasing between the structural sections, i.e. between one closed harmonic progression and the next, will be conveyed through the tension curves (for performers on the modern piano this is attained through dynamic modifications which correspond with the harmonic development).

The dynamic relationship between consecutive notes might pose a problem for many performers. The result one should be aiming for is to transmit a chord progression behind the single sixteenth-notes; thus the notes forming each chord must sound as equal as possible, and greatest care has to be taken to avoid emphasis of the upper pitches.

Choosing the tempo is a very complex matter because of the indications Bach gave for the portions which he added to his son's smaller piece. For the harmonically determined part alone, the same would hold true as for the C major prelude: the tempo should be chosen in order to best convey the idea of harmonic processes. Too fast a performance easily diverts the listener's attention by what appears as a display of virtuosity, and too slow a tempo makes it impossible to hear more than just one chord at a time.

Next, there is the question of a meaningful balance of tempi between the four sections. One reasonable assumption (and the choice of many artists) is to interpret the final "*Allegro*" as a return to the original tempo, thus giving the prelude a rounded form. For the two tempi in between, the following proportion works well:

Presto = twice as fast as the main section;
translation: 2 bars in bars 1-27 = 1 bar in bars 28-33

Adagio = twice as slow as the main section;
translation: 1 bar in bars 28-33 = 1 eighth-note in bar 34

Allegro = back to the original tempo
translation: 1 eighth-note in bar 34 = 1 quarter-note in bars 35-38.

This option results in a well-balanced overall structure within that portion of the prelude which abandons the initial two-part texture. What we will hear are

- six bars, on the dominant pedal and between pedals:

bars 25-27 = 3 bars in original tempo

- + bars 28-33 in *Presto* = 3 bars in original tempo;
- six bars, on the (extent or implied) tonic pedal:
 - bar 34 in *Adagio* = 2 bars in original tempo
- + bars 35-38 in *Allegro* = 4 bars in original tempo.

Another option assumes a 2:3 proportion between the outer sections on the one hand and the *Presto–Adagio* on the other hand. While this option does not maintain the balanced structure mentioned above, it allows a simpler transition into the fugue. (Approximate metronome settings: (a) beginning beat = 72, *Presto* = 144, *Adagio* = 36, *Allegro* = 72; (b) beginning beat = 88, *Presto* = 132, *Adagio* = 66, *Allegro* = 88. The tempo in the fugue would be chosen either in complex proportion after a simple proportion within the prelude: (a) fugue beats = 96, or in simple proportion after a complex proportion within the prelude: (b) fugue beats = 88.)

The ornaments in this prelude include two inverted mordents: one (obviously contained in the autograph) in the middle of the *Adagio* bar; the other (deriving from an early copy) on the final note. The first is played with E#, following the harmony of this bar, while the last is a whole-step ornament.

In addition to these embellishments, the two arpeggios in the *Adagio* are worth considering carefully. Is the upper note primarily part of the (vertical) arpeggio, or is it first of all part of a (horizontal) melodic line?

If one plays the note as the score seems to indicate, without any sophisticated interpretation, then it would sound as the last note in a broken chord. According to the requirements of Baroque style, this broken chord has to start on the beat, which would cause the uppermost note to fall after the beat. The question is therefore whether a melodic continuity would be destroyed by such a rendition.

Particularly relevant in the second arpeggio (see bar 34m), the rendition with F as an (after-beat) last note would interrupt the melodic flow quite awkwardly. In this case it is therefore certainly preferable to interpret the melodic note as independent of the chord, i.e. to play the F together with the bass note C on the beat and then arpeggiate the remaining chord notes.

Going back half a bar to the beginning of the *Adagio*, the upper note E can probably be perceived in two ways, either as a chord note or as a melodic component. A realization similar to that of the second arpeggio is therefore possible (and perhaps beneficial to the symmetry in this bar) but not necessary for its understanding. (The practice described above was quite well-known in Baroque times: performers were expected to understand, from their immediate grasp of the musical “sense”, whether or not an arpeggio included the upper note, and then play accordingly. The fact that there was obviously no need to specify this in writing may indicate that musicians usually did understand – or, perhaps just as often, that they were students of the composer and thus could be taught during the lesson.)

I/2.1.4 What is happening in this prelude?

The harmonic patterns that determine the “message” of this prelude are twice eclipsed by secondary processes: in one instance by sequences (see the second section); in the other by a bass pedal. The development of tension in the entire prelude as created jointly by all these processes can be described as follows:

In the course of the first simple cadence, it is the subdominant which commands the greatest tension; this tension subsequently finds a stepwise resolution through the dominant towards the tonic. The dynamic equivalent to this process is approximately

p - mp⁺ - mp⁻ - p

The following section begins with a string of sequences. The first question is therefore: what kind of relationship exists between the two bars of the model (bars 5 and 6). If, e.g., the step from the A^b major chord in bar 5 towards the D⁷ chord in bar 6 is taken as active, this model sets the pattern which the next two-bar combinations must follow – on a generally softer level because the sequences are descending. The section is rounded off with a cadential close in the relative major key E^b major. The dynamic equivalent could be expressed as

mf - - mf⁺ - mp⁺ - mf - mp - mf - - mp⁻ - mp - mp - p⁺

After this very extensive second section, the third section is surprisingly short. No new string of sequences delays the return to the home key; instead, the harmonic progression moves directly into the steps of the simple cadence in the initial C minor key (see bars 15 to 18). The dynamic development of these four bars should therefore appear more like that of an appendix to the preceding section than as an independent section:

mp - mp⁻ - p⁺ - p

The fourth section of the prelude needs a much more detailed description. In the Well-Tempered Clavier version, it commences in the middle of bar 18, thus making this bar the only one of those built on the same surface pattern which contains a change of harmony. (In this matter it seems difficult to decide which of the two versions reflects the composer's true intention. The text of the initial Little Prelude shows bar 18 with two equal halves and a repeated C bass, while the version preferred in today's Urtext editions of the Well-Tempered Clavier quotes a bass note B^b on the third beat of this bar. The latter version certainly sounds harmonically more convincing, but it does so at the expense of continuity – this bar diverges significantly from the pattern observed throughout the remainder of this part of the piece.) The bass-note transition from C to B^b converts the tonic chord into an inverted V⁷/iv (dominant-seventh of the subdominant) and thus triggers a new, active harmonic motion. This then leads very soon (see bar 21) to a dominant pedal.

The gradual tension increase inherent in any prolonged pedal note is enhanced here not only by the rising pitches of the chords (see bars 21-24 and 25-28), but also by the sudden change, in the latter portion, to a more virtuoso, toccata-style texture. This new surface pattern prepares the intriguing inner expansion with which Bach enriched his original version of this prelude when including it in the Well-Tempered Clavier.

The ensuing passages constitute not only a change in tempo but also a surprise in their surface patterns. While the harmonic basis remains for a while on the dominant pedal, the one-track, broken-chord texture gives way to a virtuoso two-bar figure in Presto (see bars 28-30d: U). This figure is imitated in stretto (after one bar and thus overlapping for exactly one bar) by the lower voice. Both the model and its imitation are then sequenced, thus creating a suddenly dense polyphonic structure. The leading upper voice adds a second, related but shorter figure (see bars 32-33d) which is also imitated by the lower voice in the following bar. Within these six bars with their pattern of two-part imitation, the harmonic change from the dominant to the tonic pedal note is carried out in such a subtle way (somewhere between bars 30 and 31, but with an absence of the actual bass note) that the urge to come to a close seems as if suspended.

When the tonic pedal finally appears (see bar 34d), it marks the beginning of yet another section, headed *Adagio* and featuring a recitative-style upper voice over scarce, arpeggiated chords. These surface features – the switches in tempo, texture and character – are so intriguing that the tonic pedal again stands little chance of claiming the necessary attention to announce the end of the piece. The third change finally returns to the texture which had determined the last bars before this adventurous expansion (compare bars 35-38 with bars 25-27). Thus the bracket is finally closed.

Regarding the dynamic design in this final and largest section of the C minor prelude, the above observations permit the following conclusions:

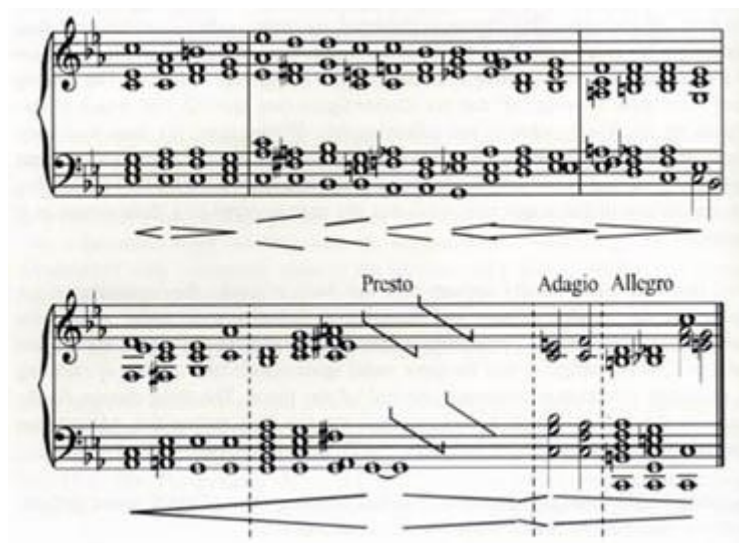
- The obvious point for a climax is the downbeat of bar 28; here, the last and longest ringing of the dominant pedal note coincides with the beginning of the *Presto* and the change to the denser polyphonic texture. This climax has been prepared in the continuous buildup which began at the end of the last home-key cadence in bar 18.
- After the climax, the overall tension diminishes in a twofold downward sweep. A (much smaller) second peak falls on the downbeat of bar 34 – here, the first appearance of the tonic pedal note coincides with the beginning of the *Adagio* and the first arpeggiated chord.
- The overall decline of tension is then continued to the end of the piece.

This overall development of tension can be expressed in the following dynamic terms. (“*pf*” here = *poco f*. The spacing of the bars – see: 28, 30, 32, 34a, 34b – depicts the actual time of the musical process in what might be the most desirable tempi.)

bar 19 20 21 22 23 24 25 26 27 28 30 32 34a 34b 35 36 37 38

mp⁻ mp⁺ mf⁻ mf mf⁺ pf pf pf⁺ f⁻ f pf mf pf mf⁺ mf⁻ mp⁺ mp⁻ p

The graph sums up the development of tension throughout the entire prelude (ex. 14).



Prelude in C minor – Postscript:

Comparison between

- the original version of the C minor prelude (as given in the *Notebook for Wilhelm Friedemann*) and
- the C major prelude (which is identical in the *Notebook for Wilhelm Friedemann* and in the *WTC*)

Although the first two preludes in the Well-Tempered Clavier share a common origin from the *Notebook for Wilhelm Friedemann*, their adaptation is significantly different. While the C major prelude remained unchanged, the minor-mode piece underwent considerable alteration.

In the initial version of the C minor prelude, the *Presto*, *Adagio* and *Allegro* portions were not yet in evidence: from the dominant-seventh chord in bar 25, Bach went directly into two closing bars over a tonic pedal. A comparison between this shorter version of the C minor prelude and the prelude in C major reveals striking parallels:

- In the C minor prelude, each of the first twenty-four bars – with only one exception which was already referred to – consists of a half-bar pattern which is repeated in the second half of the bar without any alteration or variation (just as in the C major prelude).
- The first four bars form a simple cadence here, harmonically progressing from the tonic to the subdominant, dominant-seventh and tonic (just as in the C major prelude), while the bass retains the tonic keynote (which it did not in the C major prelude).
- The second section of the C minor prelude combines elements of both the second and third sections of the C major prelude: descending sequence + modulation (compare with prelude in C major, bars 5-11), target key approached through the sixth chord which is then followed by a complete cadence (see the process of sequences / inverted tonic / perfect cadence in bars 12-19 of the C major prelude).
- Both preludes feature a prolonged dominant pedal note in the fourth (final) section. The *Wilhelm Friedemann* version of the C minor prelude commences with four bars which continue the two-part pattern characteristic of this piece. After these, the last three bars bring a gradual but significant change: first into a one-track texture of a whole bar's length (see *Little Prelude*, bar 25), then into a mock three-part structure comparable to that which characterizes the C major prelude, and finally into a one-track broken-chord descent.

The main differences between the pieces (still comparing the *Wilhelm Friedemann* versions) manifest themselves towards the end:

- While the C major prelude in its fourth section features four bars of a very intense harmonic activity before it reaches the dominant pedal, the equivalent development in the C minor prelude is confined to two bars only and is therefore much weaker in effect.
- In the C major prelude this development reaches a dynamic intensity which drops suddenly to give way to a new dynamic start on the dominant pedal. The analogous development in bars 19/20 of the small prelude in C minor reaches its similar dominant pedal section by means of a gradual buildup.

WTC I/2 in C minor – Fugue

I/2.2.1 The subject

Commencing on the second eighth-note of a 4/4 bar, the subject is two bars long. The initial notes are heard as an upbeat – not so much to the downbeat of the following bar but more likely to the middle beat of bar 1.

I/2.2.2 The statements of the subject

There are altogether eight subject entries in this fugue:

- | | | | | | | | |
|-------------|---|---------------|---|---------------|---|---------------|---|
| 1. bars 1-3 | M | 3. bars 7-9 | L | 5. bars 15-17 | M | 7. bars 26-28 | L |
| 2. bars 3-5 | U | 4. bars 11-13 | U | 6. bars 20-22 | U | 8. bars 29-31 | U |

(ex. 16)



Apart from the interval adjustment in the tonal answer, the subject appears unchanged throughout the fugue. Both the interval variation in the major mode statements and the raised third at the end of the last entry (Picardy third) are regular features. The fugue does not contain any strettos or parallel entries.

I/2.2.3 The counter-subjects

The C minor fugue features two counter-subjects. Only the first is truly independent.

CS1 makes its first appearance immediately after the initial subject statement; i.e. it stretches from the second sixteenth-note of bar 3 to the downbeat of bar 5. The very obvious change in the rhythmic pattern (only sixteenth-notes in bar 3-3m, only eighth-notes thereafter) and the pitch level (see the tenth interval C1-E^b2 in bar 3m) reveal that this counter-subject is structurally conceived as consisting of two contrasting subphrases. The first segment presents a descending scale which most probably describes a decrease of tension; the second, much larger, segment also moves essentially in a falling direction. Its most likely interpretation is therefore as an even more pronounced *diminuendo*.

(A short word on alternative interpretations of the dynamic development: Climaxes on either the lower C, the target of the descending scale, or the – admittedly interesting – F[#], are inadvisable since they debilitate the polyphonic clarity. Both notes coincide with tension peaks in the subject. Already the very even rhythmic structure in the second half of the counter-subject weakens its impact in the context of simultaneous lines; an additional dynamic parallel would offset the requirement of independence.)

CS2 is introduced against the next subject entry. It starts belatedly on the sixth eighth-note of bar 7 (see middle voice F) but concludes together with the other components on bar 9d. Rhythmically, this counter-subject is almost entirely attuned to CS1. Its pitch pattern is also not very significant, and experiences several changes in the course of the fugue. Thus this second companion to the subject stages little contrast of its own. The overall impression in the piece remains that of a dialogue between the subject and one counter-subject (which comes with a homophonic accompaniment).

For a sketch showing the phrase structure and dynamic design created in the combination of the subject and its two counter-subjects, please see the example below.

(ex. 17)

I/2.2.4 The episodes

There are six subject-free passages in this fugue:

E1 bars 5-7 E4 bars 17-20

E2 bars 9-12 E5 bars 22-26

E3 bars 13-15 E6 bars 28-29

The material of E1, E2, E4 and E5 is closely related to the subject; at least one voice constantly displays a variation of its head motive. In E2 and E5, this subject-derived motive is extended: what was originally the final eighth-note now sounds as a crochet, followed by an eighth-note rest and two chromatically ascending eighth-notes. This longer version of the head motive also complements the dynamic design: the slight tension rise in the subphrase is now rounded with a relaxation throughout the extension. (Note that in the stretto imitation used in these episodes, the [decreasing] chromatic ascent of this extension coincides with the [increasing] regular eighth-notes which open the head motive. This takes many performers unawares: they lose sight of which voice is leading and when.)

The first episode motive (M1) is introduced in E1. It consists of an ascending scale which comes to a halt on a syncopated Ab. These two features – the scale motion and the syncopation – disclose M1 as related both to the first counter-subject (which commences with a scale, though a descending one) and to the subject (which contains the syncopation group F-G-Ab). Interpretation of the character and dynamic design in this motive depends on which of these relationship one regards as more evident; M1 could be taken as a relaxed scale in diminuendo (see the beginning of CS1) or as an upbeat to a little climax (on F or on Ab, whichever the conclusion in the subject).

M2 is brought forth in the lower voice of E2. It is a figure of one-bar length made up of a descending one-octave scale which bends back two notes and is then followed by another descent down to the lower fifth. This motive obviously derives from the beginning of the first counter-subject and accordingly picks up its character and tension decrease. As E3 shows, this motive can appear not only in descending but also in ascending direction. The most consistent (though not often heard) interpretive conclusion would be to retain both the character and the diminuendo. (The implications of such an interpretation of E3 for the overall dynamic development are considerable and will be dealt with later.)

The double-note motive which appears in the two lower voices of E3, but which is never again taken up in the fugue, is least related to the primary material. It merely bears a slight resemblance to the first three notes of CS2 which, together with the same note-group in CS1, also forms descending parallels.

Finally, E6 is by far the shortest episode of this fugue; its harmonic progression and melodic features leave no doubt that it is a typical cadential close. The lower voice presents a cadential-bass pattern, the middle voice the characteristic closing formula with syncopation, and even the upper voice joins in by displaying one of the established closing features, the keynote anticipation.

The relationships between the episodes of this fugue are as follows:

- the first half of E4 (bars 17-18) is a varied repetition of E1;
compare L in E4 with U in E1,
M in E4 with M in E1;
U in E4 is new but in part parallel to L
- the second half of E4 is a varied repetition of the first half of E4
compare bars 17-18m with bars 18m-20d (M and L in inverted voices);
- the first half of E5 (bars 22-24) is a varied repetition of E2
compare U/M in E5 with U/M in E2 (transposed),
L in E5 with L in E2 (metrically varied transposition).

Both E1 and the two halves of E4 are composed in ascending sequences. They prepare the following entry by building up tension towards it (which only in the case of E1 is slightly abated at the very end of the episode).

By contrast, E2 and E5, both determined by falling sequences, create diminuendo. This seems only logical in the case of E2 which follows the last of the three initial statements in this three-part fugue. With its decreasing tension it thus sets the so far uninterrupted tension rise apart from what follows. The symmetrically beginning E5 seems intended also to give the impression that the main statements in this round have already been made, and lures the listener into expecting a redundant subject entry. But Bach seems to change his mind; he extends this episode by adding a definitely ascending, tension increasing second half (see bars 25-26) which leads to a statement in the lower voice, thus completing the round. A similar process recurs in the final episode: the cadential bars 28-29 seem to close this section in a mood of relaxation, but Bach adds a further entry – redundant this time – in homophonic texture above a tonic pedal.

This leaves E3 whose interpretation requires carefully pondering.

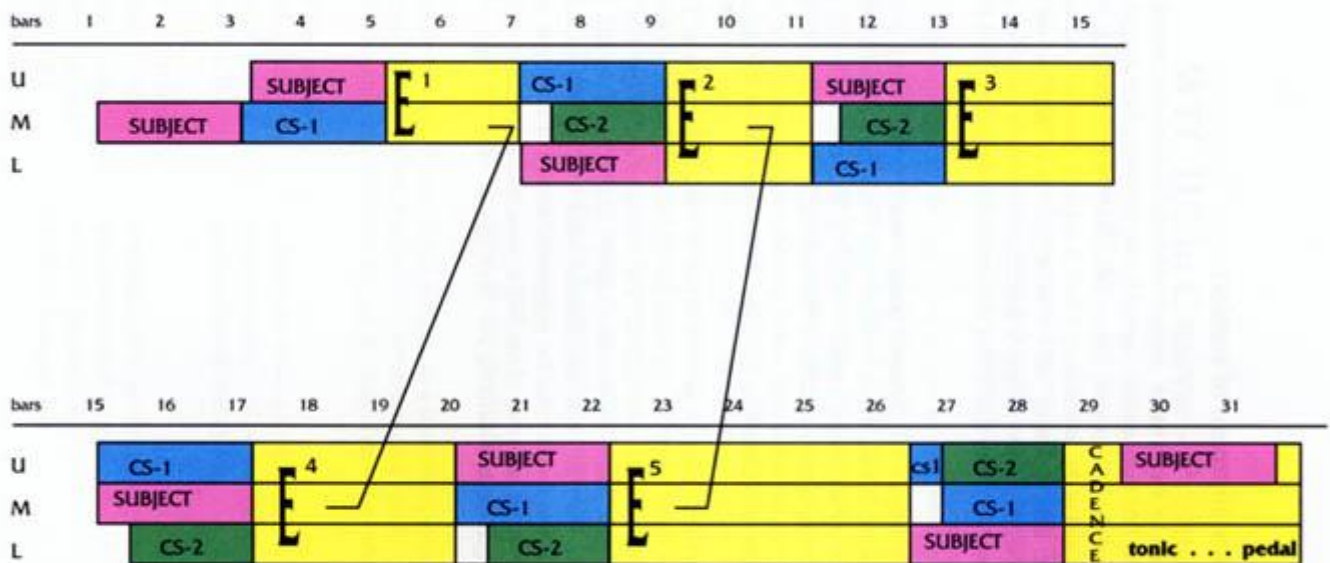
- E3 is conceived as a crescendo (which can often be heard), it appears as a link between the preceding and the ensuing subject statements. The result would be that it strings together – by means of its dynamic direction – entries which clearly do not belong to the same group.
- If this episode is conceived as a diminuendo, this tension design (together with the fact that E3 is the only episode not at all related to the subject and occurs close to the middle of the composition) suggests an interpretation of the fugue as being composed in two halves.

I/2.2.5 Character, tempo, articulation, ornament realization

The leaps in the pitch pattern and the prevalence of two rhythmic values – eighth-notes and sixteenth-notes – suggest a *rather lively* basic character for this composition. The ideal tempo is dictated by two essential details: the dance-like character, created above all by the unusually regular phrase structure

- the bass is limited to an extended tonic pedal note;
- the middle voice, for once, does not take up the counter-subject or sound any other polyphonically independent line, but accompanies the final subject statement in strict homophonic style;
- these bars sound in voice splitting, i.e. they abandon the original three-part setting and split – into an octave (L pedal) and into chords or double notes (M see from bar 30 middle).

For a sketch showing the design of the fugue in C minor, see ex. 18.



I/2.2.7 The development of tension

The curve described by the dynamic tension within the first section shows a gradual increase through the first three entries, caused by the buildup of the ensemble and the increasing gesture of the first episode. This is followed by a slight decline, both during the second episode and in the fourth entry which is not only redundant but also sounds in the major mode, thus appearing more relaxed than the original version in minor. This fugue, however, does not represent a dramatic composition but rather a cheerful, dance-like one; thus the rising and falling dynamic developments in this first section are not particularly strong.

The second section repeats this dynamic pattern: the first three subject statements, including the episodes linking them, increase very smoothly. (The second of these episodes, E5, begins by decreasing tension – before it “realizes” that this is premature and that there is one more entry to come in the buildup.) It is the cadential close after this third entry in the second section which provides the tension release, so that the redundant entry, here coinciding with the coda, sounds like a softer afterthought.

The relationship between the two sections is one of enhanced repetition. The second section sets out in a more involved way since the first subject statement already comes accompanied by both its counter-subjects. The episodes are longer and may thus create heightened anticipation of the next subject entry. The cadential close is a stronger interruption than the decreasing second episode in the first section.

Finally, the last entry, in its detachment from the polyphonic texture of the fugue, may depict more of a retreat than the last entry of the first section, which appeared lighter mainly because of its changed mode.

WTC I/3 in C[#] major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/3.1.1 The prelude-type

This prelude presents itself in two-part texture. It clearly shows a number of motivic figures. These are restated after their respective first appearance in an answering voice – i.e. in imitation – before they sound again in their original voice.

The fact that some of these motives are not conceived as a one-dimensional melodic line but as a hidden two-part structure requires further attention. Similarly it should be mentioned that the secondary voice to this motive is not polyphonically independent but in fact a disguised parallel (ex. 25: bars 1-16):



(ex. 26: bars 63-75)

I/3.1.2 The overall design of the prelude

The first cadence ends on the downbeat of bar 7. On the one hand, this cadence ending lies embedded in a melodic flow which continues uninterrupted beyond this bar. On the other hand, a definite change of surface pattern occurs in the following bar 8 which suddenly features two melodically designed voices and leads into the inverted-voice texture of bars 9-15. In this sense, this initial cadence is only an indirect indication of a subordinate structural ending within a larger context. There is, therefore, no caesura, and no cut whatsoever after the appearance of the tonic itself.

Exactly the same holds true for the following harmonic progression which, now in the new tonal area of G[#] major, draws to a cadential close on the downbeat of bar 15. Here again, the melodic pattern continues

through another bar before giving way to a continuation in inverted voices which marks the beginning of a new harmonic development.

Since the structural units determined by these simple cadences are fairly short, we can distinguish a great number of them. The phrase in bars 25-31 is the first not to be followed by such a link. Instead, the second half of the cadence-ending bar serves as the beginning of a new development.

The following diagram lists the phrases and their keys in the entire prelude. (Capital letters refer to major, lower-case letters to minor keys. Note that the bridging bars – i.e. those bars which link consecutive phrases by prolonging the tonic of a cadential close before a renewed change of voices and thus do not harmonically belong to either of the closed progressions – are deliberately omitted here.) The graphic arrangement tries to visualize the harmonic progressions.

1. bars	1-7	C#	
	2. bars	9-15	G#
	3. bars	17-23	d#
	4. bars	25-31	a#
	5. bars	31-35	a#-d#
	6. bars	35-39	d#-G#
	7. bars	39-43	G#-C#
8. bars	43-47	C#-F#	
9. bars	47-53	F#	
10. bars	55-61	C#	
-	-	-	-
	11. bars	63-73	G# pedal note
12. bars	75-83	C#	
	13. bars	87-104	G# pedal note
with resolution in final bar to		C#	

This prelude contains both identical and structurally corresponding passages. With regard to untransposed recurrences, there is a stretch of seven bars in the first half of the piece which returns later (compare bars

1-7 with bars 55-61); another span of ten bars in the second half of the prelude is repeated a few bars later an octave lower (compare bars 63-72 with bars 87-96).

As for other analogies, the opening phrase of the prelude reappears altogether five times, both transposed and with its voices inverted. While the first three reappearances occur in immediate succession to the model phrase and are therefore best named imitation in inverted voices, a true recapitulation can be found after the intersecting portion with its different patterns (see bars 47- 62). These two phrases in the middle of the piece sound reminiscent of the prelude's very beginning, particularly since they are conceived as mirror images of the first two phrases.

Compare:	bars 1-16	model pattern, followed by voices inverted,	tonic dominant
with	bars 47-62	voices inverted, followed by model pattern,	subdominant tonic

Next, there is a very interesting large-scale structural analogy in this piece: the first half of the prelude, visually distinct from the second by its uninterrupted flow of sixteenth-notes in at least one of the voices, is designed in ternary form – so indeed is the second half of the piece (with the exception of the final line). A rough scheme of the structure in this prelude (which draws only on the architectonic patterns but not yet on the motivic components) would list:

-	bars 1-31	two-part pattern, voices interdependent	
	bars 31-46		contrapuntal lines
	bars 47-62	two-part pattern, voices interdependent	
-	bars 63-74	homophonic pattern	
	bars 75-86		contrapuntal lines
	bars 87-96	homophonic pattern	

On a different scale, there is an analogy in the harmonic structure (see the table above): the first four phrases (eight bars each, in dependent two-part pattern) move from the tonic through the dominant and the supertonic to the relative minor. The following four phrases (four bars each, in contrapuntal texture) reverse this process (see the progression vi-ii-V) and end on the tonic.

I/3.1.3 Practical considerations for performers

The material in the non-contrapuntal segments of this prelude is only indirectly melodic (refer back to ex. 25.) It is this indirect melodic pattern which determines the tempo. In addition, it seems worth considering the time signature of this prelude. As we know from other pieces by Bach, 3/8 does not so much indicate a pulse in three eighth-notes but rather one in whole-bar beats. With these whole-bar pulses in mind, it should not be difficult to find the appropriate range for the tempo.

The articulation applicable in a *hidden two-part structure* is a little more complex than that in a one-track melodic texture. Here it is the “hidden” melodic line which is to be articulated, not the progression from note to note as it appears on the surface. Taking e.g. the secondary line in the model of the main motive: the left-hand line in the first seven bars – C# D# E# F# E# D# C# – should, within the context of this lively character, sound non legato. This non legato effect is, however, naturally achieved by the interlocking repeated pedal note.

It would therefore be counterproductive to try to separate the first C# from its octave and so forth, because by doing this one would obtain exactly the opposite effect and hear all sixteenth-notes as belonging to one line. In other words:

In order to achieve the melodically correct results
in a “hidden two-part structure”,
the surface progression must be played legato.

In addition, the distinction in each hand between “melody” and “background” can be achieved above all by two means: by touch and by intensity. The ideal shading of the texture would consist of

an intense, dynamically molded melodic line
sounding against an almost neutral,
dynamically rather subdued background.

I/3.1.4 What is happening in this prelude?

Several motives can be distinguished within this prelude.

M1 has already been repeatedly referred to. Here are once more its main characteristics:

- It is seven bars long (the eighth bar represents a link);
- it consists of two interdependent lines;
- each of these two lines is in itself designed as a hidden two-part structure, with a curved pitch pattern providing the melodic idea and the keynote, as indirect pedal, serving as background (In bar 6 there is a deviation from the hidden two-part structure in the right hand, and in the left hand the keynote C# is replaced by the dominant representative B#).
- within the two melodic parts which form parallel tenths, the line rising from the third to the sixth is slightly more intense than that which starts from the keynote (i.e. in bars 1-7, the right hand leads over the left).

It is the link between the model and its imitation in inverted voices which deserves more attention. In bar 7, the right-hand line (which has so far been leading) continues the sixteenth-note pattern, but with such a strongly declining drift that it evokes a “retreat” from the position of “leader” to that of “accompanist”. At the same time, the left-hand line emancipates itself as the background note C#, with a sudden syncopation and a consequent continuation in the higher octave range, steps forward to take the lead.

M2a and M2b develop from the above-mentioned link. After the fourth appearance of M1 in bars 25-31, this link forms two new thematic units.

- In the right hand the syncopation, followed by a simplified version of what was originally the bridge to the next phrase, is repeated in sequence and thus builds a four-bar motive (M2a see U: bar 31 beat

3 to bar 35d).

- In the left hand, another feature pertaining to the link, the turn-like figure from U: bar 6, also brings about a little four-bar motive (M2b see L: bars 31-35d).

Just as M1 sounded four times in alternating voice inversions, so do these two motives; their four appearances also contain the imitation in inverted voices. However, besides this similarity there are considerable differences:

- While in M1 each line was conceived as a hidden two-part structure, both M2a and M2b are conceived as one-track developments.
- While M1 consisted of two interdependent lines with melodic components which formed parallels, M2a and M2b are clearly independent and polyphonic.
- While in M1 there was only one rise and fall in tension which followed the parallel curve, M2a and M2b show completely independent dynamic outlines. On the one hand, M2b creates a two-bar crescendo followed by a two-bar diminuendo; on the other hand, the two halves of M2a both carry an accent on the syncopation which implies a subsequent relaxation.

M3 is introduced in bars 63-73. It bears a number of relationships with M1.

- Like M1 it is designed in homophonic texture.
- Like M1 it contains a pedal note in both hands (G#).
- Like M1 it determines the main part of a ternary form. (Details see above under structural analogies.)
- Finally, like M1 it is followed by a link which this time does not connect the model with its imitation but joins this motive to the next one instead (see bars 73-75d).

On the surface, this motive may remind the listener of toccata style: the two voices only meet on the first beat of each bar and then form a complementary-rhythm pattern. (For details of the homophonic idea behind the toccata pattern of M3 please refer back to ex. 26.) It is interesting to see that later, after its repetition an octave lower, M3 develops into a different pattern, also in toccata style and also resting on the pedal note G# (see bars 97-102).

M4 determines the middle section of this second ternary form within the prelude. It features again polyphonic texture – and thus relates to the corresponding section in the first half of the composition. Here, i.e. in bars 75-83, the right hand retains its complementary-rhythm pattern but ascends in a large sweep up to B (almost the highest available note on Bach's keyboard). From there it moves in sixteenth-notes which gradually release the tension that had previously been built up. The entire upper-voice motive is then repeated a tone lower (and slightly softer). At the same time, the left hand describes a curve which sounds like a simplified version of the same M4. It commences with the descent (i.e. in the middle of the motive) which falls over two bars from E# to the lower-octave C^x (see bars 75-77d), and then follows the right hand in stretto imitation, rising over another two bars, before sequencing the figure.

The development of tension expressed by the layout of this prelude relies mainly on two facts: the harmonic progression (particularly in the first half) and the difference of intensity between the homophonic and the polyphonic sections. The following diagram tries to show these progressions (ex. 27):



WTC I/3 in C# major – Fugue

I/3.2.1 The subject

This subject is a little less than two bars long. It commences after three eighth-notes' rest, with what is experienced by the listener as a secondary upbeat. Such an upbeat, relating to the third beat in quadruple time, is a fairly strong impulse-giving feature, particularly since it is anticipated to shift to a normal upbeat position in the course of the fugue. (Baroque polyphony – in contrast both to the contemporary dance types and also to the music of the ensuing period – knew frequent metric shifts of its thematic material. This is especially true in quadruple time where a subject or motive first introduced in the middle of the bar could, in later statements within the same piece, be placed at the beginning of a bar, and vice versa.)

The ending of the first subject statement falls on the downbeat of bar 3. The dominant harmony (G#-B#-D#) is represented by the last two eighth-notes in bar 2, and the expected resolution onto the tonic is reached with the following keynote.

At first glance, the melodic structure of the subject seems to contain two segments: in the second half of the phrase, sequencing leaps unite the last six notes, thus appearing to distinguish these from a first half. Given this assumption, such a first half would have to be seen as ending after the “inverted mordent” figure on the second beat of bar 2 (i.e. between F# and D#).

However, the straightforward harmonic motion which describes a single curve throughout the whole subject (for details see below) clearly speaks in favor of an interpretation of this subject as one indivisible phrase. This is supported by the lack of any structural indications of sub-phrasing.

The subject contains only two rhythmic values: eighth-notes and sixteenth-notes. Its pitch pattern is characterized by leaps rather than by steps; note the alternating sixth and seventh intervals at the end and the melodic broken chord at the beginning (E#-C#-G#). The only steps to be found can be identified as written-out ornaments: a turn in bar 1 and an inverted mordent in bar 2.

The subject's harmonic background is that of a simple cadence, with the active step to the subdominant taking place on the downbeat of bar 2. An analysis of the underlying chord progressions which Bach uses later in the fugue reveals the G# (bar 2d) as an appoggiatura to the following F#. These two notes – G# and F# – thus form a pair which may under no circumstances be separated by either phrasing or articulation. (ex. 28)



subject is found in this fugue. However, metrical displacements – i.e. a beginning on the last eighth-note of a bar – occur in statements 7, 8 and 12. The subject does not appear in either stretto or parallel.

I/3.2.3 The counter-subjects

The C# major fugue contains three counter-subjects.

CS1 is introduced against the second entry of the subject (see bars 3-5: U) and remains a faithful companion to the subject thereafter. It is exactly two bars long – i.e. longer than the subject, as it begins slightly earlier in the bar. In its full scope it begins with an “inverted-mordent” figure on the keynote, followed by a five-note scale ascent and a “turn” figure on the peak. From here to its end there is a gradual descent in ornamental waves, interrupted only rhythmically by one prolonged note.

As can be seen from this description, CS1 is conceived as a unit without subdivisions. If we consider the dynamic development without, at first, taking into account the simultaneous events in the subject, there are two possible interpretations; one is based on pitch and the other on rhythmic features:

- according to the pitch pattern the climax falls on the highest note at the beginning of the turn figure;
- according to the rhythmic features it lies on the longest (tied) note.

However, as soon as we stop regarding the counter-subject as an independent body and look at it as a counterpart to the subject, the choice between these two options becomes much easier. As the second solution would cause the climaxes of the subject and its first companion to coincide, this option is contrary to the polyphonic implication of greatest possible independence within the material. Therefore, the first dynamic design is the more appropriate choice. (However, while the mind may easily accept this truth, the fingers seem more reluctant and often find it difficult to resist stressing the longer note.)

In the course of the fugue, the first counter-subject undergoes one variation which deserves a mention. The turn figure is sometimes written using the leading-note to the fifth degree (see e.g. the F^x in bar 3), yet in other similar instances it retains the context of the natural scale. This results in inconsistencies in otherwise completely analogous portions (see e.g. U in bars 3 and 44, M in bars 10 and 52).

CS2 appears only six times in the course of the fugue. It is introduced at its anticipated place, i.e. against the third entry of the subject, and taken up again only in bars 19/20, 25/26 (with a shortened beginning), 26-28, 44 46 (with a varied beginning), and 46-48. Its rhythmic and harmonic features create a distinct contrast to the two components already established:

- Rhythmically, an initial upbeat precedes three syncopations the first two of which are eight times (!) as long as the so far prevalent sixteenth-notes;
- harmonically, the beginning of this counter-subject redefines the first notes of the subject in a V⁷ context, and its ending omits the resolution into the tonic (at least in the original statement; later this is “corrected”).

The layout of tension in CS2, however, is quite unequivocal: the first prolonged syncopation builds the high-tension interval of a minor seventh over the initial notes of both the subject and CS1. It thus

represents a natural climax, with the ensuing descent of the line providing the relaxation.

CS3 – an unexpected further companion in this three-part fugue – appears only twice. In bars 10-12 it sounds against the fourth subject statement; in bars 51-53 against the last. Its characteristic features are the eighth-note upbeat followed by a descent in longer note values. These features and the long release of tension resulting from this melodic shape reveal its relationship with CS2. This impression, however, is weakened both by the harmonic progression and by the concluding cadential-bass steps.

The sketch shows the phrase structure and dynamic design in the primary material of this fugue (ex. 30):

I/3.2.4 The episodes

The subject statements in the C# major fugue are interspersed six times with subject-free passages; a seventh closes the fugue. These differ surprisingly in length.

- | | |
|----------------------------|-----------------------------|
| E1 bars 7-10 ₂ | E5 bars 28m-42 ₂ |
| E2 bars 12-14 ₂ | E6 bars 48-51 ₄ |
| E3 bars 16-19 ₁ | E7 bars 53m-55 |
| E4 bars 21-24 ₄ | |

Several elements within these episodes are closely related to the subject:

in E4 from bar 22 (end) to bar 24, the upper voice recalls the first half of the subject twice;

in E5 from bar 34 (end) to bar 37, the upper voice quotes the subject's first segment three times;
from bar 38 (end) to bar 41, the lower voice imitates the threefold quotation of the subject's initial segment.

The very first episode of the fugue introduces a motive (M1) which plays a major role in the course of the fugue (see bars 7/8 U: from G#-E# to tied note A#). M1 is imitated in stretto, with a slight interval adjustment, in the middle voice of the same bar. Both the model and its imitation are then sequenced (see bars 8/9). In a second sequence (see bars 9/10), both voices show a variation in the second half of the

motive, and the upper voice is completed by means of an extension which provides the harmonic resolution to its tied-note appoggiatura.

In the original version, the dynamic curve expressed in M1 is obvious: the jump upwards creates a rise in tension followed by a release in the falling broken chord. In the extended version, however, what is enlarged is actually the upward motion. It would therefore seem logical that, consequently, the rise in tension should also be increased.

During the same first episode, the lower voice presents a motive which can be traced back to the first counter-subject. It sets out with the same inverted-mordent figure, followed by ornamental waves which recall the final groups of CS1 in inversion. This motive is also frequently used within the fugue and will be called M2. In terms of tension, M2 contains very little active power. The short upbeat-like impulse in the inverted-mordent figure is followed by a long, subdued drop in tension.

The second episode (bars 12-14) is thematically related to the first. However, both M1 and M2 recur in considerable transformation. The significant changes which together create an entirely different character are principally the following:

- In M1, - the leader of the imitative pattern is now the middle voice;
- the tie prolongations in the motive are replaced by rests, thus interrupting the continuation of tension very definitely;
 - the imitating voice does not really follow its leader but restates the second, relaxing half of the motive;
 - towards the end of the episode, both voices abandon the motivic context altogether and join in a cadential figure (see M + L bars 13/14).
- M2 - sounds in the upper voice where it no longer appears as a sequencing one-bar figure, but is extended to a two-bar curve. In free inversion, it is pushed upwards to a slide-decorated peak;
- the effect of this climax is further enhanced by the fact that it sounds in a diminished-seventh interval to the C^x in the lower voice;
 - the ensuing release ends in a so-called “female extension”
 - a melodic tail after the harmonically resolved strong beat – on the fifth sixteenth-note of bar 14.

Neither of the subject-free passages in this fugue serves exclusively as a cadential close; however, the final two and a half bars (E7) and the first one and a half bars of E4 both present non-motivic material leading to perfect cadences with distinct closing formulas (see L bars 21/22 and 55: the cadential-bass patterns; U bars 22 and 55: two typical, though different, melodic formulas). In the case of E4, the cadential close divides the episode into two segments (see E4a: bars 21-22m, E4b: bars 22m-24₄). Another episode in this fugue, E5, is subdivided even further (see E5a: bars 28m-30m, E5b: bars 30m-34₄, E5c: bars 34₄-42₂).

Several of the episodes, or their segments, are varied repetitions of earlier models.

1. E1 recurs in three varied repetitions:

E3 uses mainly the tension-extended version of M1 from bar 9;

E6 is closest to the model but begins with a half-bar extension (see bar 48, first half);

E5b appears most remote from the model in its use of the motivic material. The voices are completely exchanged, with the lower voice in the lead, the middle voice reduced to a broken-chord figure and the upper voice recalling M2. (Despite the varied beginning, the statements of M1 in the lower voice should nevertheless retain the tension curve characteristic for this motive (with e.g. a crescendo in bars 30₄-31_d followed by a diminuendo until bar 31_m), while the figure in the middle voice is too removed from the original to take part in any subtle dynamic shaping).

2. E2 recurs once:

E5a recalls the model in inverted voices. The lower voice now sounds the dramatic ascent (a slide is to be added on the peak note $E > \delta$, see bar 29 beat 3); the upper voice, partly crossing over the middle voice, recalls the developed version of M1, and the middle voice is just filling in.

3. E5c, the last segment of the longest episode, contains an internal correspondence:

- Bars 35 38 U (with 3-sixteenth-note upbeat) are taken up, voices inverted, in
- bars 39 42 L (with 3-sixteenth-note upbeat). The variation ends in the upper voice on beat 2, in the lower voice on beat 3

One may acquire a clearer picture of what is happening in these episodes by completing the earlier diagram as follows:

E1	E2		E4b	E5 (= E2 + E1 + E4b)	
E3 (= E1)	E4a		E6 (= E1)	E7	

The role these episodes and their segments play in the dynamic development which shapes the entire fugue is both relevant in each case and significant with regard to the understanding of the overall structure.

- E1, as it is determined by the introduction of new material, demands a register or color change. (The same holds true for its three variations.) Its sequences progress downwards, thus bringing a relaxation which suggests that a section is drawing to its close. (In fact, all three voices have already stated the subject.) The last sequence, however, extends the rise within M1 and reestablishes a higher level of tension, thus preparing the listener for more to come, i.e. a redundant entry.
- The first variation of E1, i.e. E3, shows even more of this extended rising. The ascending trend within the melodic units counterbalances the relaxation implied in the descending sequences and thus clearly defines this episode as one linking adjacent subject entries.

- By contrast, the second variation of E1, i.e. E5b stresses exclusively the declining direction. Its role in the overall development of tension is therefore one of announcing the forthcoming end of a section.
- Finally, the third variation of E1, i.e. E6, returns to the pattern of the original: the smooth tension decay in the descending sequential pattern is arrested at the last moment, thus granting the following (redundant) subject entry to be perceived as still being part of the section.
- Both the original E2 and its variation E5a are self-contained units. In a color distinctly different from that of the subject-determined passages, their dynamic outline is shaped in curves; within each, a rise to the climax and a subsequent relaxation are concluded by means of a perfect cadence ending.
- Compared to the relaxing E1 type and the self-contained E2 type, E4b represents the type of episode which conveys a feeling of preparation for the next entry. The incomplete subject statements serve to suspend the tension before the ensuing full entry. This impression is further enhanced by three facts: (1) This episode segment sets off after a cadential close; (2) it is presented in reduced ensemble (the lower voice is resting most of the time); (3) the secondary voice is confined to non-motivic material.
- E5c seems to repeat this pattern in a heightened version: It also begins after a complete decline in tension; it is also presented in reduced ensemble (this time it is the middle voice which is resting); its secondary voice is not only non-motivic but actually displays a barely disguised prelude-style accompaniment pattern. This last fact especially sets this episode portion furthest apart from the remainder of the fugue. Most of the active strength and tension otherwise present in this fugue seems as if temporarily retreated.
- Finally, the two cadential formulas within the episodes both form, together with their extended preparations, dynamic curves.

In E4a, the climax falls on the downbeat of bar 22.

E7, the closing episode of the fugue, is launched from the interrupted cadence at the end of the final subject statement (see bar 53m where an A[#] minor chord replaces the expected C[#] major) and describes an increase towards the dominant bass note G[#] (bar 54m). Whether the very ending, with its quotation from the subject's tail and its voice splitting, is interpreted as a relaxation or as a triumphant close, is at the discretion of the individual performer.

I/3.2.5 Character, tempo, articulation, ornament realization

The basic character of this fugue is certainly *rather lively*. Both the pitch pattern with its many written-out ornaments, leaps and broken chords, and the rhythmic pattern with its predominance of two note values support this impression. The only element to introduce a hint of contrast is the second counter-subject with its long note values, repeated syncopations and stepwise motion.

The tempo should be fast enough to allow the written-out embellishments in the primary material to retain a touch of their ornamental character – i.e. the four notes of the “turn” at the beginning of the subject should be heard as one entity rather than as separate notes.

The appropriate articulation in this *rather lively* composition consists of non legato eighth-notes and legato sixteenth-notes. It is possible and gives the fugue a lovely depth (while admittedly increasing acrobatic demands) to play the contrasting CS2 with the characteristics of the *rather calm* character, i.e.

with legato articulation and singing touch. But it is obviously also possible to opt for unity of character in all components of the material and play this counter-subject with long but slightly detached notes.

A good tempo balance between the prelude and its fugue is reached by transforming a triplet (i.e. three eighth-notes in the pulse of the prelude) into a duplet (i.e. into two quarter-notes in the pace of the fugue). The proportion thus reads:

one bar	corresponds with	half a bar
in the prelude		in the fugue.

(Approximate metronome settings: 72-80 for one prelude bar, 108-120 for one beat in the fugue.)

The fugue features three ornaments: the slide in E2 (and, correspondingly, in E5a), the cadential mordent in U: bar 22 (not included in the fair copy but deriving from a copy, presumably because Bach regarded this very conventional ornament as self-evident), and the compound ornament towards the end of E5 (see U: bar 38).

The slide often presents a dilemma, probably because of its conventional writing slightly left of the note head it ornaments. Yet, just like other Baroque embellishments, this one also begins on the beat (the visual presentation may have its origin in the fact that, unlike mordents and turns, the slide reaches the (printed) main note truly only at the end of the ornament). Thus in bar 13, the right-hand downbeat is G[#] (which falls together with the left-hand C^x). This G[#] is followed, in thirty-second-notes or faster, by A[#]-B, and the B is then sustained for the remainder of the note value. Correspondingly, in bar 29m the left hand plays C[#]-D[#]-E; the C[#] (not the E) coincides with the middle-voice F^x.

The cadential ornament in bar 22 is a simple mordent, beginning on the upper neighbor note and consisting of a double shake E[#]-D^x-E[#]-D^x. The symbol for the complex ornament in bar 38 represents a turn plus a trill. Because of its tied ending and delayed resolution this trill ends without a suffix. The result is, in sixteenth-note motion, an initial A[#]-G[#]-F^x-G[#]. (The pitch of the lower auxiliary needs a comment. The harmony underlying these bars of retransition is normally interpreted as the dominant, represented by an alternation of dominant-six-four (C[#] major with G[#] in the bass) and dominant-seventh chords. If this interpretation is adopted, i.e. if G[#] major acts as a dominant, its seventh is F[#] (heard repeatedly in these bars), whereas its leading note in ornaments should be F^x). This is followed by six A[#]-G[#] groups. (In order to further enhance the suspension it is possible to play only five A[#]-G[#] groups and stop short a little earlier before the bar line.)

I/3.2.6 The design of the fugue

The most prominent feature of this fugue, in terms of design, is the striking analogy of bars 1-12 and bars 42-53. Here are the details:

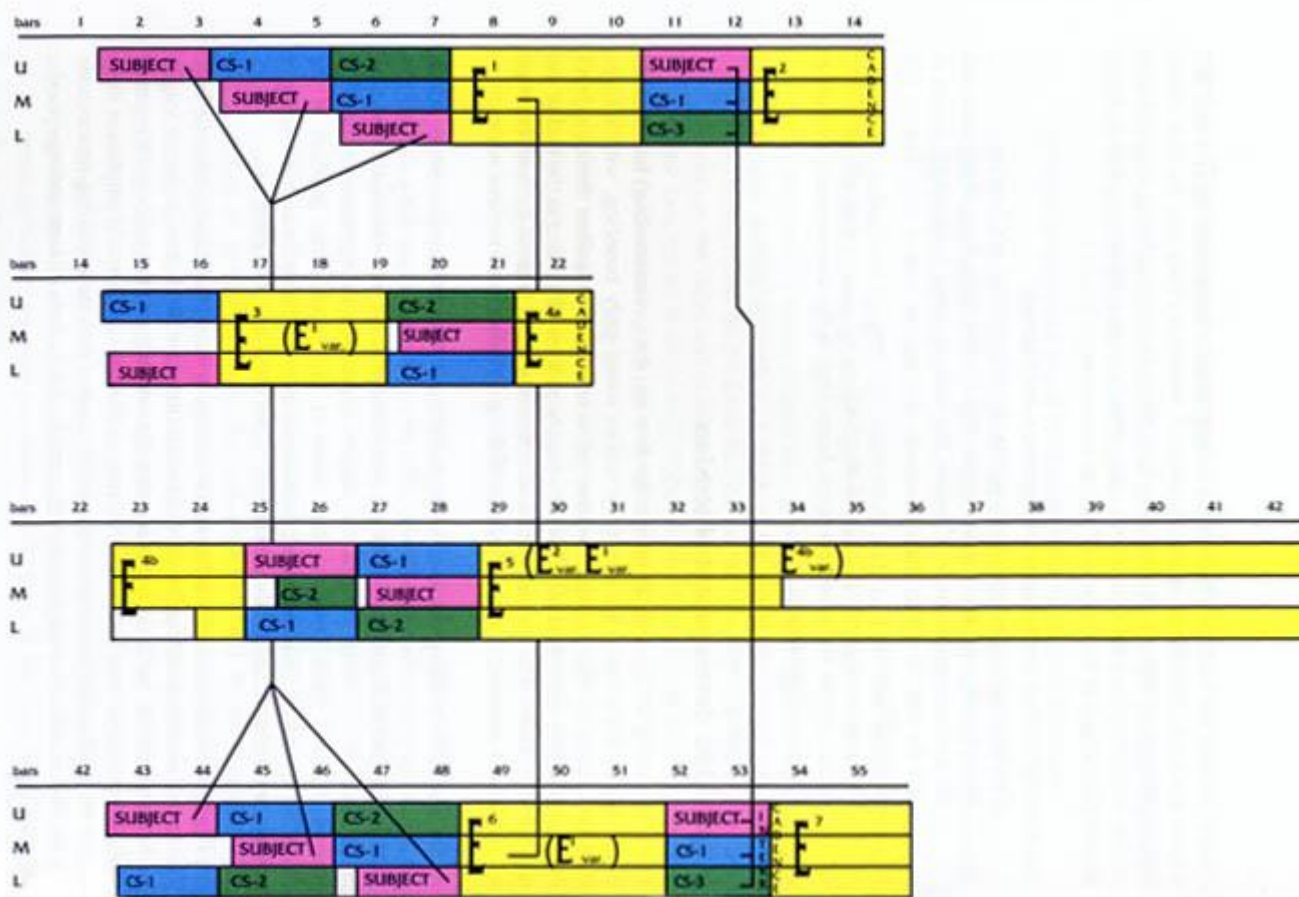
- the order, position and key of the three initial entries recurs identically;
- the surrounding counter-subjects also correspond (although bars 42-46d now feature an additional voice, due to the fact that the ensemble in a fugue never drops back to one voice);
- the subsequent episode (E6, bars 48-51) is, as has been shown above, a variation of E1, with its initial half-bar extension serving to modulate;
- the subject entry which follows also corresponds with the redundant entry in the first section

although, as a result of the modulation in the episode, bars 51-53 now sound on the tonic and not on the dominant (as bars 10-12 did). However, the order and position of the voices are the same. The analogy of these two entries is additionally enhanced by the fact that they are the only ones in the entire fugue to be accompanied by CS3.

This prominent analogy lays out the major structural traits of the fugue. In addition, the episodes play an important role in determining the design. There are three instances in the C# major fugue where the concluding force of an episode sheds light on Bach's intention of partitioning into sections:

- the first is the cadential close which ends E2 at the beginning of bar 14;
- the second is the explicit cadence in the middle of bar 22 which has already been mentioned repeatedly.
- While these appeared straightforward in their implications, the third is more complex. In E5a, the variation of E2 seems to conclude something in the middle of bar 30. However, this cadence is followed by the variation of E1 which, as has been shown, makes no attempt to launch any kind of new development; neither does the ensuing segment in which the tension is suspended. To see these three episode segments follow each other is already unusual enough; to see them trying to surpass each other in "tensionlessness" is even stranger. However, it is this very strangeness, this long retreat from the active striving in the piece, which gives this portion its particular effect: as an arresting buffer before the last section of the fugue it succeeds in highlighting the symmetrical design.

Finally, looking for features which might indicate section beginnings we find that two subject entries in this fugue appear in reduced ensemble. They are the first minor mode statement in bars 14-16 (which is thus triply justified in being regarded as a section beginning) and the first entry in the recapitulating final section. For a sketch showing the design of the fugue in C# major, see ex. 31.



The harmonic outline in this fugue confirms the other findings:

- The first four subject statements remain in the home key of C# major.
- The following two are in minor mode – the relative minor keys of the tonic and the dominant respectively. E# minor, the relative of the dominant G# major, is also the key in which Bach concludes this section with a very distinct full cadential formula.
- The episode segment E4b modulates back to C# major, and all remaining subject entries are presented in the home key, in the conventional alternation of tonic and dominant.

I/3.2.7 The development of tension

There are analogous dynamic layouts in the first and the (corresponding) last sections of this fugue. Both times, the first three entries sound gaily bouncing, with a slight increase caused by the growing number of voices. The redundant fourth subject statements regain this mood after the very timely pickup of tension at the end of the respective episodes. The second section also shows a slight tension increase between its two subject statements, mainly because of the growth from two to three voices.

In the third section, however, it is most probably the first of the two entries which contains more tension than its successor. The two main reasons are that it appears at a point of heightened expectancy (after the two incomplete subject statements) and that, in unmodified ensemble strength, the subject appears in the upper voice, possibly making it sound more powerful than when in the middle-voice position of the

following statement. This decreasing tendency is then continued through the string of episode segments which, as has been shown above, become ever lighter.

Among the four sections of this fugue, the analogous outer ones clearly take the lead. The second section sounds softened, due both to its minor mode and its shorter length. In the third section, the four bars containing the two subject statements have returned to the home (major) key but contain no special features which would emphasize them in any way. While they may sound more self-assured than the preceding minor mode entries, this mood is overshadowed by the nearly sixteen bars of surrounding episodic material.

WTC I/4 in C[#] minor – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/4.1.1 The prelude-type

The C[#] minor prelude is based on motivic development at different levels: from faithful imitation and sequencing to partial quotation and rather free adaptation. The texture in this composition is polyphonic, but without strict part writing. (The beginning and the end of the prelude are written in four voices, occasionally splitting to five; however, large portions in between contain three-part or even two-part texture, without clearly definable exits and re-entries of the voices.)

I/4.1.2 The overall design of the prelude

The first cadence is an interrupted one which finds its conclusion on the downbeat of bar 5: after the D⁷ harmony in bars 3/4, the melodic progression in all voices seems to announce the return to a tonic chord (which would consist of C[#]/E/G[#]/C[#]); however, the bass does not resolve but remains tied, and the alto ascends to A instead of remaining on G[#]. The resulting chord is thus a polytonal mixture of the tonic (C[#] E G[#] are all there) and the chord on step VI (A C[#] E. Note that this combination of pitches is exactly the same as that in the final interrupted cadence of the C[#] minor fugue – compare fugue bar 112 with prelude bar 5. More details later.)

The nature of this chord makes it very unlikely that this cadential close is intended as a structural caesura. The design of the left-hand part supports this by featuring descending sixths (see bars 5-7) which appear as an immediate extension of the sixth in which the two lower voices ended the cadence.

The ensuing harmonic progression modulates to the relative key (E major) and draws to a close on the downbeat of bar 8. Although the feeling of a structural close will be much stronger a few bars later, due to the pronounced cadential formula there, this perfect resolution into the related chord has to be regarded as structurally relevant, particularly since it coincides with the completion of a melodic idea.

The more obvious structural caesura after the middle beat of bar 14 marks the close of the following structural unit with a cadence in G[#] minor. A shorter fourth section which follows consists exclusively of three dominant-seventh chords and their resolutions:

bars 15/16 bars 17/18 bars 19/20
F^{#7} / B major G^{#7} / C[#] minor C^{#7} / F[#] minor.

This leads to the longest section in this composition: a harmonic progression with several near-cadences intercepted by last-minute deviations. This section contains another interrupted cadence in bar 35, delaying the perfect cadence which materializes only in the final bar of the prelude.

The analogous harmonic structure of the above-mentioned two-bar subphrases (bars 15-20) apart, there are several structural correspondences in this prelude:

- U: bars 5 -8d recur in U: bars 20m-23m

transposed a third lower, thus transforming the cadence in E major to one in C[#] minor. This return to the tonic, however, passes almost unnoticed because of Bach's decision to continue and develop the same melodic idea throughout the next bars

- bars 8₆-10_m recur in bars 23₆-25_m

transposed, M + L varied; see also the remote resemblances in the following bars.

I/4.1.3 Practical considerations for performers

There can be no doubt that the character of the piece is calm, yet the time signature might present a pitfall in terms of tempo: the calm character in fact expresses itself by means of a half-bar pulse. (The harmonic tempo also seems to support this view by proceeding exclusively in half-bar steps.) While these half-bar pulses should convey a generously swinging motion, the actual pace of the quarter-notes is not really slow. The appropriate articulation is an overall legato which is not even interrupted for cadential-bass formulas since Bach writes all of them explicitly with tied notes (see e.g. bars 13, 34, 38).

There are a number of ornaments to be discussed. Already the first phrase contains arpeggiated chords, grace-note groups, single grace notes and a mordent.

- The arpeggios and the paired grace-notes represent basically the same musical feature; both are played on the beat and fast. The notes are sustained whenever they are essential to fill the chord (as in bars 1, 3, 12); they sound equally fast but unsustained whenever they contain pitches also provided for by other voices (as in bars 2, 4, 8).
- The single grace-notes (see bars 2, 4) are appoggiaturas (since they imply harmonies different from the main notes), and must be played with due weight. Appearing in the context of imitating voices, in which case the rules of polyphony require the retreating voice to give way to the imitating one, these appoggiaturas should be resolved as early as possible. Holding these appoggiaturas for the duration of one quarter-note each is a good idea.
- The mordent, approached stepwise by the appoggiatura, begins on the main note and consists of a single three-note shake (see e.g. bar 2 beat 2: G[#]-A-G[#]).
- Both the grace-note (appoggiatura) and the mordent on the main note (resolution) must be transferred to all recurrences of the same motive, wherever harmonic and structural progressions allow this. See e.g.:
 - bar 3 left hand (add grace-note A on beat 1, mordent on G[#] beat 2),
 - bar 4 right hand (add mordent on D[#]),
 - bar 9 left hand (add grace-note C[#], mordent on B[#]).

The second phrase contains somewhat more problematic grace-notes. Harmonically, they represent appoggiaturas and thus require time. Melodically, they interrupt (see bars 6d, 7d) the smooth scalar motion and create note repetition. Rhythmically (and this is perhaps most important with regard to the character in the entire piece) they would have to be played in sixteenth-notes – note values which do not otherwise appear in the prelude. Last but not least, as this splitting of an eighth-note would occur on the final note of a motive, an impression of congestion arises together with a blur of the phrasing. These reasons combined seem to suggest that it might be advisable to refrain from these ornaments.

The third phrase brings forth a number of new ornaments. In bar 11, the appoggiatura in the middle voice resolves on the second eighth-note; the inverted mordent uses A[#]-G[#]-A[#]. As the second half of the bar is a sequence of the first half, one might consider adding grace-note E before the D[#]. Whether Bach left it out purposefully to avoid the resulting pitch progression E-D[#]-E[#], or whether it is one of the many corresponding segments in which ornamentation is optional, is hard to decide. In bar 13_m, the grace-note is also one eighth-note long, and the turn should sound B-A[#]-G[#]-A[#] in regular sixteenth-notes.

Within the fourth phrase, the varied sequence mentioned above (bars 16m-18m) appears without any of the ornaments which decorated the model (bars 14m-16m). Performers should consider adding the three inverted mordents:

on C[#] (U: bar 166, corresponding with that on B in bar 14),
on G[#] (L: bar 17m, corresponding with that on F[#] in M: bar 15m),
on C[#] (L: bar 18d, corresponding with that on B in L: bar 16d).

In the fifth section, the eighth-note grace-notes (U: bars 21-23) should be dealt with along the same lines as those in bars 5-8. In bars 26-28, two of the three bass-line ascents end with an inverted mordent; the same ornament should certainly be added on F[#] in bar 28m. In bar 29, the symbol above the treble B[#] indicates a mordent preceded by an appoggiatura (see the written-out example of the vertical stroke + mordent which Bach gives in the Table of Ornaments, reprinted in all Urtexts). The appoggiatura C[#] should be sustained for one eighth-note, the ornamental notes B[#]-C[#]-B[#]-C[#] falling on the bass note E and the final B[#] on the-lower voice D[#].

I/4.1.4 What is happening in this prelude?

There are two relevant motives (M1 and M2) which are introduced in the first and second phrases of the prelude respectively:

M1 is presented by the treble voice in bars 1/2. It begins and ends on the fifth degree of the C[#] minor scale. Its first half bar presents an ornamented broken chord (G[#]-E[#]-C[#]) in eighth-note motion. Hardly is the keynote reached that it is propelled – very suddenly and enhanced by an arpeggio – up to the octave. In the second half of the motive, a stepwise descent in a dotted-rhythm pattern leads to a long final note.

The character of this motive might be described as mild and graceful. There can hardly be any doubt what kind of dynamic design is expressed in this melodic progression: the sudden octave jump offers itself as the obvious climax towards which the tension in the first half bar rises and from which it then descends.

Within the first phrase of the prelude, M1 is imitated (bars 2/3) and sequenced on the dominant (bars 3/4). When this sequence is also imitated (bars 4/5), the slight abbreviation at the end is due to the phrasing in the right hand. (For the same reason, grace-note and mordent are not appropriate here).

The only other complete quotation of M1 occurs in bars 8/9. There are, however, quite a few developments, deriving mainly from the first half bar.

- In bars 9/10, the right-hand line brings a rise in tension created by a threefold use of this partial motive. The middle voice answers in a single quotation which leaves out the octave leap (bar 10m-11d), and the lower voice continues with its own little build-up in a twofold motion which, during its final steps, points downwards (bar 11/12).
- A similar development of M1 can be witnessed in bars 24-28: the threefold rise in the right-hand line corresponds with that in bars 9/10, and the lower voice also answers with a twofold quotation of the partial motive. This, however, takes up the original octave leap. It is then extended through two additional sequences with upturned endings, resulting in a powerful tension increase towards the peak note F[#] (bar 28m). All the while the right hand uses the half-bar figure for a gradual descent.
- A third development of the same kind involves only the right hand: bars 30/31 show a fourfold rising motion which prepares a climax on the G[#] on the downbeat of bar 32.

Besides these obvious developments there are short quotations of thematic components which mainly serve to create overall unity. The partial motive frames the end of the third phrase by appearing in bar 12

(right hand, imitated by left hand) and in bar 14 (left hand); it wanders through the voices in phrase four (see the almost continuous motion from L: bar 15 to M: bar 18) and concludes this section (see M: bar 20). Two further quotations appear towards the end of the piece (see L: bar 34 and M: bar 37).

The rhythmic figure from the second half bar of M1 is also used independently; see above all bars 9-11, bars 15 and 17, bars 21-27, bars 30/31, bars 35, 36 and 38. Even the cadential formulas in bars 13/14 and 34/35 rely in their leading voices on this rhythmic figure.

M2 is exactly one bar long. It is introduced in bar 5 where it starts after the downbeat and ends on the first eighth-note of the following bar. It consists of an ascending broken chord which brings with it a natural though soft increase in tension, and a falling scale which resolves this tension. This motive only appears twice in the prelude: in bars 5-7 where two descending sequences follow the model, and in bars 20-23 where the same progression – model plus two descending sequences – is extended through a fourth sequence the end of which melts into the M1 development of bars 23-28.

The overall dynamic development in this prelude never ceases to be gentle. As the tension rises slightly through the first phrase and falls through the descending sequences of the second, there is an initial furtive climax in the middle of bar 5. The second overall climax occurs in the third phrase. While it is somewhat stronger than the first climax, it is weakened by the fact that the treble reaches it in the bar 10m, the bass only on the downbeat of bar 12.

The fourth phrase contains, in its three subphrases, three dynamic curves which rise gradually in level; however, none of them is important enough to serve as an overall climax. The more significant peak follows at the beginning of the long section where, corresponding with the two initial phrases of the piece, it falls on the first peak note of M2, at the end of bar 20.

The three most powerful climaxes in the prelude are thus:

- right hand, middle of bar 25;
- left hand, middle of bar 28;
- both hands together, downbeat of bar 32.

Thereafter, the tension declines (no accent on A in bar 33!). The very last passage, after the interrupted cadence in bars 34/35, shows an extremely soft, subdued build-up through bars 35/36 to the downbeat of bar 37.

The diagram in ex. 36 attempts to depict these relationships.

WTC I/4 in C# minor – Fugue

I/4.2.1 The subject

The subject commences with a whole-note on the downbeat of bar 1. It ends, only four notes later, with a return to the keynote. The quarter-note C# on the downbeat of bar 4 completes a full cadence, since the whole-note D# in the third bar represents both the subdominant and the following dominant harmony (for more details see below) and finds its expected resolution onto the tonic on this C#.

With its length of only five notes, this compact little unit is no doubt one of the most condensed subjects within Bach's Well-Tempered Clavier. It is obvious that the five notes of the subject define a single, indivisible phrase.

The pitch range of this subject is extremely limited: the keynote is encompassed by only one note below and two notes above it. Three of the four intervals are seconds. The remaining interval, however, makes all the difference. This seemingly inconspicuous little curve features the rarest of the "high-tension intervals", the diminished fourth between B# and E in bar 2.

With regard to the rhythmic pattern, it is necessary to distinguish the different components of the thematic material within this fugue. The subject itself contains three different note values: whole-note, half-note and quarter-note. Later in the piece, however, we find more rhythmic variety, including many eighth-notes and frequent syncopations (particularly half-notes tied to a quarter-note on the following downbeat).

The harmonic background of the subject comprises all the necessary steps for a full cadence. In the course of the fugue, we find essentially the following harmonizations:

(ex. 37)

In deciding what kind of dynamic design might be expressed by these five notes (with regard to their particular melodic make-up, rhythmic shape and implied harmonic progression), one finds that the subject of this fugue allows for two rather different interpretations. The choice between them strongly depends on how the individual performer values the facts mentioned above:

- A performer who perceives the specific power which emanates from the diminished fourth in bar 2 will no doubt interpret this striking interval as the subject's center of tension. This concept requires a tempo slow enough to allow for the melodic step to be fully savored.
- A performer who prefers to interpret the whole fugue with greater focus on rhythm (encouraged by the alla breve time signature) may feel that the long note D[#] in bar 3 carries the climax. Harmonically, this also makes sense as the beginning of this note represents the subdominant field within the cadence. This concept, in order to sound consistent, implies a generally faster tempo for the whole piece. There should also then be less emotional emphasis on the climax than in the first interpretation.

The choice between these two approaches is so much a matter of personal inclination that any academic reasoning would seem out of place. However, one little warning for performers: avoid trying to serve two masters at one time. An adherence to the second concept will necessarily have to under-emphasize the interesting interval in favor of the rhythmic pulse. Equally, an adherence to the first concept cannot, at the same time, stress the rhythmic element. In either case the subject should convey immense calm together with a peculiarly intense, introverted excitement.

I/4.2.2 The statements of the subject

The subject appears twenty-nine times in this fugue. (As this is a five-part fugue and fruitless discussions about whether there are two altos, two tenors etc. should be avoided, v1, v2, v3, v4, v5 is here used to refer to "voice one", "voice two" etc.)

- | | |
|-------------------|---------------------|
| 1. bars 1-4 v5 | 16. bars 54-57 v2 |
| 2. bars 4-7 v4 | 17. bars 59-62 v1 |
| 3. bars 7-10 v3 | 18. bars 66-69 v1 |
| 4. bars 12-15 v2 | 19. bars 73-76 v5 |
| 5. bars 14-17 v1 | 20. bars 76-80 v1 |
| 6. bars 19-22 v4 | 21. bars 81-84 v4 |
| 7. bars 22-26 v4 | 22. bars 89-92 v1 |
| 8. bars 25-29 v3 | 23. bars 94-96 v1 |
| 9. bars 29-33 v5 | 24. bars 95-97 v2 |
| 10. bars 32-35 v3 | 25. bars 96-98 v1 |
| 11. bars 35-39 v4 | 26. bars 97-100 v5 |
| 12. bars 38-41 v3 | 27. bars 100-102 v4 |

the existence of a counter-subject is not necessarily excluded. Let us therefore deal with this component of the material first.

At the place where one expects the first counter-subject to make its appearance, there appears a line which is both characteristic and independent, and which recurs later (see in the fifth voice from bar 4 D[#] to bar 8 D[#]). The only detail of this counter-subject that is a bit confusing is its length: CS surpasses the length of the subject which it is supposedly accompanying. (Yet, as the following will show, a different concept of phrase length is impossible.)

CS is taken up, although without its first note, in the fourth voice (see A in bar 7 to G[#] in bar 11). Hereafter, the counter-subject never appears again in its full range. There are, however, several segments which qualify as separate building blocks in this fugue. These shall be investigated briefly.

The immediately obvious segment to recur separately derives from the end of CS. It consists of a syncopation (see bars 6/7: F[#]), introduced sometimes by an upbeat (a quarter-note or two eighth-notes), and followed by a stepwise descent which ends in a smooth “hook”. This CS segment will be called M1; its frequent appearances can be verified in the five-part sketch (see M1 in ex. 40). It is interesting to observe that M1 occurs with greatest density within in the first section. This section (see bars 1-22d) is constructed in such a way that it generates a powerful dynamic increase, brought about by both the rising order of statements and the increasing number of voices. Owing to its dynamic gesture of relaxation, the effect M1 exerts in this context is one of soothing or balancing.

The first segment of CS also revolves round a syncopation which is, this time, followed by an inverted mordent figure (see bars 4/5). This figure is dropped and forgotten for a long time, but resurfaces in bars 41/42 (v3) and in bars 45/46 (v1) before eventually turning out to have been a forerunner of the third subject (see below). Because of this final relationship with the third subject, it is here called M3.

A last figure which deserves attention is the ascending tetrachord first introduced in bars 17-19 (see v5: G[#] to C[#], B to E). It accompanies the subject particularly between bar 23 and bar 35 where, quite in contrast to the effect of the above-mentioned M1, it reinforces the tension-increasing tendency. From bar 35 onward it turns into the upbeat of the fugue’s second subject (see below). Because of this later integration, it shall be referred to as M2.

After having identified the counter-subject as well as the smaller motives which, in part, derive from it, the stage is prepared for the other subjects in this triple fugue. Their appearance is connected – though not entirely corresponding – with the large-scale ternary design of the fugue. If one looked at the composition without knowing much about it, one would be able to distinguish three major parts:

- A first part featuring only occasional eighth-notes (until bar 35),
- a second part displaying a constant flow of eighth-notes (bars 36-93),
- a third part where the eighth-notes are again abandoned (bars 94-115).

It is at the outset of the second part, in the voice which moves in eighth-notes, that the second subject (S2) is introduced. Just like the main subject, S2 also appears with various modifications. Trying to pinpoint its main features one finds an upbeat (which, in its first statement, is the stepwise ascent of M2), followed by an ornamental line which, behind a sequencing one-bar figure, hides a whole-bar descent (see bars 36-40: G[#], F[#], E, D[#], C[#]). Both the exact length (i.e. the number of bars which expound the ornamental figure) and the exact metrical ending of the second subject remain open to constant changes.

The tension curve in this second subject, however, is quite unmistakable, with a short rise in the upbeat and an extended release in the descent. In comparison to the first subject, both the intensity and the urge seem reduced here. The character might be described as “introverted and relaxed”.

The beginning of the second large part of this fugue also marks the resurrection of M3. In terms of a pattern consisting of upbeat + syncopation + inverted mordent, it can be detected already in bars 36-38 (v5: G# C# B# C#) and, even closer to the original, in bars 39-41 (v4: B A# G# Fx E# Fx G#) and bars 45-46 (v1: D# C# B# A# B#).

As it finally discloses itself, the third subject (S3) takes up the more outgoing variants among the traits of M3 (the jumping-fourth upbeat and the inverted mordent in eighth-note motion) and adds, as a particular characteristic, the repeated-note splitting of the syncopation. The character of the third subject could be described as “extroverted and active”.

It is this very extroverted version which plays a major role in this fugue, from its initiation in bars 49-51 (v3) to the end of the composition. The dynamic development within S3 contains a rise towards the downbeat (i.e. to the last of the repeated notes), followed by a relaxation.

The following sketch shows the phrase structure and dynamic design resulting in the juxtaposition of the three subjects.

(ex. 39)

I/4.2.4 The episodes

Episodes are generally defined as “subject-free passages”. In a fugue with three subjects, only those bars which do not contain any subject at all would therefore truly qualify. These are very few. In the first part of the ternary design, before the entry of S2 and S3, there are only two short stretches; these are matched later in the fugue by another two:

E1	bars 10m-12m	E3	bar 88
E2	bars 17m-19m	E4	bars 109m-112 ₁

The most prominent feature in E1 is M1; the soothing quality of this motive defines this first episode as a softening break which allows breathing space before the plunge into the next span of tension build-up.

E2 is determined by M2. The role of this episode in the overall development of tension is therefore that of a link which continues the tension increase.

In E3, the little M1 figure which seemed long forgotten is briefly recalled, thus giving this episode again a calming quality.

Finally, E4 is conceived as a cadential close. Sounding as it does at the end of a longer dominant pedal which had already provided the backdrop for a tension increase, this cadence promises relief which it then withholds: its final chord is an oddity and deserves more detailed discussion. Following the dominant-seventh chord in bar 111 there are, theoretically, three different resolutions which a listener could expect:

- the tonic (C# minor),

- the Picardy-third modification of the tonic (C# major),
- or the interrupted-cadence chord on step vi (A major).

What Bach gives us is not one choice of these three but a combination – and the oddest possible combination, for that matter. Bar 112 contains in the left hand the A-C# third of the interrupted-cadence chord, simultaneously with, in the right hand, the E#-G#-C# of the Picardy-third tonic. This results not only in a polytonal effect but also in an implied clash between the (missing but implied) fifth E of the A major chord and the (sounding) E# of the C# major harmony.

What Bach expresses by using this artful though daring device seems to be this: the cadentially confirmed ending in the home key at this moment still leaves so much literally unresolved tension that it demands yet another pair of S1/S3 statements. However, these should not sound as a coda. Perhaps it is in order to achieve this effect of “belonging” that Bach created the incomplete harmonic resolution which binds the final cadence as a necessary completion to the one in bars 111/112.

I/4.2.5 Character, tempo, articulation, ornament realization

The complexity of both the rhythmic pattern and the structural design, together with the predominance of stepwise motion in all but the S3 upbeat, clearly favors the interpretation of this fugue as one of *rather calm* character.

Upon closer inspection of the emotional implications of this character it becomes obvious that there is a distinct hierarchy within the components of the material:

- The main subject is defined by a strong but suppressed, introverted urge;
- the second subject is generally lighter in its mood;
- the third subject shows more of a jolly, extroverted vivacity.

The three subjects appear in all possible combinations. Determining what kind of mood or spirit results from each of these juxtapositions lays a good foundation for an understanding of the entire composition.

- The coupling of S1 + S2 brings about a quality which is more serene, less urgent than that which the main subject possesses when reigning alone.
(S1 “introverted/intense” + S2 “introverted/relaxed”)
- In the S2/S3 combination, all the darker drive has gone. What is left is a momentarily intense quality, soon giving way to one of relaxation.
(S2 “introverted/relaxed” + S3 “extroverted/active”)
- When S1 is paired with S3, however, two strong forces join, expanding both inwardly and outwardly.
(S1 “introverted/intense” + S3 “extroverted/active”)

The range of tempo in this composition is confined on the one hand by the basic character which is *rather calm*, on the other hand by the time signature which requires an alla breve pulse. The ideal tempo results in an eighth-note motion which is unhurried but can nevertheless be clearly felt in half-bar groups.

The corresponding articulation requires legato for almost all melodic notes. An exception can be made within the third subject where the first interval, the ascending fourth, and the ensuing note repetitions may sound in a bouncing non legato in order to give credit to the special “outgoing” mood of this component of the material. The Urtext of this fugue does not indicate any ornaments.

The relative tempo of the prelude to the fugue which best does justice to both characters appears sets larger metric units in proportion. Owing to the strong half-bar feeling in both pieces, a very good effect is achieved like this:

half a bar	corresponds with	one bar
in the prelude		in the fugue

(Approximate metronome settings: prelude beat = 100, fugue beat = 66.)

I/4.2.6 The design of the fugue

As has been mentioned, the distribution of material in the C# minor fugue allows an immediate recognition of three parts. Within the first part, the full ensemble of five voices is attained only transitorily in bars 19/20; the fifth entry and most of the redundant subject statement sound in still reduced ensemble. After the ensuing distinct cadence (see bars 21/22) the number of voices drops to only three, a fact which suggests the beginning of a new “round”. This second section ends in full ensemble and with a pronounced cadence in bar 35, followed again by a reduction of the ensemble to only three voices.

The third section brings the introduction of the second subject sounding both against the main subject and independently, both in its original shape and in inversion (see bars 41-44). With the last eighth-note in bar 48, the third subject enters. Its immediate combination with both S1 and S2 marks the beginning of “something new”: the fourth section.

From here to the end of the large middle part, the fugue features two structurally analogous progressions:

bars 48-72	correspond with	bars 73-93
5 three-subject juxtapositions	:	4 three-subject juxtapositions
grouped 3 + 1 + 1	:	grouped 2 + 1 + 1
(bars 48-57 / 59-62 / 66-69	:	bars 73-79 / 81-84 / 89-92)
interspersed by two passages featuring only S2/S3		
(bars 57/58, bars 62-64	:	bars 79/80, bars 84-88)
rounded off by a passage with distinct cadential-bass steps		
(bars 69-71	:	bars 92-94)

After the end of these two sections – the fourth and fifth in this fugue – the second subject is dropped again. Instead of the three-subject juxtapositions, the sixth section commences with S1 and S3 in simultaneous stretto. All this together provides a picture of six sections, with the following statements of the main subject:

S1: I	bars 1-22	v5, v4, v3, v2, v1, v4;
II	bars 22-35	v4, v3, v5, v3;
III	bars 35-48	v4, v3, v2;
IV	bars 48-72	v1, v4, v2, v1-v1;
V	bars 73-93	v5, v1, v4, v1;
VI	bars 94-115	^{v1} v2, ^{v1} v5, v4, v1, v2.

As both the second and the third subject enter considerably later, it is to be expected that their own “rounds” do not entirely coincide with those of the main subject. For the fifteen statements of the second subject, four groups can be made out:

S2: I	bars 35-48	v1, v4, v5, v1;
II	bars 49-65	v2, v3, v1, v2;
III	bars 66-71	v5, v1;
IV	bars 72-94	v3, v5, v2, v1, v4.

The third subject enters last but seems the strongest amongst its rivals. It surpasses both the other subjects in the number of its statements; it catches up with the second subject by already finishing its fourth round in bar 92; and it equals the main subject insofar as it also builds a total of six rounds. The thirty-seven entries of the third subject are as follows:

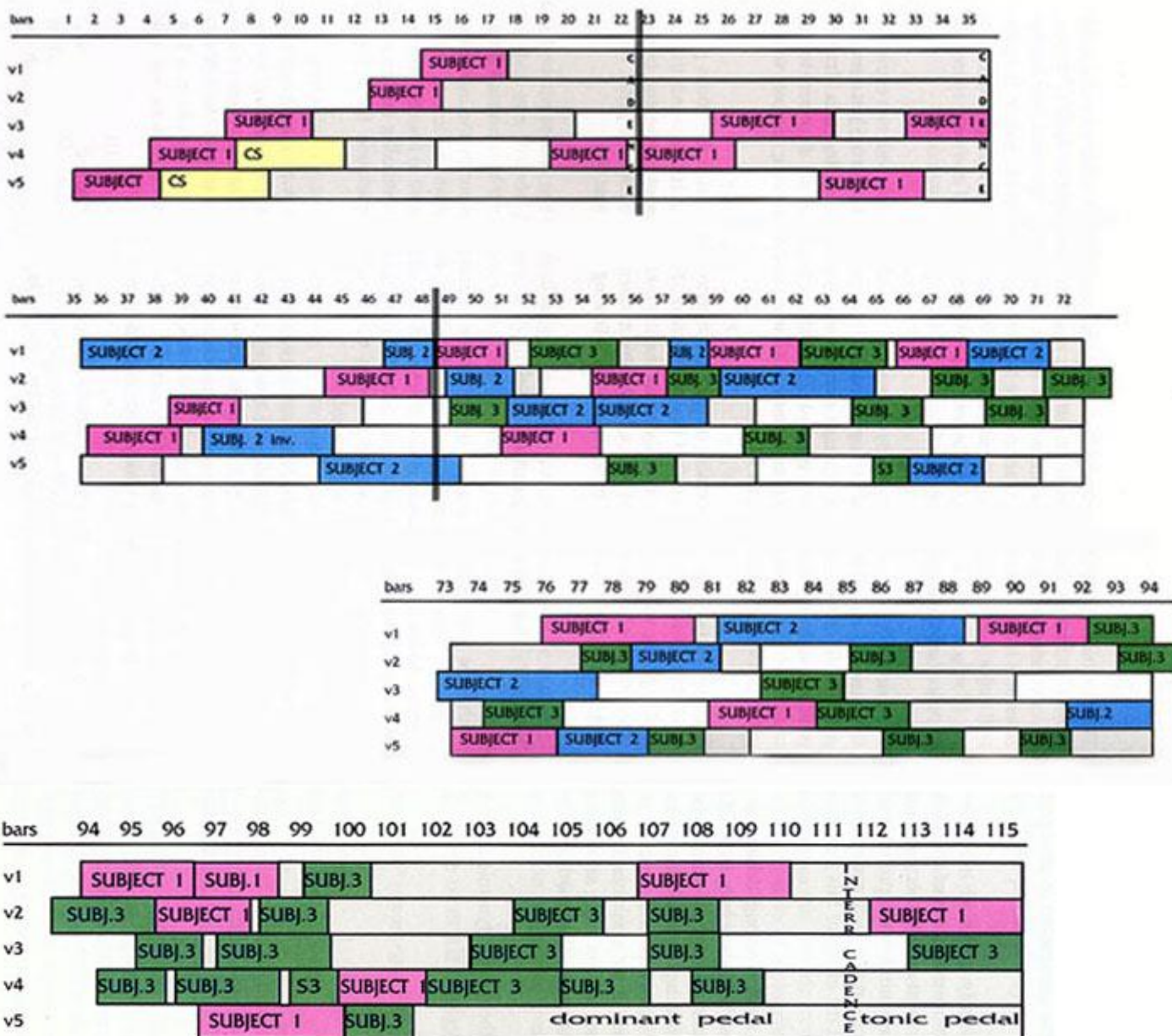
S3: I	bars 49-64	v3, v1, v5, v2, v4, v1;
II	bars 64-73	^{v3} v5, v2, v3, v2;
III	bars 74-84	v4, v2, v5, v3;
IV	bars 84-92	v4 ^{v2} , v5, v5;
V	bars 92-101	v1 ^{v2} , v4 ^{v3} -v4 ^{v3} , v2 ^{v4,v1} , v5;
VI	bars 102-115	v4 ^{v3} , v2 _{v4} , v3+v2 ^{v4} , v3.

The harmonic outline of the composition should be regarded with reference to the main subject. Its first six statements, all on the tonic and dominant respectively of C[#] minor, are concluded with a cadential close in G[#] minor in bar 21/22. The next four entries describe a modulation to the relative major key, through F[#] minor, C[#] minor, B major to E major with its cadential close in bar 34/35. The third section finds S1 returned to the C[#] minor field; it closes, interlocked with the beginning of the next round, in C[#] major (see the downbeat of bar 49).

The fourth section commences firmly anchored in the subdominant, with two entries in F[#] minor and one in the relative key A major. However, the last two S1 statements revert to C[#] minor, with the repeated entry in the first voice ending in a floating position on the dominant seventh chord. The fifth section

confirms the return to the tonic by placing all its four S1 statements on C# itself and concluding this part with a cadential close in C# minor (bars 93/94).

The final section basically remains on the tonic; stretto entries occur in various pitch levels but all relating to an implied key of C# minor. From bar 105 onwards the G# pedal (giving way only momentarily to its leading-note F#) prepares the end of the composition which is reached with a final subject statement over a tonic pedal. For a sketch of the design in the C# minor fugue, see following ex. 40.



I/4.2.7 The development of tension

Within the first section, a gradual rise in tension is brought about by the increasing number of voices, enhanced by their special order of entry from the lowest to the highest. As has been mentioned above, there are forces which serve to hold the tension back slightly and prevent a premature full-fledged climax:

the relaxing tendency of M1 and the fact that this section (belying the obvious expectation for a fugue exposition) does not close in full ensemble.

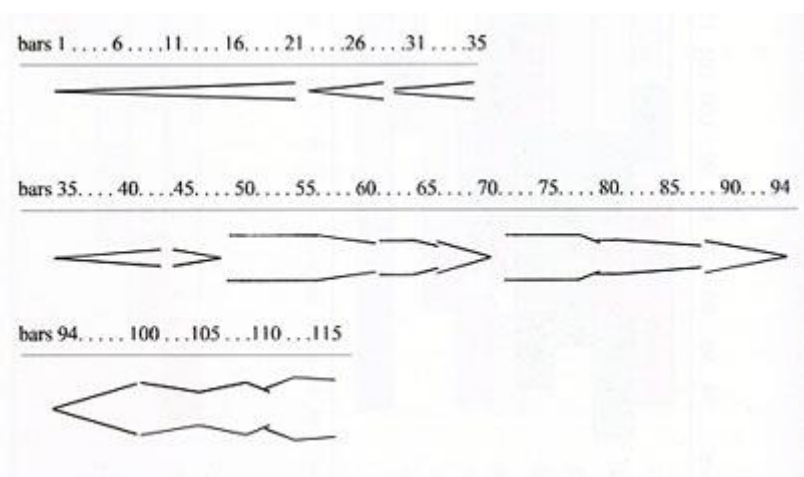
The second section brings the modulation to the major mode and with it a six-bar-long stretch in five voices. In addition, the calming influence of M1 is replaced by the forward-pushing gesture of M2. Thus the second tension increase is considerably stronger than the first one. It creates the impression that it means to unite the first two sections under one common “target”. After this, the third section maintains a low tension profile as there is neither an increase in the number of voices nor any harmonic or structural device which might engender a rise.

The two analogous sections which follow also correspond in their dynamic curves. The climaxes fall at the respective beginnings, where the three-subject juxtapositions create a state of very high intensity which abates only very gradually, through the interspersed S2/S3 pair statements, the following entry group and the final cadential-bass steps. Towards the end of the fourth section, this tension decay is melodically supported by spans of chromatic descent (see bars 67-69 v1, 69-70 v2, 70-73 v1). An equivalent in the fifth section can be observed in the unexpected re-emergence of the soothing M1 (see bars 68/69).

At the beginning of the sixth section, the previously achieved intensity of three simultaneous subject statements is surpassed by the combination of the two stronger ones which, for several bars, now both sound in stretto. (Whether such unheard-of density can actually be grasped by the human ear and mind – most probably it cannot – is beside the point, last but not least because Bach’s music was certainly to a large extent written “For the Greater Glory of God”. But the effect of this immense density is undoubtedly stunning.)

The middle of this section then brings forth a sudden strong decline in tension, enhanced by the chromatic descent in the uppermost voice (see bars 101-105). As this descent touches ground, it is met by the commencement of the dominant pedal note which gives new impetus to the tension which rises again much faster than it had previously fallen. A parallel statement of S3 tries to surpass the earlier strettos in intensity and is supported by the harmonic sidestep to the diminished seventh chord (see bars 107-109). Even the following cadence does not yet bring about the deserved relief but instead a climax of yet different means: the momentarily bitonal cadence ending mentioned above.

The following diagram attempts a visualization of the overall dynamic development in the C# minor fugue (ex. 41).



WTC I/5 in D major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/5.1.1 The prelude-type

Underneath its virtuoso surface structure, the D-Major Prelude is strongly determined by harmonic processes. Its sixteenth-note pattern does not develop motives; any recurrences are transpositions which occur exclusively in connection with analogies in the harmonic development.

I/5.1.2 The design of the prelude

The first cadence ends on the downbeat of bar 3, after a harmonic progression from the tonic (bar 1) via ii^7 and V^7 (bar 2) back to the tonic. This cadential close comes with a – very subtle – structural break.

The harmonic progression which follows brings a modulation to the dominant key. During this modulation, the right-hand ornamental line seems to resemble that of the first cadence (compare bars 3 and 4 with bar 2), and its end is an exact transposition of the previous ending bar (compare bar 5 with bar 2). As before, this cadential close again signifies the completion of a structural unit.

There are altogether eight closed harmonic progressions (note that each phrase begins with the second sixteenth-note in the right-hand pattern and ends on a downbeat):

bars 1 – 3d	D – D	bars 14 – 20d	D – G
bars 3 – 6d	D – A	bars 20 – 22d	G – G
bars 6 – 12d	A – E	bars 22 – 25d	G – D
bars 12 – 14d	E – D	bars 25 – 35	D – D

It seems worth mentioning at this point that this prelude, like several others from the first volume of the *WTC*, derives from a much shorter model in Bach's *Note Book for Wilhelm Friedemann*. The original version contains twenty-two bars. Of these, bars 1-17 appear unchanged in bars 1-17 here, and bars 19/20 from the original can be found in bars 27/28 of the *WTC* version. An interesting question is therefore whether the basic binary form of the *Wilhelm Friedemann* version has only been extended, or whether the addition of bars 18-26 changes the structure.

No portion of the D major prelude is repeated literally. There is, however, a striking five-bar symmetry, in that the beginning of the piece is restated in the middle of the prelude in the subdominant key (compare bars 1-6d with bars 20-25d). The modulation from tonic to dominant which takes place in the second phrase thus serves, in its transposition launched from the subdominant, to return to the home key in the manner of a typical Baroque recapitulation.

Besides this there are several further analogies:

- The three-bar modulation in the second section recurs as a "bracket" in the subsequent portion: compare bars 3-5d with bars 6/7 and 10-11d.
- The beginning of this modulation then reappears once more at the outset of the ensuing section:

compare bars 3-4m with bars 14-15m.

- A further correspondence includes: two and a half bars built on a pedal note, followed by another one and a half bars which conclude the modulation (compare bars 8-12d with bars 16-20d). The bass line of the two passages differs slightly while the right-hand part is an almost exact transposition, with only a tiny adjustment in the last half bar.

I/5.1.3 Practical considerations for performers

The choice for the tempo in the prelude should be made after considering the following two aspects:

- The bass line is composed as a hidden two-part structure – this might indicate that behind the given time signature of 4/4 an *alla-breve* pulse should be made perceptible
- The treble shows a pitch pattern which is easily unmasked as an ornamentation of broken chords. A melodious treatment of this line would mislead the listeners who will expect a true melody which then does not materialize.

The appropriate tempo is therefore fairly fluent: fast enough to give the impression both of a half-bar pulse and of a non-melodious, arabesque-like right-hand patterns.

The corresponding articulation is legato or, better, quasi legato for the right hand. The left hand plays non legato; because of the obvious rests in the bass part, this indication is more important for the touch and coloring of the notes than for their actual length.

Exceptions from the patterns established in bar 1 only begin with bar 27 and become more considerable from bar 32 onwards. Here, a peak-note line in the right hand is marked as a suddenly emerging melodious upper voice. Due to the features of this line – syncopated rhythm and keynote / leading-note / keynote (*do-si-do*) formula – legato playing is indispensable here. (This can either be done by changing 4-5 on each of the three syncopations, or by playing these notes with 4, 5, 4 right away). At the same time, the newly created "tenor" should sound non legato. The same holds true for the second half of bar 34 where the "soprano" presents again the typical closing-formula while the simultaneous quarter-notes in the left hand continue the non legato touch.

The only ornaments appearing in this prelude are the two arpeggios in bars 33 and 34. They invite the same questions as those asked in the C minor prelude:

- Is the top note of the arpeggiated chord primarily a melodic note, or
- is it primarily part of the chord, with no more melodic value than any note in the middle register of this chord?

The answer, as can easily be seen from the score, will be different for the two cases. In bar 33, the treble D is both an immediate continuation of the preceding melodic motion and the point of departure for the continuing line. In bar 34, however, it is actually the bottom note C[#] which is the logical target of the run in the preceding bar, while the upper-register B^b is only a chord note. This B^b is, admittedly, a chord note of high tension, representing the diminished seventh of this chord and moving up chromatically to the B natural in the chord which follows. Yet it is very important to realize that both these peak notes do not carry the melodic flow which can rather be traced like this:

bars 32 33 34 35
 F₂ E₂ D₂ C₂[#] D₂.....(D₁) C₁[#] D₁ D₂ C₂[#] D₂

Recognizing this melodic progression is particularly vital for a performer because it will influence the execution of the two arpeggios:

- In the first arpeggio (bar 33), the melodic note D should sound on the beat, together with the bass note A, while the remaining notes of the arpeggiated chord follow swiftly.
- In the second arpeggio (bar 34), however, the melodic target note is the C[#] (at the bottom of the chord) which, according to the rules of Baroque ornamentation, will at any rate fall *on* the beat; the top note B^b sounds here at the end of the broken chord, slightly after the actual downbeat.

I/5.1.4 What is happening in this prelude?

The first two bars establish the key of D major with a simple cadence. The harmonic curve contains no unexpected features; the subdominant harmony, here represented by a ii7 chord, is reached in the first half of bar 2, followed by the dominant and the resolution onto the tonic. The dynamic curve in this section is thus still very soft and may resemble something like this:

bars 1 2 3
 p mp⁻ p

The ensuing modulation builds up slightly more tension towards a climax, in the first half of bar 4, on the inverted seventh chord which brings the shift from one key area to the next. After this harmony, the tension subsides gradually until the resolution on the downbeat of bar 6.

bars 3 4 5 6
 p mp⁺ mp⁻ p

The next bars represent a transposition of the preceding ones, with a similar climax in the first half of bar 7. However, the last three notes in bar 7 announce a change which materializes in the F[#] pedal extended for two and a half bars. During these bars (bars 8/9), the tension which had just begun to decrease after the climax, rises again. This rise is more gradual than the former increases in tension because it is not triggered by an active harmonic step but rather by the persistence of the pedal note.

Bar 10 which ends the pedal is at the same time the transposition of bar 5. In keeping with this structural analogy, the tension-decrease should end on the downbeat of bar 11 where the target harmony of this modulation, the E minor chord, is reached. Yet Bach decides not to settle on this harmony. As if the target key had been reached too suddenly after the buildup over the pedal, he adds another bar which confirms the E minor tonality (bar 11). Then, with a swift turn, he reverts to the key of D major which is again confirmed by an extra bar on the same tonic (see bar 12 = modulation back to D, bar 13 = remain on D).

These two bars, which in the harmonic development represent a modulation of their own, thus appear really like an appendix to the previous progression. The entire segment, expressed in terms of dynamics, will appear somewhat like:

bars	6	7	8	9	10	11	12	13	14
	p	mf ⁻	mp ⁺	mf ⁻	mf	mp ⁺	mp ⁻	p ⁺	p

A process roughly similar to that described above can be found in the following section. The first bar is yet another version of the active part of the modulation (compare bar 14 with bar 3, in octave displacement). After a renewed climax in the first half of bar 15, the tension begins to fall but is suspended in its descent by a pedal of two and a half bars on B (bars 16-18). Here, the hidden two-part structure which had so far characterized the bass pattern is replaced briefly by a broken chord pattern, thus giving these two bars the even larger frame of whole-bar pulses. Bar 18, which concludes the pedal, seems to lead to a new key (A minor); yet this again is not established but passed through on the way to G major. However, this time there are no repetitions of the two target harmonies. As in the corresponding bars above, this final small-scale modulation sounds like an appendix to what preceded.

bars	14	15	16	17	18	19	20
	p	mp ⁺	mp	mp ⁺	mf ⁻	mp	p

The recapitulation of the first five bars should, of course, also retrace the dynamic outline from the beginning of the prelude; in other words:

bars	20	21	22	23	24	25
	p	mp ⁻	p	mp ⁺	mp ⁻	p

The last section of the prelude begins with two bars which prepare the final pedal on the dominant. Unlike similar final pedals in many other preludes, this dominant bass note is not preceded by its leading-tone. Here, instead, this leading-tone seems made up for in the middle of the pedal (compare bar 30 beat 2 with bar 31) when it combines with virtuoso peak pitches in the right hand and thus creates a very strong emotional climax. After this interruption, the dominant pedal continues – partly as a real note, partly implied under the cadenza-like setting of the right hand in bars 33/34 – and only resolves onto the tonic in the very last bar of the piece.

For the dynamic design this means a steady increase, with only slight inflections on the surface in those bars where the harmony seems to come to a halt, i.e. bars 30/31 and bar 33. The overall dynamic development in this section may be described as follows:

bars	25	26	27	28	29	30	31
	p	mp ⁻	mp	mp ⁺	mf ⁻	mf	mf ⁺
bars	32	33	34	35			
	poco f ⁻	poco f	poco f ⁺	f			

The following diagram attempts to capture the dynamic layout within this prelude:

(ex. 46)

WTC I/5 in D major – Fugue

I/5.2.1 The subject

This subject is roughly one bar long. It commences after one quarter-note rest on the second beat of bar 1, ends on the downbeat of bar 2, and consists of one indivisible phrase. Its pitch pattern contains a predominance of steps, only interrupted by one major-sixth leap in the middle of the phrase. This leap is not one of the so-called "high-tension intervals".

The rhythmic pattern within the subject includes three kinds of note values which differ considerably from one another: the longest (the dotted eighth-notes) are six times as long as the shortest (the thirty-second-notes)! Further along the composition, quarter-notes provide a fourth note value.

It is interesting – and important – to see that this particular rhythmic organization bears an allusion to a definite musical genre of that time. The almost constant presence of the dotted-note group (in this case the dotted eighth-note plus its complement, one sixteenth-note), interspersed with ornament-like groups of very fast note values, is typical of the French overture. The fact that this fugue is modeled on such a distinct character piece accounts for most of the particularities which would, without this background, seem somewhat disconcerting in a fugue.

The subject's harmonic background is that of a simple progression, with the sequence T S D7 T (ex. 47).

All musical aspects in this subject unite in favoring one note for the climax: the dotted B in the middle.

- Harmonically, this B represents the active step (the subdominant);
- melodically, it is reached in the sudden interval leap of a major sixth;
- rhythmically, it represents a surprisingly long note value after the bustling beginning.

While the tension-rise before this climax sets out from the keynote in complete relaxation and escalates in almost no time, the subsequent resolution of the tension is much more gradual. As the subject ends on the third (F[#]), the tension does not entirely fall back to the level of the beginning.

I/5.2.2 The statements of the subject

There are all together 12 subject statements in this fugue:

- | | |
|-----------------|----------------------|
| 1. bars 1/2 = B | 7. bars 11/12 = S |
| 2. bars 2/3 = T | 8. bars 12/13 = A |
| 3. bars 4/5 = A | 9. bars 13/14 = S |
| 4. bars 5/6 = S | 10. bars 14/15 = T |
| 5. bars 7/8 = B | 11. bars 15/16 = B |
| 6. bars 8/9 = S | 12. bars 24/25 = B+S |

(ex. 48)



This subject suffers none of the modifications otherwise encountered in Bach's fugues: it is never inverted, augmented or diminished, and its pitch and rhythm patterns remain untouched.

The only exception to all that has just been said occurs in the final statement (see bass, bars 24/25) which some scholars do not consider equal to the other statements. This entry appears extended in both directions. The bustling thirty-second-note group from D (see bar 24, beat 4) is preceded by three similar groups which gradually ascend in fourths towards the tonic level (see the groups from B, E, A). Symmetrical to these anticipating figures there are sequences in bar 26 which follow the second half of the subject: the original notes of this half, G F[#] E D (beginning here with an octave displacement) recur in a first transposition a fifth down (C B A G), while a second sequence is modified to accommodate the cadential-bass steps (F[#] E D A).

There are no real strettos in this fugue. The final entry, however, is partially set in parallels – and as the parallel begins one beat (i.e. one whole figure) later, the deceptive impression of a stretto may arise for a moment. To complete this unusual entry, in its second half and throughout its sequences the three upper voices move in rhythmic consensus but in contrary motion (see right-hand chords in bars 25/26). The strong homophonic element in this final, extended subject statement enhances the special place it occupies within the design of the fugue.

I/5.1.3 The counter-subjects

The usage of counter-subjects is somewhat unusual in the D major fugue; it reaffirms the fact that the French overture, an essentially homophonic genre, is one of the spiritual parents of this composition.

CS1 That musical entity which appears in the regular place of the first counter-subject (i.e. which sounds in continuation of the first subject statement and against the second entry) consists of the notes G-F#-E-D-E-A (see B: bars 2/3). When checking the three basic requirements of a counter-subject – that it be easily recognizable, that it be independent and that it be taken up again later in the fugue – we find that all are met. Then why do we hesitate to call it a counter-subject? One reason is that it sounds very much like a cadential-bass pattern. Another, more important reason is that it does not wander from voice to voice as a polyphonic idea should, but remains essentially at the bottom of the texture, thus reinforcing the impression of a cadential bass.

In its longer notes (F# D E A), this cadential-bass pattern represents the chords vi-IV-V-I. Though there are, throughout the fugue, many variations of detail, this basic harmonic progression remains unchanged.

CS2 The third subject statement is the place where one expects the next contrapuntal idea to enter. Indeed, what emerges in the tenor in bars 4/5 is again recognizable and independent from the voices around it; furthermore, it recurs frequently. However, the rhythmic shape and pitch pattern of this note group D-C#-D are that of a typical closing-formula.

CS3 Similar conditions prevail with regard to the third counter-subject: it is introduced in due place (see tenor bars 5/6, C#-B-A), fulfills theoretically all the conditions for a fugal counter-subject, but lacks melodic character and conviction. Instead, this figure again sounds like an integrated inner part of a cadential formula.

This having been said, it is time to prove that, "according to the rules", this composition is indeed a fugue with three counter-subjects. The following diagram shows how the statements of the subject are accompanied. (* = Counter-subject appears varied: second note tied over, no resolution)

entry no.	2	3	4	5	6	7	8	9	10	11
bars	2/3	4/5	5/6	7/8	8/9	11/12	12/13	13/14	14/15	15/16
CS1 in	B	B	B	T	B	B	B	B	B	–
CS2 in	–	T	A	–	A	–	S	A*	S*	–
CS3 in	–	–	T	–	T	–	–	–	A	A+T*

Dynamic shaping in the contrapuntal figures allows for little independence.

- The cadential-bass pattern of CS1 should logically approach the note which represents the subdominant as its climax – a climax which thus coincides with that of the subject.
- Equally, CS3 with its quarter-note/half-note/quarter-note rhythm will accent the half-note – which falls again on the same beat as the other climaxes.

- Only the syncopated CS2 would sound in diminuendo – that is it would if it were left alone; but then it is hardly ever in a position to do as it should, since its first note more often than not is identical with that of the subject beginning (see bars 4, 5, 8, 13). The dynamic rendition of these four parts thus gives a distinctly homophonic result.

Sketch of phrase structure and dynamic design (ex. 49):



I/5.2.4 The episodes

The subject statements in the D major fugue are interspersed five times with episodes, the last of which is of substantial length. They are:

E1	bars 3/4	E3	bars 9-11	E5	bars 16-23
E2	bars 6/7	E4	bar 13 (beat 1)		

Among the three motives which make up the episodes, there is one which uses the thirty-second-note figure from the subject beginning. This figure appears in four of the five episodes. In addition, E5b (bars 17-23) is dominated by the dotted rhythm of the second half of the subject. It can therefore be stated that most of the episodes in this fugue are closely related to its subject.

The first episode motive (M1) is introduced in E1. If one were to leave aside, for a moment, the ornate surface pattern and reduce the given lines to a simpler structure, M1 would emerge as being built on a descending step of two syncopated half-notes which appear in parallel sixths (see B: A-G, T: F[#]-E). As such, M1 merges with the varied version of CS2 as it is found e.g. in bars 13 and 14.

A similar underlying framework can be detected in E2 (see S: bars 6/7), and, in variation, in two cadences later in the piece (see S: bar 20, S+T: bar 22; the second syncopation gives way to a resolution on the ending downbeat here). In whichever version M1 occurs, the tension will always show a gradual decrease.

The second episode motive (M2), introduced in bar 6, derives from the subject's thirty-second-note figure. Despite its obvious relationship to the subject, it may well have a different dynamic outline, with the thirty-second-note figure relaxing instead of building up towards a climax. There are three reasons for this view:

- Firstly, M2 ends, in bars 6/7, with a perfect fourth – an interval of no particular tension and certainly much less dramatic than the subject's sixth;
- secondly, all further statements of M2 (see E3, E4, E5) begin on the downbeat of the bar;
- thirdly, the structure of the fugue might no longer be intelligible for listeners if all statements of M2

sounded like subject entries.

In other words, while in the subject this figure prepares the climax and represents therefore a strong tension-increase, within the episodes it stands on its own and could well have its emphasis at the beginning and diminish through the running notes.

The third episode motive (M3) is related to both the subject and the cadential-bass figure (CS1) in that it picks up their dotted rhythm. M3 appears simultaneously in three voices: A+T present a simple version while the soprano, beginning one beat earlier, replaces the expected dotted eighth-note with a written-out "inverted mordent". (Thus, in an imagined simplified version, this motive would sound like parallel sixth chords; see bars 9/10, 17-19.) As M3 is composed of descending sequences, the dynamic gesture is that of a diminuendo.

E4 and E5b build on combinations of these three motives while E5a (bars 16-17d), confirming the E minor key reached in the preceding subject statements, is a mere cadential close. Between the episodes there exists only one immediate relationship: segments of E5b recall E3 (compare bars 17-19 and 21 with bars 9-11).

These are the roles the episodes play in the development of the fugue:

E1 with its underlying lines of parallel syncopations links two pairs of subject entries (bars 1/2 and 5/6) within the same section.

E2 because of its very similar upper part gives the same impression, although in terms of structure it clearly opens the second section. By creating this relaxing effect in front of what should be a new impulse, Bach seems to thread the first two sections closely together, so that the feeling of a structural ending only arises when a new tonal sphere is reached, i.e. with the downbeat of bar 9 which establishes B minor).

E3 sounds self-contained; it seems intended as a buffer between two larger portions of the piece.

E4 again serves as a link; it is only one beat long and may easily pass unnoticed if the performer forgets to distinguish it in tone color from the surrounding subject entries.

E5a as has already been mentioned, is a cadential close and thus brings a feeling of relaxation.

E5b The extensive second segment of the last episode is again very much self-contained. After descending sequences (bars 17-20) it regains tension in a dense imitative interplay of the thirty-second-note figure (bar 20). The following cadential close (see bar 21d) cannot dissipate all the excitement that had been built up; it therefore fails to serve as a convincing announcement of the forthcoming end of the piece. Instead, reinforcement is needed which Bach creates by repeating, after another short quotation of M3, the cadence in a more traditional pattern (see bars 21-23).

I/5.2.5 Character, tempo, articulation, ornament realization

The character of this fugue is certainly determined much more by the particular mood of the French overture upon which it is based than by the conventions which it shares with other polyphonic compositions. It might be described as "stately", lively but not light. As articulation in French overtures was an intricate affair, it has to be discussed separately for each of the rhythmic patterns.

- The thirty-second-note groups are obviously legato. They are virtuoso figures which should by no means sound melodious – this already gives a first indication for a minimum tempo.
- The dotted-note groups reflect the stately character of this piece best if played in a rather heavy non legato.
- The longer note values in the subject's companions require three slightly different types of articulations:
 - * neutral non legato in the cadential figure of CS1
 - * a more melodious non legato in CS3
 - * true legato in the do-si-do formula of CS2
- Finally, the sixteenth-notes in the upper part of M3 could all be played legato. However, if one wished to emphasize the underlying dotted-note patterns, it would make sense if one carefully articulated the structural details. The first three sixteenth-notes in each group, i.e. those which can be read as a written-out "inverted mordent", are then played legato, while the fourth sixteenth-note sounds as non legato as the accompanying voices.

As the prevalent features in this fugue and the preceding prelude are so strikingly different, the risk of monotony does not arise and the tempo proportion may be simple; in other words, the pulse remains steady throughout both pieces.

one half bar (or two quarter- notes)	corresponds with	one quarter-note
in the prelude		in the fugue

(Approximate metronome settings: prelude beat = 120, fugue beat = 60.)

The fugue contains three ornaments which, according to their print size in the Urtext edition, originate from Bach's own hand: they are the cadential ornaments in bars 20 and 22 and the grace-note in bar 10.

- The ornament in bar 20 is written as a mordent and should consist of four notes (D-C#-D-C#). A realistic speed for this mordent is probably to play the first three notes as a triplet of sixty-fourth-notes against the first two thirty-second-notes in the left hand. (Anything slower, like a motion in thirty-second-notes, would create an awkward D-C# against C#-D.)
- The compound trill in bar 22 needs more notes (and thus much more practice). The symbol indicates a "turn + mordent" figure, which requires eight notes (D-C#-B-C#-D-C#-D-C#). These have to be fitted into less than a dotted eighth-note as the anticipation should come after a short stop. A brilliant sixty-fourth-note execution, with the final C# on or before the dot, is the only solution.
- The grace-note in bar 10 represents an appoggiatura; it may, however, only be held for a sixteenth-note in order to avoid the D-C# parallel with the bass. Again, the decision to play it is one that must be maintained through the whole piece.

Other ornaments stem from copies by Bach's pupils; they may or may not go back to the master's suggestions but are certainly worth being considered.

- The subject could be played with ornaments on two of its dotted notes. The first is an inverted mordent (to be played with a whole tone neighbor note in all statements apart from those in bars 8 and 15). The second is a mordent which could comprise three or, better still in the context of an overture style, five notes. Both ornaments have to be treated with consistency: they are either omitted completely or included in each subject statement.
- The mordent in M1 (see T: bar 3) seems inconsequential but sounds pleasant.
- The inverted mordent in bar 15 may serve to enhance the fact that this subject statement, unlike all the others, ends unresolved. No conclusions for other entries need to be drawn.
- The two cadential ornaments in bars 16 and 26 are very typical. Both begin with the main note, ascend twice to the upper neighbor note and end in a suffix. Their rhythmic realization depends on a decision which, unique to this particular fugue, has great impact on the performance in general:
 - * Performers who place the emphasis on the French-overture character of the piece will render these ornaments in the appropriate style, i.e. as fast as possible, concluding it in the time span of a dotted eighth-note or less and leaving ample room for a *point d'arrêt* stop.
 - * Performers who wish to stress the fugue will interpret the compound-ornament symbol as an indication for a note-filling trill; they will therefore sustain the initial main note for a sixteenth-note which is followed by three regular thirty-second-note-pairs.

This brings the focus to a rhythmic feature which should be mentioned in this context. French overtures are known to contain "over-dotted" rhythms. This means that some of the notes written with single dots were traditionally played as if they were double-dotted.

Again: whether one wishes to carry the imitation of the genre piece as far as this and play this composition in the style of a true French overture, or whether one decides to regard it as "after all, a Bach fugue", depends on personal taste. In the first case, however, it is vital to know that the over-dotting does not apply equally to all dotted notes but only to those which

- are complemented by a single note
- fall on one of the strong beats in a bar
- are not accompanied by lines that indicate normal dotting.

To give some examples: over-dotted eighth-notes are possible in bar 1 on beat 3, in bar 2 on beats 1 and 3; in bar 4 on beat 3, and in bar 5 on beats 1 and 3. In the episodes bars 3/4 and bars 6/7, however, the strong-beat notes are each complemented by three faster notes which must sound in their written value. In bars 9/10, the spelled-out ornamented version of the upper part indicates that the parallel voices, too, are to be played as written. As a result, the following pattern is possible:

- Subject and CS1 can be double-dotted in their middle (beat 3)
- the subject's ending note can be double-dotted when followed by another subject statement (bars 2,

5, 12) or a sequence (bars 25/26), but must be simply dotted when followed by a group of notes (bars 8, 14)

- all episodes in this fugue seem not to allow for double-dotting, except perhaps for the notes in the cadential formulas (beat 3 in bars 20 and 22).

I/5.2.6 The design of the fugue

There are a few indicators of structural design in the surface features. The first subject statement to appear, after the initial buildup of the ensemble, in reduced number of voices is that in bar 11. The two-part setting here constitutes quite a dramatic reduction from the full ensemble of bars 5 and 7/8). Furthermore, as mentioned above, there is only one among the episodes which manifestly concludes a section: the episode in bars 15/16. From these findings alone we can thus deduce that there are two partitions in this fugue: one in bar 11 (after beat one) and another in bar 17 (after the downbeat).

However, the assumed first section of the fugue with its six entries contains one subject statement more than it "should". This section must, therefore, consist "under the surface" of two sections. The same holds true for the second section: here it is not so much the number of entries but the fact that the soprano sounds both at the beginning (bars 11/12) and in the middle (bars 13/14) which points to a design with sub-grouping.

The third section also is, without doubt, quite unusual in a fugue. It consists mainly of an extensive episode which is twice interrupted by a cadential formula reconfirming the return to the home key. Its last portion finally leads into a subject statement which itself sounds quite different from what one might expect: luxuriantly extended at both ends, the expected contrapuntal texture is abandoned for parallel motion (first half) and homophonic chords (second half).

These results are supported by the harmonic development in the composition. After five entries in D major, the sixth entry is in the subdominant. This begins a modulation which passes through the relative key B minor (bar 9) and returns to the subdominant G major (bar 11). The point at which this new key is established coincides with the subject statement in reduced ensemble which, as was mentioned, indicates the beginning of a second section. On closer inspection two more details are discovered:

- Although the fifth entry (bars 7/8) sounds in full four-part texture, it is accompanied by only one of the contrapuntal figures – the other two are substituted by material which reminds one much more of the episodes.
- This statement is also the first one in the fugue to end, not in a resolved root-position chord, but instead in an inverted seventh chord.

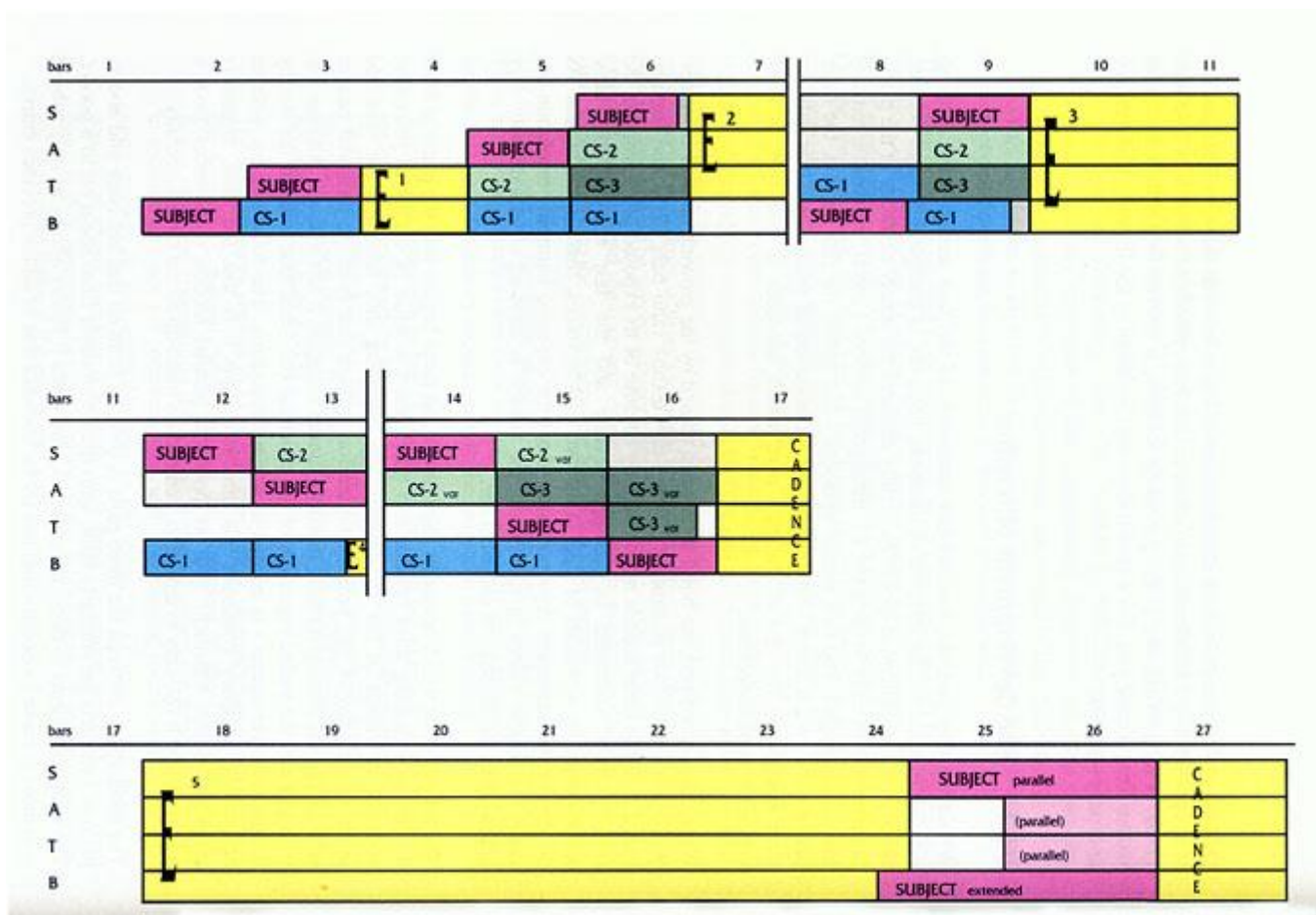
This entry is thus weakened both with regard to its surroundings and in its harmonic stability. The concluding D⁷ chord links it to the target key, G major, of the subsequent modulation. In other words, Bach created two subtly distinct structural levels. On the obvious level, the first part of the fugue is ten bars long; on a sub-level, this part consists of two only slightly separated sections. Among them, the first contains the buildup of the ensemble in an ascending order of voices and the successive introduction of all three contrapuntal figures, while being harmonically static. The second begins with the subject accompanied only by CS1 and two neutral lines in homophonic pattern; it is also harmonically weakened by its resolution onto a chord which is not only inverted but comes with an additional seventh and thus tends towards a resolution onto the key of G. The second subject statement of this second section brings

both the expected new key and the four-part ensemble with all three contrapuntal figures. This latter fact relates it to the fourth entry (the last of the first section).

The second part of the fugue shows a similar sub-surface split into two sections. These are strung together even more closely and are hardly distinguishable when heard for the first time. Indicators appear again in the harmonic development:

- The subject statement in bar 11 sounds in the new key G major and in two-part texture. It is followed by an entry in three-part ensemble which modulates into the relative minor key (see bar 13: B minor). This fact relates it directly to the sixth entry which brought forward the same modulation (compare subject bars 8/9 with subject bars 12/13).
- The ensuing entry returns to D major; in addition, its resolution chord contains the seventh (C natural) which relates this statement to the fifth entry in the fugue – the first statement in the second section. Further, the three-part texture is retained and not yet complemented with the missing fourth voice. The next entry sounds in full ensemble and in the expected G major; but again, its resolution chord includes a seventh (this time the major seventh). The third entry in this group reaches the relative of the subdominant: E minor, the key of the explicit cadence at the end of this part.

Looking at the strange balance attempted in this fugue between these sections and the final episode E5b, it is interesting to observe that this episode of seven bars (see bars 17-23) is longer than any of the preceding sections; it is even longer than the entire six-bar long second part. For a sketch showing the design of the fugue in D major, see ex. 50.



I/5.2.7 The development of tension

Within the first part, the four subject statements of the first section bring forth an increase in texture. The increase in loudness, however, is comparably small because already the first statement should have fully declared the stately character of the piece. From the fourth entry to the sixth, i.e. throughout sections I and II, the tension remains almost unchanged. The two similar episodes – one within the first section, the other between the two sections – bring slight but inconsequential relaxations. It is only the third episode, at the end of the first part, which succeeds in conveying a more noticeable tension-decrease.

Within the second part, the buildup is again caused by the growing number of voices. While among the two statements in three-part texture (alto bars 12/13 and soprano bars 13/14) the latter sounds more outgoing because of its exposed pitch position, the ensuing tenor statement in four-part texture and the last entry in the bass, accompanied by a parallel of CS3 in the two middle voices, share in the climax. As the end of this statement does not bring about the expected harmonic resolution but keeps the middle voices in suspension, the tension is allowed to subside only very gradually in the subsequent cadential bar.

The long episode which opens the third part of the piece begins with the material from the tension-releasing third episode and thus creates a sense of continued relaxation until the downbeat of bar 20. Immediately following this, however, the fourfold imitative interplay of M2 propels the tension so high that even the cadential pattern with its typical closing-formula mordent cannot dissipate it fast enough. Another bar with M3 and the varied repetition of the cadential bar – this time without the stormy thirty-second-note stretto – is needed to achieve relaxation. The following bar with its descending tendency continues this direction. Thus it is that the final, unusually extended subject statement with its powerful parallel motion commences from a relatively soft level, only to unfold its tremendous buildup all the more forcefully.

The relationship between the three parts is obvious from all that has been said above: the first two parts are similarly built, with rises both times from about *mf* to a good *f*. The third part seems to delay the outbreak, and when it finally allows its only subject statement to make its declaration, this by far outranks that of all the previous entries.

WTC I/6 in D minor – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/6.1.1 The prelude-type

This prelude sets out from a purely harmonic design. Against this backdrop, melodic ideas gradually emerge, in some cases emancipating themselves from simple bass patterns. The piece should therefore be analyzed under the criteria of both harmony and motivic development.

I/6.1.2 The design of the prelude

The first cadence can be detected at the end of the lower D which serves as a tonic pedal during the first five beats of the piece. (In the right hand, the conclusion of this initial cadence falls on the fifth triplet-sixteenth-note of bar 2). The fact, however, that this progression unfolds and closes above a pedal-note bass conveys the impression that the piece has not quite begun yet. This cadence-ending is thus not to be regarded as a structural break, but as a first segment of a larger unit.

The more encompassing first section of the prelude modulates to the relative key, F major. Its cadential close appears in bar 6 (right hand: until the eighth triplet-sixteenth-note). The structural caesura is enhanced by a distinct cadential-bass pattern (see bars 5/6).

Seen under harmonic aspects alone, the sections of this prelude are as follows:

I	bars 1 - 6	tonic to relative	(D minor to F major)
II	bars 6 - 8	relative to subdominant	(F major to G minor)
III	bars 8 - 10	subdominant to dominant	(G minor to A minor)
IV	bars 10 - 15	dominant back to tonic	(A minor to D minor)
V	bars 15 - 26	tonic confirmed	(D minor)

However, a closer look at the melodic structure reveals that the three sections in the middle are closely interrelated: the first sets up a motive in the lower voice which is sequenced one tone higher immediately after its introduction (compare L: bars 6-8 with bars 8-10) and taken up again after a short interruption (see L: bars 12-14). This time, the expected cadence is delayed and appears only after an additional bar of extension (see bar 15). Furthermore, what was just passed by as an "interruption" contains in itself a short motive (see bar 10: A A G F) which is sequenced three times.

Extending the analytical view to include motivic development, the previous layout can thus be condensed into three major sections:

I	bars 1 - 6	(D - F)
---	------------	---------

II bars 6 - 15 (F - D, two motives and their development)

III bars 15 - 26 (D - D, motives 1 and 2 not present)

The sequential structure in the three harmonically closed progressions in section II apart, the prelude does not contain any transpositions, variations or other analogies of passages. However, a very short correspondence deserves a mention as it will add to the understanding of the overall design: bar 15 recurs in bar 23, transposed to the dominant and enriched by an additional middle voice.

I/6.1.3 Practical considerations for performers

The continuous flow of broken chord patterns in the right hand might indicate an ideal tempo for the piece. As in those preludes which are determined solely by harmonic processes, these broken chords should be played fast enough to allow listeners to perceive them as harmonic entities rather than as melodic zigzag lines. On the other hand, they should not sound like sparkling virtuoso figures so as not to divert the listener from grasping the inherent harmonic design.

The appropriate articulation in this prelude should reflect the *rather lively* basic character: legato for the triplet-sixteenth-notes but non legato for the eighth-notes. Within this non legato articulation in the eighth-notes, a color shading between neutral bass notes and more emotional motivic notes is, of course, very much encouraged.

I/6.1.4 What is happening in this prelude?

The first larger section of this D minor prelude, stretching from bar 1 to bar 6, displays all the characteristics of a piece determined by harmonic processes. Each eighth-note represents a complete chord, and unlike the more complex progressions in the preludes in C major, C minor, D major etc., most of these chords (until the third eighth-note in bar 4) appear in root position.

Furthermore, both of the secondary processes which often occur in harmonically-determined pieces can be found here: a pedal in bars 1/2 and sequences in bars 2/3, 3/4 and 4/5. These processes are connected with the following dynamic lines:

- Above the tonic pedal, a D minor cadence unfolds with the active step (i-iv) taking place on the middle beat of bar 1. This tension-enhancing active step is reinforced by an upward shift in the pitch level. A complementing descent accompanies the tension-decrease towards the resolution in bar 2:

bars 1 - 2(fifth sixteenth-note) p - mp - p

- After a drastic leap of an octave which brings a sudden tension-increase, a model of four eighth-notes is introduced and sequenced one step lower. Within the model, the tension as well as the pitches are again descending:

bars 2 (beat 2) - 3 (beat 1) mf⁻ - p⁺ - mp⁺ - p⁻

- Within the next bar, the density of both the sequence pattern and the harmonic change doubles. Each eighth-note now establishes a new chord, and the model which is to be sequenced is only two eighth-

notes long. (The sequences contain one slight adaptation in the bass which allows the left hand to move to the preferred lower octave.) This model and its three sequences move upward and thus express a rather significant tension-increase:

bars 3 (beat 2) - 4 (beat 1) mp - mp⁺ - mf⁻ - mf

- The next bar brings a yet slightly different pattern, with harmonic changes now occurring only on the quarter-note beats while the bass inserts non-harmonic passing notes on each unaccented eighth-note. The two-eighth-note long model is followed by three descending sequences. Here, the tension-release is prolonged for an additional bar with a short cadential close:

bars 4 (beat 2) - 6 (beat 2) mf⁺ ----- p

The second section of the prelude is determined by its two motives. The larger first motive (M1), introduced as an independent melodic unit in the lower-voice line of bars 6-8, is actually not completely new. Its stepwise descent recalls the bass line in bar 4, and its ending is clearly reminiscent of the cadential-bass pattern in bars 5/6. Some details, however, are new, and they are very effective:

- M1 begins on a pitch which is the seventh of its chord – this creates high melodic tension right from the start of the motive.
- In the second half of the motive the line returns once more to the same note which is now redefined as the root of the deceptive chord of the cadence which follows – the tension created here is of a harmonic nature.

In the right hand, the uppermost chord notes present several short parallels to the left-hand line. Particularly the ascent in the middle of bar 7 serves to enhance the impact of the deceptive chord.

The much shorter second motive (M2), introduced in bar 10 (second to fifth eighth-note) depicts a melodic descent combined with a harmonic process of relaxation; it thus counterbalances the gesture of M1.

The dynamic processes in this section may be described as follows:

- motive 1 bars 6 (beat 2) – 8 (beat 2)
= mf - mp - mf⁺ - p
- sequence bars 8 (beat 2) – 10 (beat 1)
= mf⁺ - mp⁺ - poco f⁻ - p⁺
- motive 2 + sequences bars 10 (beat 1) – 12 (beat 2)
= mf - mp⁺ - mp⁻ - p⁺
- motive 1 + extension bars 12 (beat 2) – 15 (beat 1)
= poco f⁻ - mf⁻ - poco f - mp⁻ - mf⁺ - p

The third section of the prelude combines secondary melodic processes of a different nature. The lower part sets out from the newly-found keynote D. After a broken chord which propels it almost two octaves up, it splits into a hidden two-part structure, with D as a pedal in the lower part and a melodic descent in the upper notes (see the falling line from a major seventh to a second interval in bars 16-19). The right-hand part accompanies this descent first with a peak-note figure which contracts as the bass interval shrinks. The anticipated complete annihilation of tension is delayed when the peak-note figure takes on a virtuoso form (bars 18/19); but, as this virtuosity seems to bear little effect against the decreasing power of the bass line, the previous peak-note pattern is reinstated.

Soon after the bass descent is concluded, the concealed two-part structure of the left-hand part turns into a real one: an independent middle voice evolves. As middle and lower voices proceed, two distinct tritone intervals mark points of high tension (see the middle beats in bars 21 and 22). In the right-hand part, the peak note figure is taken over alternately by the top and bottom notes of the broken chords. The overall impression is one of descent, so that the downbeat of bar 23 is reached in a softness almost comparable to that of its corresponding bar 15. From here, both hands are once again propelled up almost two octaves, with the now firmly established middle voice adding extra drive. In an unaccompanied treble line the ascent continues until the high B>ð, from where diminished chords descend chromatically until the keynote D is regained – and with it the beginning of a short, chordal-style final cadence.

WTC I/6 in D minor – Fugue

I/6.2.1 The subject

Beginning after one eighth-note of rest and ending on the downbeat of bar 3, this subject is exactly two bars long. Despite the sudden interruption of the sound flow indicated by the wedge on the B^b which creates a tension-sustaining hiatus, the subject must be interpreted as consisting of one indivisible phrase.

The pitch pattern in the subject contains predominantly steps and minor thirds. However, there is one larger leap in the middle of the phrase. This leap embraces a minor sixth and thus represents one of the "high-tension intervals". The rhythmic pattern contains four different note values: sixteenth-notes, eighth-notes, quarter-notes and the tied quarter-note (which, as will be seen later, does not belong entirely to the subject but is nevertheless heard as such a rhythmic unit).

As one compares the remainder of the piece rhythmically with the subject it becomes obvious that only one additional note value appears within the thematically active parts (i.e. not counting the longer values in the cadential closes): a syncopated dotted-eighth-note note. It is the same as that sounding implicitly at the beginning of the counter-subject.

The harmonic background to the subject is that of a simple cadential progression; the tonic gives way to the subdominant in bar 2 beat 2, followed by the dominant seventh in bar 2 beat 3, and resolving onto the tonic on the downbeat of bar 3.

(ex. 55)



The fact that the active harmonic step takes place, in the middle of bar 2 and not on one of the downbeats, endows the B^b with the quality of a syncopation. This impression is enhanced by the rhythmic standstill (this is the feeling given by the quarter-note which appears suddenly, after the initial eighth-note motion had developed into sixteenth-notes) and the interrupting wedge.

This B^b is therefore the obvious choice for a climax. Melodically reached in a high-tension leap, harmonically representing chord iv, further enhanced both by its suddenly larger rhythmic value and by the unexpected articulation mark, and metrically appearing as a quasi-syncopation – this note certainly combines all possible features which could characterize a climax.

While it seems thus perfectly clear where the climax is, both the preparation and the resolution of this climax are slightly irregular. On the one hand, the process of tension-growth before the climax is impeded by a slur in bar two. (For more details regarding the way in which this slur can be interpreted, see paragraph 7 below.) On the other hand, the climax is followed by only two notes which have to cope with the task of resolving the rather powerful tension. Yet, instead of ending on either of the melodically relaxed notes of the tonic chord, the third F or the keynote D, the subject comes to a melodically incomplete-sounding halt on the fifth A – the one scale degree which regularly fails to convey a feeling of resolution.

I/6.2.2 The statements of the subject

The subject appears in seventeen complete and seven incomplete but structurally relevant statements (the latter are here marked with an asterisk):

- | | | | |
|----------------|----|----------------|----|
| 1. bars 1- 3 | U | 13. bars 23-25 | L |
| 2. bars 3- 5 | M | 14. bars 25/26 | M* |
| 3. bars 6- 8 | L | 15. bars 26/27 | L* |
| 4. bars 8-10 | U | 16. bars 27-29 | U |
| 5. bars 12/13 | M* | 17. bars 28-30 | M |
| 6. bars 13-15 | U | 18. bars 29-31 | L |
| 7. bars 14-16 | M | 19. bars 33/34 | M* |
| 8. bars 14/15 | L* | 20. bars 34-36 | L |
| 9. bars 17-19 | L | 21. bars 35/36 | U* |
| 10. bars 18-20 | M | 22. bars 35/36 | M* |
| 11. bars 21-23 | L | 23. bars 39-41 | L |
| 12. bars 22-24 | U | 24. bars 40-42 | M |

(ex. 56)



Two kinds of changes can be observed in the complete statements of the subject: Its ending can be slightly varied (see bars 22/23 with a fifth interval, bars 35/36 with eighth-notes instead of the two quarter-notes), or it can appear inverted (see entries nos. 5, 7, 12, 13, 14, 15, 16, 18, 22).

Furthermore, among the complete subject statements there are two conspicuous two-part strettos, both involving complete entries appearing in the original shape (see in bars 17-20, 39-42). These are surpassed by a stretto which sounds in a chain of three entries of which two are inverted (see in bars 21-25). In addition, there are several strettos made up of a mixture of complete and incomplete statements, using both the original shape and the inversion:

- bars 12-16: incomplete/inverted (M) + complete/original (U)
 + incomplete/original (L) + complete/inverted (M)
- bars 25-31: incomplete/inverted (M) + incomplete/inverted (L)
 + complete/inverted (U) + complete/original (M)
 + complete/inverted (L)
- bars 33-36: incomplete/original (M) + complete/original (L_{var})
 + incomplete/original (U) + incomplete/inverted (M)

Parallels of subject statements do not occur. There are, however, two instances where the (inverted) second entry of a stretto coincides with an incomplete entry in the original shape: see

bars 14/15 M + L, bars 35/36 U + M.

I/6.2.3 The counter-subject

Bach uses only one counter-subject in his D minor fugue. CS begins immediately after the first subject statement. Here the fact that the subject ends in a tied note brings up the question of what note value the beginning of the counter-subject is worth.

To what proportion the A which is held for the value of five sixteenth-notes on the downbeat of bar 3 is divided between the subject and its counter-subject can be understood when comparing later statements of the counter-subject: whenever CS does not follow immediately after a subject statement, it invariably begins with a first note of dotted-eighth-note duration (see e.g. bar 6 upper voice, bar 15 upper voice, varied).

The counter-subject thus begins, like the subject, on the second eighth-note of the bar and ends after two bars on the downbeat (with varying note values for its final note). It consists of two subphrases which are interrelated through their rhythmic structure. Both subphrases set out with a syncopated dotted-eighth-note note on the second eighth-note of the bar (compare U: bars 3 and 4) and both are followed by regular sixteenth-note motion until the subsequent downbeat. Moreover, in each subphrase the sixteenth-note motion presents a sequential pattern: in the first subphrase, four descending sixteenth-notes are repeated one step lower; in the second subphrase, a "turn" figure is equally repeated one step lower. (The two subphrases are particularly clearly distinguished in bars 6-8 where the first is allocated to the upper voice while the second continues in the middle voice.)

Considering all these features, each of the subphrases will find its climax on the initial syncopation, after which the sixteenth-notes in their descending direction bring a relaxation. (These two dynamic developments are very gentle.) With regard to the relationship between the two subphrases, it seems that the second subphrase represents a higher tension-level than the first one, both because of the shift upwards and, more particularly, because of the greater emphasis created by the "real" syncopation as compared to the "implied" one at the beginning of CS.

The sketch shows the phrase structure and the dynamic design in subject and counter-subject (ex. 57).



I/6.2.4 The episodes

Determining the number of episodes in the D minor fugue depends on the evaluation of the incomplete subject statements. If one assumes that, as in many other fugues, considerably shortened statements of the subject function as episode material, then the number of episodes would amount to eight. However, since the incomplete statements in this particular piece mostly engage in primary-level combinations (strettos and parallels) with complete entries, the label "episode" seems ill-fitted for those bars which are characterized by these shortened entries.

The following table lists the episodes of this fugue but places those bars which contain incomplete subject statements in brackets:

E1 bars 5-6d	(E5 bars 25-27d)
E2 bars 10-12d (-13d)	E6 bars 31-33d (-34d)
E3 bars 16-17d	E7 bars 36-39d
E4 bars 20-21d	E8 bars 42-44

Almost all episode material in this fugue seems closely related to the subject. This is particularly true for the first three episodes and their analogues later in the piece:

In E1 the upper voice imitates the second half of the subject (see bar 5 r.h.) while the middle voice recalls the beginning of CS – including the way in which CS emerged out of the subject's ending note (compare M: bar 5 with U: bar 3).

In E2 both the upper and lower voices extend the preceding entry in sequences (see bars 9-10d sequenced in bars 10-11d and 11-12d); only the middle voice gains some independence by creating a little

motivic figure of one-bar length. Bars 12-13d then combine the first incomplete entry in the middle voice with the second half of the subject in the lower voice (as it appeared in E1) and a long note in the upper voice.

- E3 is a varied sequence of the bar preceding it (compare bars 16-17d with bars 15-16d).
- E4, by contrast, is a typical cadential close: the upper voice provides an elaborately ornamented keynote / leading-note / keynote (*do-si-do*) formula, the middle voice contributes the syncopated trill with resolution on the next downbeat which often appears in closing-formulas, and the lower voice sounds a cadential-bass pattern. In E5, two incomplete subject entries in the middle and lower voices are combined with a figure which derives from the end of the counter-subject – extended and in inversion.

The three final episodes are related to three episodes in the first half of the piece:

- E6 see E2 although the voices are inverted and considerably varied (compare bars 31-33d or 34d with bars 10-12d or 13d).
- E7 see E3 the latter being an extended version of the former, but its three bars equally continuing as a sequence of the preceding bar.
- E8 see E4 insofar as the first bar of E8 is an exact transposition of E4 (compare bars 42-43d with bars 20-21d). This is followed by one and a half bars of coda in which the three voices of the fugue are split into six. What are now the four inner voices present a fourfold parallel of the first half of the subject – the right-hand double thirds in inversion, those of the left-hand in the original direction.

Among these eight episodes there is not a single one which displays independent motives, and none reaches the level of a self-contained unit. One can, however, distinguish four different ways in which these episodes behave within the dynamic design of the fugue:

- The two cadential closes (E4 and the first half of E8) create the most noticeable relaxation. In the case of E8, this relaxation is soon counteracted by a particularly powerful tension-increase, but this represents already the coda.
- Those episodes which appear as an extension of the previous development by picking up parts of the preceding material in imitation or sequence, create a gradual relaxation but never quite lose the color of the primary material (see E1, E2 and E6).
- Those episodes which extend the preceding bar in sequences involving all voices (E3 and E7) serve to prolong the tension of the subject entry; in both cases this impression is further enhanced by the incomplete statements which balance the resolving tendency in the second half of the subject (see L: bars 15-16d and particularly U: bars 35-36d).
- Finally, that episode which appeared in brackets because of its stretto of incomplete subject statements (E5) has the strongest drive of all episodes. It sets out from a point of complete relaxation and creates, in both its incomplete stretto and the inverted (i.e. ascending) counter-subject figure, a powerful increase which prepares the subsequent complete-entry stretto.

I/6.2.5 Character, tempo, articulation, ornament realization

Both the pitch pattern (which shows predominantly steps and minor thirds, interrupted only by the high-tension interval of the minor sixth in the subject) and the rhythm (which includes five different note values) advocate a *rather calm* basic character. Yet there is one detail which seems to support a character in which the single notes carry less weight: it is the fact that, upon close inspection, all sixteenth-note groups are either turn-figures or scale segments which ornament larger notes (e.g. bar 3 = A-G ornamented).

Taking into consideration both the main constituents of the basic character and the ornamental structure of the sixteenth-notes, the ideal tempo is one which creates a sense of calm within a rather fluent quarter-note pulse. The corresponding articulation requires legato for all melodic notes, but giving slightly less weight to the sixteenth-notes. Non legato is reserved for cadential-bass notes (see bars 20 and 42) and obvious broken chord patterns (as in L: bars 31/32). The wedged note in the subject should sound actively interrupted after about half its note value. (For those who like to work on shades: such active interruption stands in contrast to the passive ending of unmarked notes before a rest or phrase cut).

Special discussion is needed for the slur in the subject. What does this slur indicate? As we all know that articulation symbols in Baroque polyphonic music derive from string and wind players, it might help to take a string player's view. A violinist who approaches this piece would play each of the notes with a separate bow movement, while attempting the best legato due to the *rather calm* basic character which he recognizes in this fugue. He would thus be able to increase the tension through every note. But, seeing the slur in the subject, he would change his attitude and combine the group of notes comprised under the slur in one single bow movement. The dynamic effect is that the notes following the initial note under the slur, sound more passive and do not continue the tension. The slur thus creates a two-level structure: the dynamic gesture leads through each of the notes in the first half of the subject to the first note under the slur and from there directly to the climax note B^b, after which it breaks off and then resolves through the trill into the ending note of the subject.

The relative tempo of the prelude to the fugue is simple:

one quarter-note	corresponds with	one quarter-note
in the prelude		in the fugue

(Approximate metronome settings: 60 for all beats.)

For the ornament in the subject there are two possible solutions; they depend on how the individual interpreter feels about the wedge on the climax note.

- For performers who feel that the wedge creates a sudden, rather dramatic halt in the melodic flow, and that the G which follows comes in after something like a phrasing, the trill should begin according to the rules for ornaments at phrase beginnings – i.e. on the main note.
- For performers who feel that the wedge creates articulation rather than phrasing, and that the tension is suspended throughout this interruption and picked up at almost undiminished level in the G, the trill should begin according to the rules for ornaments within a phrase – i.e. on the upper auxiliary note.

In each case the trill shakes in thirty-second-notes and ends in the suffix F-G.

I/6.2.6 The design of the fugue

There are several indicators which help determine the design of this fugue:

- A subject entry in reduced ensemble can be found at the beginning of the four-bar passage with multiple stretto (see bar 21 beat 2 to bar 25d). Moreover, this reduction of voices occurs after that episode which was identified as a definite cadence with strongly conclusive powers.
- The fugue reveals a rather extended analogy. Working backwards from the corresponding cadences one can find:

bars 20-21d	correspond with	bars 42-43d
bars 17-19d	correspond with	bars 39-41d
bars 12-(16d)	correspond with	bars 33-(38d)
bars 9-11d	correspond with	bars 30-32d
- The order of statements in the fugue's first half shows several distinct patterns:
 - * Bars 1-10 feature four single entries in the voices U, M, L, U.
 - * Bars 13-16 present, after a preparation by an incomplete entry, a stretto with two complete and one incomplete subject statements (complete entries in voices UM; for more details refer back to the table of statements).
 - * This complex stretto is followed in bars 17-20 by a straightforward stretto of two complete (uninverted) entries in voices L^M.

The fugue's second half begins differently but then shows a similar design:

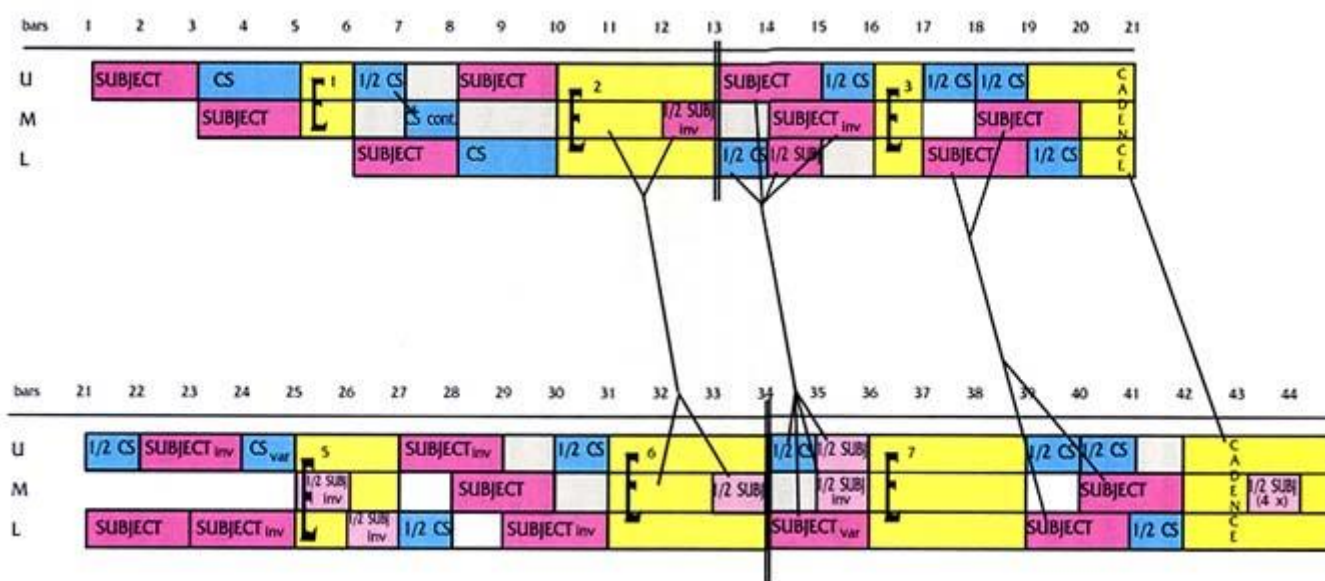
- * Bars 21-25 feature three statements in stretto chain – a leading entry in the lower voice accompanied one bar later by the inverted entry in the upper voice and followed by another inverted entry again in the lower voice.
- * Bars 27-31 follow with another complex stretto built, after two preparing incomplete statements in bars 25/26, by three complete entries in voices U, M, L.
- * The ensuing complex stretto in bars 34-36 (with preparation in 33) and the straightforward two-part stretto in bars 39-42 correspond with the above-mentioned stretto groups in the first half of the fugue; complete entries are heard in voices L and L^M.

The design which can easily be deduced from these findings reveals that the first four simple entries are matched in the second half of the fugue by two strettos. These portions make up the first and third sections, with section endings falling on the downbeats of bars 13 and 34 respectively. Those two long stretches which were found corresponding – bars 9-21 and 30-43 – provide the second and fourth sections.

It is interesting to detect that the harmonic endings of the first and third sections overlap with the incomplete first entries of the strettos with which the second and fourth sections begin. Such an

overlapping creates a particularly tight-knit linkage between two consecutive sections, so that the main impression of the design of this fugue is one of two parts, each with a section-pair.

With regard to the harmonic layout, the first three subject statements are firmly rooted in the key of D minor, while the fourth entry seems to belong to no definite key area. The ensuing episode modulates to the dominant key (A major). The second section remains in the dominant region, changing only between the major and minor modes, and closes with another A minor cadence. In the second half of the piece, the very first stretto modulates back to D minor which is reached on the downbeat of bar 25. As with the dominant key in the first half, the entries which follow in the second half change between the major and minor modes. The cadence which corresponds with that of the first half closes still in D minor, but the coda reverses this through the traditional ending of minor-mode pieces in the major mode (Picardy third). For a sketch showing the design of the fugue in D minor, see ex. 58.



I/6.2.7 The development of tension

Within the first section, the tension rises gradually owing to the growing number of voices. The descending sequences in the episode which ends this section serve to slightly dissipate this tension, so that the second section sets out from a rather soft level. Its many strettos, however, create a powerful buildup until immediately before the ending cadence. Both sections feature an episode in their middle which, as has been shown above, is so closely related to the primary material that the tension-loss is negligible.

The third section begins in reduced ensemble on a soft level into which it falls back in the return modulation (bar 25) after only little increase in-between. Yet from here on, all forces join in a stretto which reaches an intensity considerably above that in the corresponding bars of the first part.

The fourth section begins again slightly softer than the third section had ended – but louder than its equivalent in bar 13. After the initial stretto, the tension-sustaining episode with its ascending sequences is extended (compare E7 with E3) and thus leads to a final statement pair which also outranks the corresponding one in the first half of the piece.

It can thus rightly be said that

- each of the two parts of the fugue is composed as one long buildup of tension which is only slightly interrupted at the section ending in its middle;
- the second part of the fugue combines several additional intensifying features and thus results, in terms of tension, as a heightened variation of the first part.

WTC I/7 in E^b major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/7.1.1 The prelude-type

The prelude in E^b major is a fairly long and complex piece. Its three different segments are visibly distinct in both the use of material and the degree of virtuosity.

- The first segment (bars 1-10) is built along the lines of a "prelude determined by motivic development", ending with a virtuoso passage and a cadential close.
- The second segment (bars 10-25) displays polyphonic texture in which voices enter one after the other presenting a short motive. This motive is imitated in stretto right from the start, although later, this tight imitative pattern grows looser rather than denser. Structural details which might indicate one of the well-known form models (such as fugue or invention) do not materialize: there is no cadential close in a second key followed by a new beginning corresponding in some way to that in bar 10. Such a passage in free imitative style based on a single motive is usually referred to as a "fugato".
- The third segment of the prelude (from bar 25 onward), and by far its largest, is also polyphonic. It begins with two contrapuntal voices and, as a quick glance through the remainder of the piece reveals, works with this material in many different ways. As there are several definite cadences in related keys and new presentations of the material after these cadences, this segment within the E^b major prelude must be called a "fugue".

To sum up, Bach's prelude in E^b major is conceived as an integrated three-movement composition comprising "prelude", "fugato" and "fugue".

I/7.1.2 The design of the prelude

The first cadence is completed on the middle beat of bar 4. However, as the bass has not yet begun to participate in the harmonic progression but remained locked in a tonic pedal, this cadential close cannot be regarded as a structural ending. Another reason is that the flow of the lines continues perfectly uninterrupted, without even the slightest sign of phrasing.

The next harmonic progression ends – again over a pedal note – on the downbeat of bar 10 in B^b major (dominant of E^b). This cadential close, as has been said above, definitely marks a structural caesura.

Within the "fugato", similar circumstances prevail as in the "prelude". The only structurally relevant cadence, however, appears again at the end of this segment, i.e. on the downbeat of bar 25 (cadence also in B^b major). There are, though, two earlier cadences which are worth mentioning because of the unusual way in which the listener's expectations for a resolution are deceived in the first and turned around in the second. Both cadences attempt to close in the home key of E^b major, but are prevented from doing so.

The first cadence seems to draw to a close in bars 15/16. The typical closing-formula has, however, not yet reached the resolution when three of the four voices proceed quite differently from what is anticipated. (Try and play bar 15 as the second-last bar of an E^b major cadence. The soprano would resolve onto E^b, the alto would descend to G and the tenor to E^b, and the bass would jump down to E^b. As the downbeat of bar 16 shows, this is not what happens: all voices but the alto take unexpected turns. Recognizing this subtle process seems important both for the listener and for the performer of this piece.) The second cadence occurs in bar 18. On the downbeat of bar 19, the return to the tonic seems achieved, with only a soprano appoggiatura remaining unresolved. Yet when the expected resolution materializes, it finds the inner voices moved, so that the E^b harmony appears redefined as an inverted F major seventh chord. After this second attempt at a resolution onto E^b major, this section returns to the dominant tonality from which it had set off.

Neither the "prelude" nor the "fugato" thus contain any structurally relevant cadences. The "fugue", however, is clearly subdivided. Altogether, the E^b major prelude consists of eight structural sections, each of them individual and without any analogy of design. In the table below, the key in brackets denotes the cadence in which each section closes.

1.	bars	1-10 = "prelude"	(B ^b major)
2.	bars	10-25 = "fugato"	(B ^b major)
3.	bars	25-35 = "fugue section I"	(G minor)
4.	bars	35-41 = "fugue section II"	(C minor)
5.	bars	41-49 = "fugue section III"	(B ^b major)
6.	bars	49-58 = "fugue section IV"	(A ^b major)
7.	bars	58-68 = "fugue section V"	(E ^b major)
8.	bars	68-70 = "fugue coda"	(E ^b major)

I/7.1.3 Practical considerations for performers

The ideal tempo for this prelude is one which allows to accommodate the particular character of each of the three "movements" without any need for adjustments of pace. To be specific, the tempo should allow the thirty-second-notes of bars 8/9 to sound fluent enough to give the impression of an ornamental rather than that of a melodic line; at the same time, the quarter-notes of bars 10-24 should sound calm enough to express the basic character of the "fugato".

The appropriate articulation for the entire piece is mainly legato. Although in the prelude, the lively character would require any eighth-notes and longer note values to be played non legato, there are no notes to which this could apply: virtually all longer values come with tie-prolongations, and the only separate long notes (tenor bars 7-10) form a keynote / leading-note / keynote (*do-si-do*) group which is legato in any case.

In the *rather calm* character of both the "fugato" and the "fugue", only cadential-bass notes and consecutive jumps are detached. These are the groups in which non legato applies:

bars 29/30 (B^b B^b E^b)

b) The "fugato" within the prelude

The second segment of the composition is also based on one motive. M2 is originally five notes long (see T bars 10-11m: B^b E^b D C B^b) but soon drops its final resolution. In its four-note version it is strikingly related to the main motive of the Prelude in B minor, also from Book I of Bach's Well-Tempered Clavier. As M2 is the one and only driving force of the fugato, it seems important to identify all its statements:

- | | | | |
|---------------|------|----------------|------|
| 1. bar 10 | T | 6. bars 13/14 | S** |
| 2. bars 10/11 | B | 7. bars 14/15 | T** |
| 3. bars 11/12 | A* | 8. bars 16/17 | B*** |
| 4. bars 12/13 | S*** | 9. bars 17/18 | S* |
| 5. bars 12/13 | B** | 10. bars 19-21 | S** |

While the four-note version is still very close to the original, later modifications of M2 transform it more and more. These are the variations as indicated by the asterisks above:

- * = The third note may appear prolonged to twice its value, delaying the fourth note to a weak beat where it follows usually as yet another syncopation.
- ** = The motive may sound with its first note lengthened to a syncopation. This may then be followed either by only the third note or by the two remaining notes.
- *** = The fourth note may bend back instead of leading downwards.

The final portion of the fugato shows only two rudimentary statements of M2 (see S and B: bars 19-21); more influential here are the descending lines in all voices:

soprano	bars 20-25	= E ^b down to D
alto	bars 20-25	= D down to B ^b
tenor	bars 22-24	= B ^b down to E ^b
bass	bars 20-23	= G down to A ^b

Each of these descending lines comes in diminuendo, so that the last five bars of this section describe a long relaxation. Not only is the ending of the fugato section thus well prepared, but, more importantly, the beginning of the third major segment, the fugue, is strongly suggested.

c) The "double fugue" within the prelude

The beginning of the fugue presents two melodic ideas simultaneously. As each of them is later used quite independently, it seems appropriate to speak of two subjects rather than of one subject and its counter-subject.

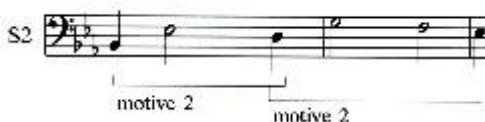
Subject 1 (S1) is introduced in the alto. It is two bars long, beginning on the second sixteenth-note in bar 25 and ending on the downbeat of bar 27. This subject is closely related to M1 from which it borrows its first seven notes.

(ex. 3)



Subject 2 (S2) first appears in the bass: it stretches from the first beat of bar 25 to the downbeat of bar 27. This subject is closely related to M2. The beginning recalls the first three notes of M2; these are followed, after the third note has doubled as the beginning of a new sequence, by the entire four-note version of M2.

(ex. 4)



The dynamic design of the two subjects is, at least at their beginnings, determined by the motives from which they stem.

- S1 commences with a tension-increase towards what was the final note of M1; the second, longer subphrase begins anew and carries an even stronger crescendo through the varied sequence of the motive. The climax falls preferably on the quarter-note E^b and is followed by the resolution of the tension through the subsequent *do-si-do* figure.
- The dynamic shape of S2 reflects its evolution from the fugato motive: a first climax on the syncopation E^b is followed – after a slight relaxation which turns out to serve as a new beginning – by a stronger second climax on the downbeat of the second bar. The descent to the keynote of the target chord brings the complementing relaxation.

The combination of both subjects in their particular phrase structure and dynamic development is depicted below:

(ex. 5)



In the course of the "fugue" within the E^b major prelude, S1 appears twelve times and S2 twenty-two times. The following chart lists the statements of both subjects:

bars 25-27	S1 A + S2 B
bars 27-29	S1 S + S2 T
bars 30-32	S1 B + S2 A
bars 35-37	S2 A + S2 S
bars 38-40	S2 S + S2 T
bars 41-44	S2 A + S2 T + S1 S
bars 46-49	S2 B + S2 T + S1 A
bars 49-51	S1 A + S2 B
bars 53-56	S1 S/B + S2 T + S2 A
bars 56-58	S1 B + S2 A + S1 S
bars 58-60	S1 A + S2 S
bars 60-63	S1 S + S2 A + S2 B
bars 64-67	S2 A + S2 S + S2 A
bars 68-70	S1 A + S2 T

Both subjects appear with several irregularities and variations:

S1 may come without its final note (see bars 27-29) or even without the last two notes (e.g. bars 60, 63);

- it may be deprived of its entire first subphrase (see bars 30-32);
- it may be shortened in the middle, so that the first subphrase leads directly into the note repetition of the ending (see bars 56/57 B);
- it may, while shortened in the middle as described above, find its closing note repetition replaced by a single tied note (bars 56/57 S).

S2 may come without its final note (see e.g. bar 27-29);
it may have lost both its final notes (see bars 30-32, 35-37, 38-40 etc.);
its beginning may sound ornamented (see bar 60).

S2 builds several strettos (see particularly bars 35-49 and bars 64-67) the last of which sounds briefly like a parallel – although it is not. In addition, there are a few interesting voice crossings which should be mentioned:

- In bar 28 the tenor does not descend right away after the two rising fourths of the S2 beginning; instead it continues, using scattered M1 quotations, to climb as high as A^b (bar 29). The alto with its statement of S2 thus begins underneath the tenor and only regains its rightful position in bar 31.
- In bars 41-43 both the alto and tenor with their S2 statements climb high while the soprano with its S1 entry crosses below both voices before it corrects its position with an octave displacement (see bar 43 the compound fourth from B^b to E^b).
- Finally, in bars 53/54 the statement of S1 seems "mixed up": it begins in the soprano with a varied first subphrase, then descends correctly until E^b (bar 54 beat 1) after which it switches to the bass! This, however, does not pick up the right pitch: instead of the expected A^b A^b A^b G A^b we hear F F F E^b A^b.

As in any other fugue there are a number of subject-free passages or episodes:

E1 bar 29	E5 bars 44/45
E2 bars 32-34	E6 bars 51-52
E3 bars 37/38	E7 bar 63
E4 bars 40/41	E8 bar 67

The material employed derives most frequently from M1; the remainder is neutral. Features to be pointed out include typical cadential patterns (see B: at the end of E2 and E8, S: at the end of E3 and E4), as well as particular pitch patterns which engineer tension-rise in all voices, thus preparing for the entries which follow (see E5 and E6). In contrast to these six episodes with definite closures, E1 and E7 use fragments of the first subject, serving merely as links.

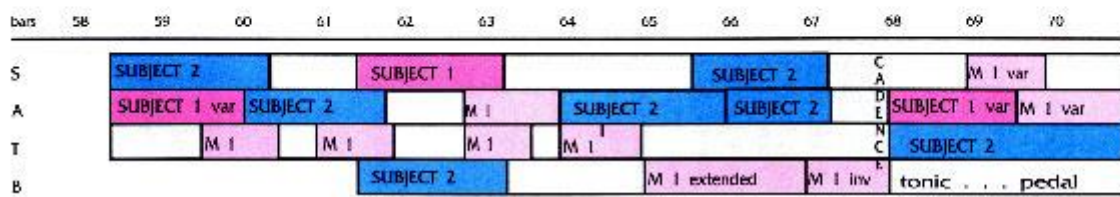
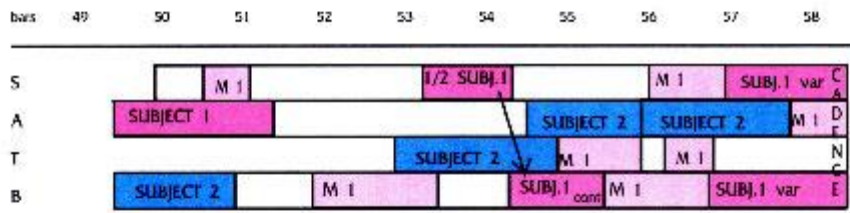
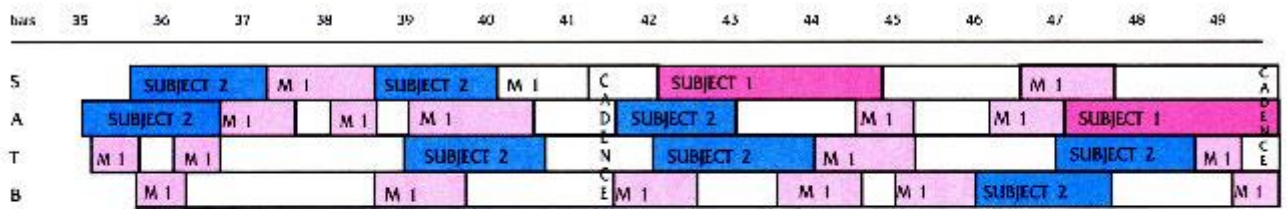
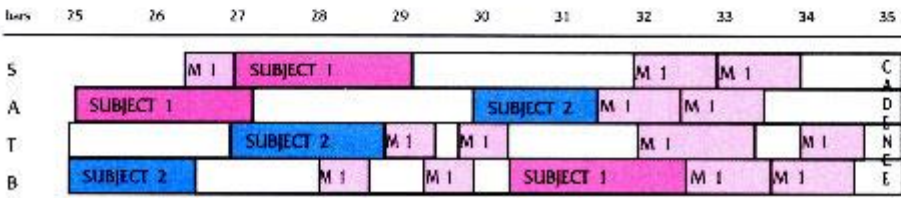
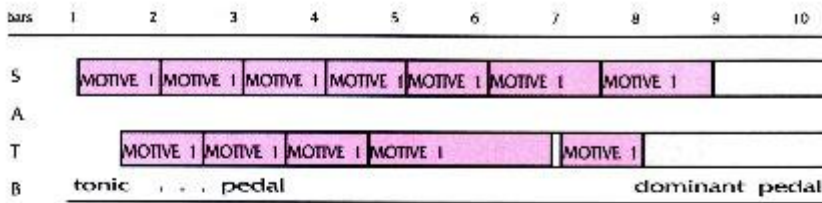
As for the design of the fugue, many obvious indicators help in presenting an easy overview:

- The four-part ensemble is built up gradually, from the initial two voices (alto + bass) in bar 25 which are joined by the soprano in bar 26 and the bass in bar 30, to a first four-part cadence in bars 34/35.
- A tonic pedal in bars 68-70 separates the coda from the fugue's "trunk".
- The grouping of subject statements includes
 - simple S1/S2 juxtapositions in bars 25-35,
 - S2 strettos in bars 35-41,
 - S2 strettos with additional S1 statements in bars 41-49,
 - S1/S2 juxtapositions with irregular S1 entries in bars 49-58,
 - merging entries / juxtaposition / S2 stretto in bars 58-68.

These groupings coincide perfectly with the sections that had been revealed in the earlier harmonic analysis:

bars 25-35	=	fugue section I	(G minor)
bars 35-41	=	fugue section II	(C minor)
bars 41-49	=	fugue section III	(B ^b major)
bars 49-58	=	fugue section IV	(A ^b major)
bars 58-68	=	fugue section V	(E ^b major)
bars 68-70	=	fugue coda	(E ^b major)

The design of the entire Prelude in E^b major can thus be expressed as shown in ex. 6.



(A missing accidental in the Urtext, contained in several other editions, should be carefully considered: in bar 20, the tenor features B^b-A^b-B^b despite the A^b in both soprano (bar 19) and alto (bar 20). As the soprano statement of M2 suggests B^b major for these bars, adding a natural to the leading note seems essential.)

WTC I/7 in E^b major – Fugue

I/7.2.1 The subject

The subject of this fugue is one and a half bars long. It commences on the downbeat of bar 1 and ends on the middle beat of bar 2 (B^b). As indicated by the >δ in front of the A (see end of bar 1), the middle of the subject witnesses a modulation to the key which has only two flats: B^b major, the dominant key of E^b major. A natural is not only the leading-note to the new key but also part of a broken chord F-A-C-E^b (see bars 1/2), the dominant-seventh chord of B^b major. The subject note B^b in the middle of bar 2 brings the resolution onto the new tonic.

There are two subphrases within this subject. This can be deduced not only from the rest in its middle but much more from the varied partial sequence with which the second subphrase commences: the two prominent eighth-notes in the second half of the subject actually sound like an elevated sequence of the two eighth-notes before the rest, the preceding sixteenth-note-group is shortened here but "made up for" by the final strong-beat note.

The pitch pattern in the subject contains mainly broken chords (the use of the second eighth-note in bar 2 as a passing note is confirmed in Bach's harmonization of later subject statements; see e.g. bars 4, 7, 18):

bar 1_{1,2} = E^b major chord (with auxiliary note)

bar 1_{2,3} = A^b major chord (with auxiliary note)

bar 1₄-2₂ = F⁷ chord (with passing note)

A brief look at the remainder of the fugue shows that these and other broken-chord patterns are prevalent features throughout the piece.

The rhythm in the subject consists mainly of sixteenth-notes and eighth-notes, with the exception of the quarter-note which carries the trill. The same predominance of these two note values can be detected in the entire piece.

The subject's harmonic background is determined by the modulation which takes place within its confines. The active step (tonic to subdominant) occurs melodically immediately after the second beat, metrically confirmed only on beat 3. This subdominant harmony is sustained even when the second eighth-note of beat 3 returns to B^b (a note which, in its unaccompanied melodic version, might be heard as a return to the tonic). The pivot chord (V⁷/V) which begins melodically with the A>δ can be felt metrically either in the rest on beat 3 or on the downbeat of the second bar:

(ex. 7)



For several reasons, the E^b on the downbeat of bar 2 seems the obvious choice for a climax: it falls on a downbeat, it represents the metrical place of the pivot chord which triggers the modulation, and it is reached in the high-tension interval leap of a minor seventh. In addition, it is conceived in varied sequence to the process in the first subphrase which finds its climax on the C (bar 1m), the note which represents the subdominant harmony and sounds rhythmically as the first halt after the initial eight sixteenth-notes.

The tension in the entire subject thus consists of two curves. The first begins with a crescendo of moderate strength and is complemented with a relaxation in only one note (C-B^b); a second crescendo then surpasses the first and is complemented with a longer diminuendo for a more perfect resolution of the tension.

I/7.2.2 The statements of the subject

The subject appears altogether nine times in this fugue:

- | | | |
|----------------|-----------------|-----------------|
| 1. bars 1- 2 U | 4. bars 10-12 U | 7. bars 25-27 L |
| 2. bars 3- 4 M | 5. bars 17-19 M | 8. bars 28-30 U |
| 3. bars 6- 7 L | 6. bars 20-22 L | 9. bars 33-35 M |

(ex. 8)



The subject always sounds in its complete length; its last note appears most often as a sixteenth-note but may be extended to an eighth-note (bars 27 and 30) or even to a quarter-note in the final entry (bar 35). Moreover, several statements begin with a syncopated anticipation of the first note (see bars 10/11, 25/26, 28/29 and 33/34). In addition to these small changes in the appearance of the subject, interval adjustments – between the first two notes and across the rest – occur in all tonal answers (see bar 3 etc.). No stretto or parallel of subject statements appear in this fugue.

I/7.2.3 The counter-subject

Bach has invented only one counter-subject for this fugue. CS is introduced in bars 3/4, against the second subject statement, where it commences slightly later than the subject with the eighth-note A^b and ends, together with the subject, on the G in the middle of bar 4. This counter-subject appears as a faithful companion to the subject in all but the initial and final entries, featuring only one slight variation of its beginning in bar 20. It fulfills its task of counter-balancing the subject in several ways:

- Against the broken chord patterns which dominate the first two-thirds of the subject, CS sets stepwise motion, and against the stepwise motion at the end of the subject it sets a broken dominant-seventh chord (see bar 4 beat 2).
- While the subject is made up of two subphrases, the counter-subject is conceived as one indivisible line.
- While the subject has two climaxes – a softer one on the third beat and a stronger one on the fifth beat after its beginning – the counter-subject shows only one unbroken tension-curve. Its climax is either on the first eighth-note, followed in this case by a single long diminuendo, or (perhaps more likely) on the syncopation which coincides with the rest in the subject.

Sketch showing phrase structure and dynamic design (ex. 9):

The sketch consists of two musical systems. Each system has two staves: the upper staff is labeled 'CS' (Counter-Subject) and the lower staff is labeled 'S' (Subject). The top system shows the CS in the upper voice and the S in the lower voice. The bottom system shows the CS in the lower voice and the S in the upper voice. Both systems include dynamic markings (trapezoidal shapes) and phrasing slurs (horizontal lines with vertical end-caps) above the CS staff and below the S staff.

I/7.2.4 The episodes

In this fugue, the number of episodes equals that of the subject statements:

E1 = bars 2/3	E4 = bars 12-17	E7 = bars 27/28
E2 = bars 4/5	E5 = bars 19/20	E8 = bars 30-33
E3 = bars 7-10	E6 = bars 22-25	E9 = bars 35-37

Only E6 among all these episodes shows a relationship to the subject: its first two bars (see bars 22/23) use a variation of the first subphrase in their upper voice. All other episodes are entirely independent from the primary material. They present a number of characteristic motives which are used with great consistency:

M1 E1 introduces a half-bar motive featuring two broken chords, each with a subsequent step downwards to the next beat (see bars 2/3: F-D-B^b-A^b, F-D-A^b-G). This motive plays a leading role in all episodes of this fugue, occasionally in an extended version with a final unaccented jump upward (see in E3, E4).

- M2 E2 combines a prolonged M1 in the middle voice with a figure in the upper voice which also consists of broken chords, this time in ascending direction; significant features, however, are the long syncopations. M2 also recurs (see e.g. bars 8/9), sometimes unchanged and sometimes represented only by the accented upward jump in eighth-note rhythm (see e.g. U/L: bar 9).
- M3 E3, the first episode in full three-part texture, introduces the third motive (see M bars 7/8: F D B^b E^b) which is subtly related to the other two: like M1 it begins with a descending broken chord, and like M2 it ends with an accented upward jump. Yet it is at the same time clearly distinct, as its rhythm contains only eighth-notes.

These three motives are used in a variety of combinations (see particularly in E3, E4, E5, E8). The second half of E6 then introduces a new pattern which recurs shortly afterwards in E7: sequences of ascending eighth-notes in the bass and a sixteenth-note dialogue with varied segments of M1 in the two higher voices create a pattern which we shall call M4.

Several relationships exist among the episodes of this fugue:

- E5, E2 the shape of the two episodes is very similar though the hands appear inverted (compare bars 4/5 with bars 19/20);
- E3, E4a, E8 with inverted voices but few other changes (compare bars 7-10 with bars 12-15 as well as with bars 30-33);
- E6b, E7 the second half of E6 is taken up, as was mentioned above, in E7.

The only episode segments which remain without any correspondence are the cadential close of E4b (with its preparation, see bars 15-17m), the first half of E6 (for E6a see bars 22-24d), and the final episode E9.

As all episodes apart from E6a are conceived as independent in material and character from the subject and counter-subject, they should logically sound as self-contained units, in a color and intensity distinctly different from those of the subject and its counter-subject. The dynamic gestures within this contrasting and much lighter color are:

- E1 features descending sequences which create a natural decline of tension; equally, the final episode E9 sounds in manifold falling lines.
- E2 with its corresponding episode E5; and E3 with its corresponding episodes E4 and E8 all show relaxing tendency in descending sequences.
- The first half of E6 also features a pitch direction which points downward; here again the dynamic tendency is decreasing.
- The second half of E6 and, correspondingly, E7 are the only episode segments to show dynamic build-ups; these are created both by the ascending eighth-note lines in the bass and by the ascending sequences.

I/7.2.5 Character, tempo, articulation, ornament realization

Both the steady rhythm pattern with its predominance of sixteenth-note and eighth-note values, and the pitch pattern with its high content of broken chords, clearly characterize this fugue as *rather lively*.

The tempo should be fast; a conductor beating an energetic four-four meter may give a good orientation for the minimum tempo, and the tricky trills in bars 21, 27 and 35 certainly mark the upper limit. The articulation which corresponds with the character of this fugue requires a bouncing non legato for the eighth-notes and a legato which borders on *leggiero* for the sixteenth-notes. The only longer note values which must be played legato appear in a do-si-do formula (see bar 35 E^b-D-E^b: U); legato is optional in the two-part version of M1 in U: bars 27/28 (see D^b-C and E^b-D) and in the chromatic descent in the split-off upper part of the middle voice in the final bar (see D^b-C-C^b-B^b).

The relative tempo of the E^b major prelude to the subsequent fugue should best be kept simple:

a quarter-note equals a quarter-note
in the prelude in the fugue

(Approximate metronome settings: 84 for all beats.)

The only ornament in this fugue is the trill in the subject. It begins, as it is approached in stepwise motion, from the main note (which is a sixteenth-note long), then proceeds in two pairs of thirty-second-notes and ends in a suffix.. This trill has to be retained in every subject statement, even where it is not at all or only ambiguously indicated in the score, as in bar U: 12, L: bar 27 and M: bar 35. (Note that the trills in bars 7, 12, 21 and 27 come with a double note to be played in the middle of the trill motion; bar 30 becomes much easier if both middle-voice E^b are played in the right hand – which is more comfortable than one might think. In bar 35, the main part of the trill can be played with the right hand while the suffix is much smoother if taken in the left.)

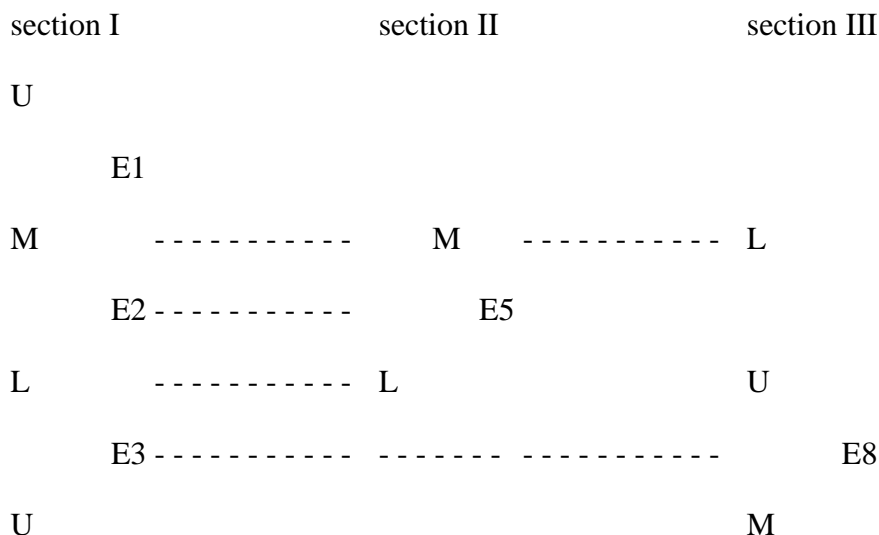
I/7.2.6 The design of the fugue

The design of the fugue in E^b major reveals itself from several obvious features:

- The entering order of the subject statements begins with a complete round of all three voices followed by one redundant entry. While all four entries are separated by episodes which steadily increase in length (E1 = 2 bar, E2 = 12 bars, E3 = 32 bars), the episode which follows the redundant entry is by far the longest (E4 = 5 bars); furthermore, it ends in a definite cadence.
- The fifth subject statement, after E4 with its cadential close, is presented in a reduced ensemble as the bass is resting. This texture confirms that a new section begins here. The next episode is a variation of E2, the episode introduced after the two-part entry in the first section – an obvious structural correspondence.
- The first half of E6, as has been shown above, is the only one in this fugue not to find a matching counterpart; we can therefore assume that it has some structural importance.
- The second half of E6, with its rising tendency, not only prepares the next statement but also recurs in variation (see E7) immediately afterwards where it acts as a bridge to the subsequent subject entry. This episode-type, newly invented here, must therefore be understood as marking the beginning of the third section; the fact that it is taken up at the first opportunity strings the seventh and eighth entries closely together.

- The subsequent group of subject entry / episode / subject entry is built in obvious symmetry to that group in the first section of the fugue which encompasses the third entry / third episode / redundant entry (compare bars 6-12 with bars 29-35).

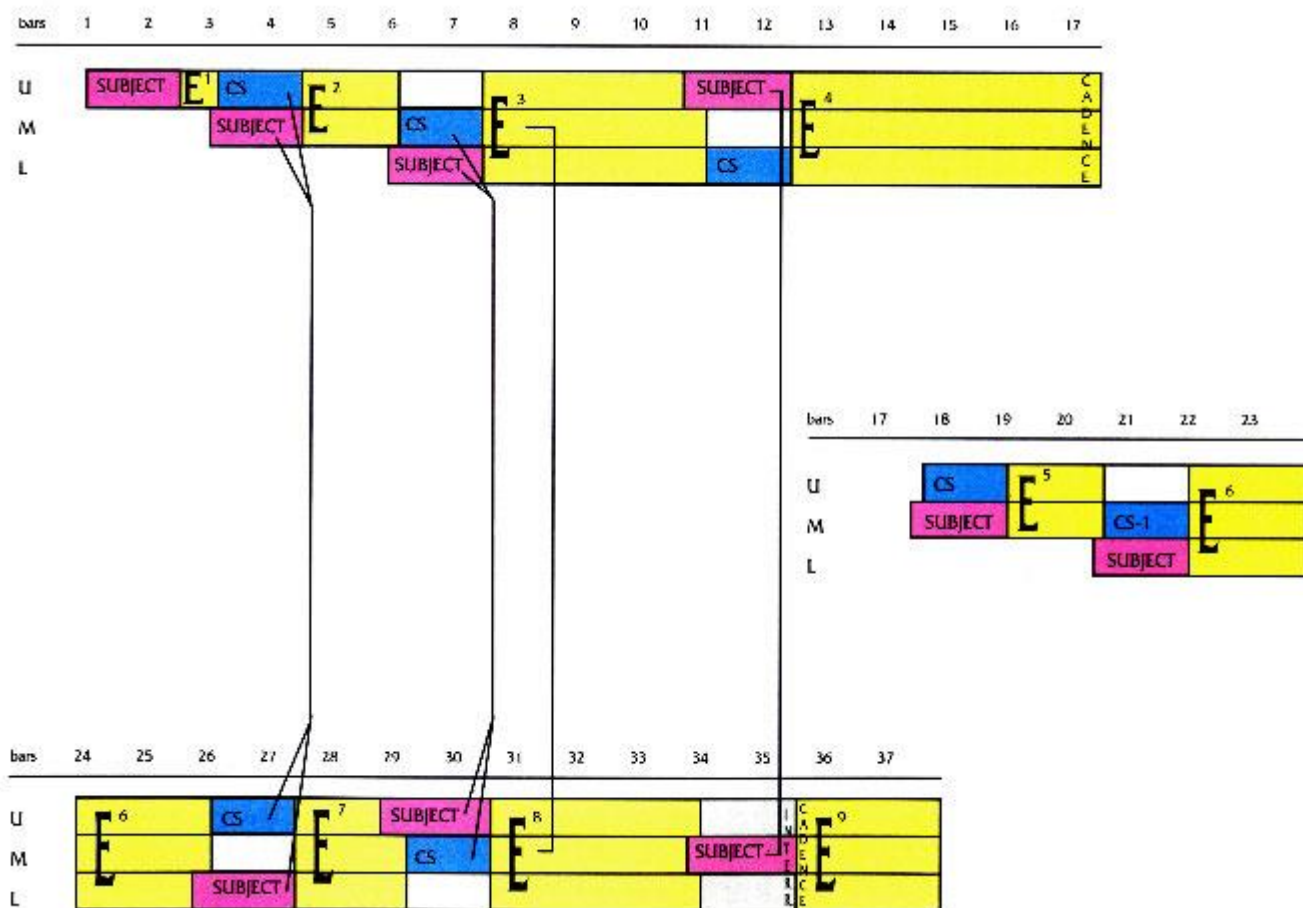
This symmetry hints at a structural analogy between the second to fourth entries of the first section and the same number of entries in section three. Pursuing this assumption one finds that the entries in bars 3/4 and 26/27 are in fact strikingly similar.



The harmonic progression within the composition confirms this concept of a structural outline:

- The first four subject statements all relate to the home key; only the section-concluding episode E4 modulates to the relative key of C minor.
- The two entries which, according to the above-stated concept, make up the second section are both in minor mode. The ensuing first half of E6 modulates back to E^b major which appears firmly re-established on the downbeat of bar 24.
- The second half of E6 as well as the three entries in the third section are again rooted in the key of E^b major.
- The final entry is harmonically the most daring event of the entire fugue. It features additional chromaticism (see particularly bar 34 middle) and ends in an interrupted cadence (bar 35 middle = C minor).

For a sketch showing the design of the fugue in E^b major, see ex. 10.



I/7.2.7 The development of tension

Within the first and second sections, the tension-increase engendered by the gradually growing ensemble appears constantly interrupted by the regularly interspersed episodes of contrasting color. Thus each subsequent entry sounds only slightly louder than the previous one.

In the third section, the preparation of entry no.7 creates more tension at the very beginning (thus making up for the "missing" first statement in the recapitulation?). This process is repeated before the next subject statement so that the tension-increase within this section is more pronounced than that in the exposition.

As the first subject entry of the fugue already expresses a certain strength, due to the lively and bouncing character of the subject, the dynamic equivalent to this tension-increase might be approximately *mezzoforte* to *poco forte*. Within the second section, the change of mode results in a considerably less exuberant mood and, consequently, in a much softer touch. The third section thus not only balances the first one but even exceeds it slightly.

WTC I/8 in E^b minor – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/8.1.1 The prelude-type

The E^b minor prelude is mainly determined by melodic processes which unfold around an essentially homophonic accompaniment. The two predominant melodic ideas are introduced in the treble line of bars 1-4 and 20/21 respectively (the former begins in the second half of bar 1 and ends on the E^b in bar 4; the latter stretches from the high C^b in bar 20 to the downbeat of bar 21). While subsequent developments of these melodic ideas show a large degree of variation in the treatment of pitch progressions, rhythmic patterns remain very consistent.

I/8.1.2 The design of the prelude

The first harmonic progression concludes in bar 4 (at the end of beat 1); it is a simple cadence with the subdominant in bar 2 and vii⁷ (replacing V) in bar 3. As this cadential close coincides with the end of the melodic entity, it is certainly of structural importance insofar as it emphasizes phrasing. However, as the development which follows is composed as an immediate continuation, bringing forth its own structure as well as appearing in obvious contrast to the second motive, this phrase ending only marks a smaller breathing within a larger unit.

The subsequent harmonic development embarks on a progression of secondary dominants resolving each into their related tonics. Thus, the listener repeatedly experiences resolutions without truly arriving at any new key.

bar	5	6	7	8	9	10	11	12
	V ⁷ /vi -- vi		V ⁷ /iv -- iv		V ⁹ ----- i		V ⁹ /v --- v	

The following twofold cadence in B^b minor (see bars 13-14m and 14-16) then confirms a modulation to the minor dominant; yet again, this new key is not established with a truly convincing resolution. In bar 14 the new tonic is reached in metrically unaccented position on the second half-note, and in bar 16 the melodic ascent after the downbeat also creates a sense of openness. The subsequent bars then modulate to the subdominant (A^b minor) which is established with a iv-V-i progression in bars 19/20. The point of completion of this cadence marks the end of the first larger section of this prelude.

There are altogether four structural sections in the E^b minor prelude:

I	bars 1-4	(E ^b minor)	tonic confirmed
II	bars 4-16	(B ^b minor)	modulation to dominant
III	bars 16-20	(A ^b minor)	modulation to subdominant
IV	bars 20-25	(E ^b minor)	modulation back to tonic
V	bars 25-40	(E ^b minor)	tonic confirmed

The fifth section shows three subdivisions – not only on the level of melodic development but also on that of harmonic progressions – insofar as there are two deceptive cadences prior to the final perfect ending:

- In bars 25-29, the Neapolitan sixth chord (bar 26) and the vii^7 (bar 27) seem to prepare a definite ending. This expectation is deceived on the downbeat of bar 29 by a chord which combines features of the traditional "interrupted-cadence" chord VI (the notes of which are $C^b E^b G^b$) with the A^b of step iv (reached by way of an appoggiatura B^b); the i^6 of E^b major which follows in bar 30 is reached plagally from iv^6 and thus does not conclude this cadential progression either.
- In a similar process in bars 31-37, the subdominant chord (bar 31d) is redefined on beat 2 as another Neapolitan sixth chord, the vii^7 is extended through four bars (bars 32-35), and the preparation of the ending is almost exactly the same as before (compare second half bar 36 with second half bar 28). Again the expectation is deceived, this time because the resolution chord E^b appears topped by its minor seventh – which, as a V^7/iv , initiates another $iv-vii^7-i$ round which, above a four-bar tonic pedal, finally leads to the resolution into the Picardy-third tonic.

While melodic processes in this prelude reveal several immediate sequences, there are no obvious correspondences on the structural level.

I/8.1.3 Practical considerations for performers

The appropriate tempo in this prelude is determined by rhythm and meter. On the one hand, the sixteenth-notes have to be calm enough to retain their melodic expressivity and at the same time to allow for thirty-second-notes in the trills. On the other hand, the *alla breve* time signature demands a tempo fast enough to convey a pulse in half-notes. This is very important, particularly as the somewhat complex rhythmic structure in the piece may tempt performers into a transitional stage of counting in quarter-notes. While this may be essential during the process of preparation, it is equally vital that this stage be finally overcome in favor of the larger swinging pulse with only three beats to a bar.

The articulation of this prelude requires legato for all notes pertaining to the melodic processes; this can be achieved, as in other Baroque keyboard pieces, through the fingers alone and thus poses no problems. The accompanying chords also sound best if smoothly linked. Yet connection between chords – particularly if they involve so many repetitions – is not possible on the piano without the help of the sustaining pedal. (The use of the pedal is a very delicate matter and may appear somewhat complicated where sixteenth-note motion in one of the lines requires a clean and unblurred rendition. The only solution is thus to pedal on or slightly after the last rhythmic value in a bar. As every performer will aim at evenness in tone color throughout each bar and each phrase, this means that one can always pedal only on or slightly after the last sixteenth-note fraction of each half-note. The only stretches which might do without any pedal are the beginning of the second half (bars 20/21) and the cadenza-like bar 35.)

The ornaments in the E^b minor prelude fall into three categories: trills, arpeggios and a grace-note. The grace-note (bar 36) poses the easiest task. According to the Baroque rule of "equal distribution between appoggiatura and resolution in binary note values", the A^b (played together with the notes in the other voices) is held for one quarter-note, leaving the second quarter-note for the resolution note G^b .

Although the trills are indicated by three kinds of symbols – simple mordent (as in bar 3), extended mordent (as in bar 4) and *tr* (as in bar 15) – their main difference lies not in this indicator but in their context. On the one hand, if the extended mordent in bar 4 is interpreted as a note-filling trill, consistency requires one to play an ornament of similar duration in bars 8, 10 and 12 where only the simple mordent sign appears. On the other hand, the *tr* in bar 15 ornaments a dotted-note figure and must therefore be

executed as a "point d'arrêt trill". This apparent confusion can be solved easily by answering a simple set of questions:

- (a) Does the ornamented note have a tendency to resolve? In this case the trill may fill the entire value with a suffix immediately before the resolution if this resolution should, however, occur on a strong beat.
- (b) Does the resolution occur on an unaccented fraction of a beat, or is it preceded by written-out notes? In this case the ornament has to stop short slightly before the next written-out note.
- (c) Does the ornamented note belong to the same harmony as the subsequent pitch? In this case an ornament does not fill the entire note value, and a trill, even if relatively long, ends on the main note without a suffix.

As we know that Bach often wrote simple mordent symbols for any length of trill including suffix-ending long trills, the above takes care of all ornaments in this prelude. A further detail to be considered is the note with which the ornament begins. As always in ornaments of this era, a beginning from the main note is required only if the ornament is approached in stepwise motion; in all other cases, the ornament commences from the upper auxiliary.

The arpeggios all begin with the lowest note on the beat. They sound best and most even if the rhythmic distance between the lowest and the highest note remains the same (this is better – though perhaps more difficult – than retaining the rhythmic distance between any two consecutive notes); as a result, the speed in the five-note arpeggio in bar 6 should be considerably higher than that in the three-note arpeggios in bar 8.

The more vital question is whether all notes of the broken chords belong to the level of accompaniment, or whether either the top or bottom notes of any arpeggio actually form part of the melodic (horizontal) progression. Whenever the latter is the case, the performer must consider both the touch coloring (melodious vs. neutral) and, in the event of a treble line, the metric placement of the melodic note. The melodic context would sound awkwardly distorted if this note appeared "offbeat" – as it would if played as the end of an arpeggio.

One creative way of finding out which rendition is more appropriate to any given context is to imagine the entire texture of this prelude rewritten for an ensemble of instruments – e.g. the oboe (for melodic lines in the higher register), the bassoon (for melodic lines in the lower register), and the harp (for the accompanying chords). This mind image will, at the same time, greatly improve the sound-color pattern of the keyboard performer.

Questions like the following should then be asked: Who plays

- the bass-clef B^b on beat 1 of bar 5 as opposed to that on beat 2 of this bar, and the treble-clef E^b on beat 1 of bar 6 as opposed to that on beat 2?
- the treble-clef C^b - B^b - A^b on beat 1 of bar 8 as opposed to the notes on beat 2 of this bar, and the treble-clef G^b - F^b - E^b on beat 1 of bar 4 as opposed to the high G^b on beat 2 of this bar?
- the treble-clef F on beat 2 of bar 12 and the G^b on beat 1 of bar 13; also the treble-clef G^b on beat 1 of bar 25 and the F^b on beat 1 of bar 26?
- the treble-clef E^b - D in bar 28? (This bar might allow for two equally meaningful solutions.)

A second question worth considering carefully is whether those accompanying chords which follow exactly the same pattern as the others but appear without an arpeggio sign should not also be equally treated. This applies to

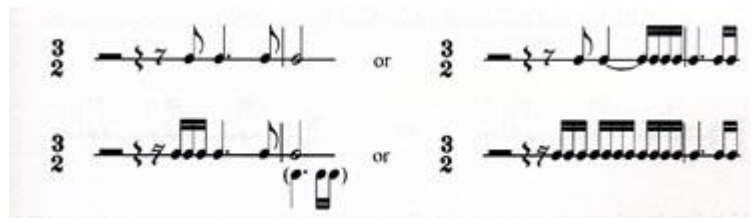
- the left-hand chords in bars 29/30;
- the two-hand chord in bar 31 beat 1 (with exception of the C^b which continues the "oboe" line);
- the right-hand chords in bars 32-34;
possibly the chords on beats 2 and 3 of bar 36 (here again, a distinction has to be made between melodic top notes which are on the beat, together with the root of the arpeggio);
- the left-hand double notes in bars 38/39.

I/8.1.4 What is happening in this prelude?

As was already mentioned, the prelude contains two relevant motives, both of which undergo considerable changes in the course of the piece. Furthermore, both motives are determined much more by their rhythmic and metric shapes than by their pitch patterns or the number of notes they encompass.

M1 rests on a figure which could be described as a "question + answer" phrase with two similar halves, each consisting of an upbeat to beat 3, a dotted-note group, and a downbeat. The upbeat can vary in length, the dotted-note group can be ornamented, and the downbeat may have a "female" tail:

(ex. 16)



M1 is introduced at the beginning of the prelude, in an extended version which stretches altogether over four bars, from the eighth-note B^b in the middle of bar 1 to the unaccented sixteenth-note E^b in bar 4. In this version with three subphrases, several details which are to characterize the motive later appear slightly obscured. Both the structural design of "question + answer" with two corresponding halves and the texture which enhances this design appear more clearly in bars 4-6d, and the fact that the B^b in bar 1d is stemmed upward and thus seems to belong to the motive also obscures the shape of the melodic unit. Later statements leave no doubt that the motive regularly begins as described above.

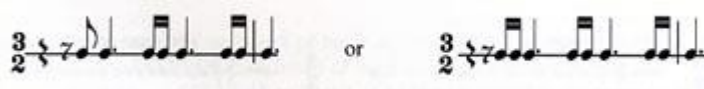
Dynamically, the two answering subphrases of M1 describe a tension-curve with the main climax on the downbeat which marks the end of the first subphrase, and preferably no heavy accent within the second subphrase. The character of this motive is graceful and mild. This can be heard particularly well after the completion of the first perfect cadence (see bars 4-6, 6-8, 8-10 and 10-12): each time, the "question" sounds in the lower melodic voice, leading harmonically to a dominant-seventh chord, while the "answer", given in the upper melodic voice, brings the respective resolution.

Bars 12-14 continue with a free development in the upper voice, followed by a varied version of M1 in what is written as a middle voice (bars 14-16). A last statement, presented in the lower voice bar 16, is extended and merges into the cadential-bass pattern which ends this section of the prelude.

In bars 22-25, another variation of M1 appears, with two "questions" in the lower voice merging directly into an upper voice "answer" which shows signs of being infected by the rhythm of M2. Finally, towards the end of the prelude, M1 recurs once more. Stripped of its "question + answer" design it appears here in chain and under different harmonic circumstances (see U: bars 30/31, U+M in parallels bars 31/32, L: bars 32-35 on an extended vii⁷ chord, U: bars 37-39, varied).

M2 is introduced in bars 20/21. Only one bar long, it shares with M1 the rhythmic feature of the dotted-quarter-note group, the beginning with a eighth-note-upbeat inside the bar, and the end on a downbeat. Its prevalent rhythmic patterns are

(ex. 17):



M2 is first heard exactly in the middle of the prelude. Its initial statement in the upper voice (bars 20/21) is followed after one beat in stretto imitation by the lower voice. The same imitative pattern is then sequenced (see bars 21/22). These two bars in the middle of the prelude thus stand out for various reasons: apart from marking the beginning of the second half (after the definite cadence in bars 19/20) and introducing the second motive, they are also the only bars in the entire piece to come without any accompanying notes or chords.

The tension expressed in M2 is different mainly insofar as the entire figure rests on only one harmonic step. The climax therefore falls on the beginning, i.e. on beat 2 in the leading voice, on beat 3 in the imitation. The character of this motive might be described as stately.

This second motive is developed once, in bars 26-28, where it appears in a single-voice version without imitation. Because of the harmonic change at the end of the first of these statements (see downbeat bar 27) and because of the inverted pitch pattern in the second, the dynamic curve would be most convincing if it were also inverted, with each time a crescendo to the final note of the motive. A final statement, only recognizable through its basic rhythmic structure, could perhaps be detected in the middle voice of bars 39/40.

As for the dynamic design in the entire prelude, an overall development of tension with large-scale buildups does not seem the aim in this very meditative piece.

WTC I/8 in D[#] minor – Fugue

I/8.2.1 The subject

With a little more than two and a half bars, the phrase length of this subject is not metrically oriented. The keynote D[#] which falls on the middle beat of bar 3 does not only act as a harmonic resolution of the dominant-seventh chord represented by E[#] and G[#] at the beginning of bar 3, but also marks the melodic return to the pitch from which the phrase departed on the downbeat of the initial bar. While intuition tells us that this subject is made up of two subphrases, the exact point of phrasing is not quite so certain. Looking at the original statement of the subject alone, there could be two equally valid solutions:

- (a) One option is to regard the jump D[#]-G[#] (bar 2m) as a varied sequence of the initial D[#]-A[#] at the subject's beginning. This makes sense rhythmically and metrically: both D[#]s are quarter-notes falling on strong beats, and the target notes of both jumps are syncopations of three-eighth-note length.
- (b) Another option is to view the complete curve from the initial D[#] to the D[#] on the middle beat of bar 2 as an entity and thus as the "main thought", with the scale descent from G[#] onwards as an "afterthought".

Most people have immediate and fairly strong feelings as to which version they prefer. However, as it turns out in the course of the fugue, the choice is not really ours for there are two statements which reveal what phrasing Bach himself had in mind. The middle-voice entry in bars 19-22 and the upper-voice entry in bars 20-22 both feature a rest within the phrase. This rest occurs after the end of the curve; it cuts the assumed sequential jump in two and thus gives undeniable evidence for the phrasing into "main thought" and "afterthought", the second option described above.

The pitch pattern in the subject contains two fifth intervals, at both ends of the main subphrase; all else is stepwise motion. (The succession D[#]-G[#] is not counted as an interval since the two notes do not belong to the same phrase.) Rhythmic features in the subject include eighth-notes, quarter-notes and syncopated dotted (or tied) quarter-notes.

The harmonic background to this subject is that of a simple cadence with an extended first chord. The complete curve of the first subphrase is firmly rooted in the tonic, but interspersed with dominant chords which quickly resolve back into D[#] minor. The syncopation at the beginning of the second subphrase represents the subdominant, followed by a gradual return to the home chord.

(ex. 18)



The shaping of tension within the subject leaves no room for doubt in the second subphrase where a simple decrease after the syncopation is certainly the only logical answer. In the first subphrase, however, it allows for two slightly different interpretations, depending on the chosen tempo and on individual preference for rhythmic vs. melodic processes.

- Performers who feel the rhythmic feature stronger than the melodic one, will place the main climax on the dotted A[#].
- Performers who feel the melodic feature strongly enough, may wish to play a tension-rise past this A[#] to the B – which is the (high-tension) minor sixth degree – thus giving this subject a very special emotional quality.

I/8.2.2 The statements of the subject

The D[#] minor fugue contains thirty-five subject entries: in this fugue, the subject seems all-important. There are no rivaling counter-subjects or even any transitorily prominent motives. Instead, subject entries encompass an unusually large portion of the composition, and the subject appears in so many different shapes, distributed with such obvious determination and purpose, that nothing else seems to matter.

1. bars 1-3 M 18. bars 52/53 L

2. bars 3-6	U	19. bars 52/53	M
3. bars 8-10	L	20. bars 52/53	U
4. bars 12-14	L	21. bars 54/55	L _{inv}
5. bars 19-22	M	22. bars 54/55	M _{inv}
6. bars 20-22	U	23. bars 54/55	U _{inv}
7. bars 24-26	U	24. bars 57-60	U
8. bars 24-26	M _{rh}	25. bars 61-64	M
9. bars 26-29	U	26. bars 62-67	L _{augm}
10. bars 27-30	M	27. bars 64-67	U _{inv}
11. bars 30-32	U _{inv}	28. bars 67-69	L
12. bars 36-38	M _{inv}	29. bars 67-72	M _{augm}
13. bars 39-41	L _{inv}	30. bars 69-72	U
14. bars 44-47	L _{inv}	31. bars 72-75	M
15. bars 45-47	U _{inv}	32. bars 77-79	L
16. bars 47-50	M _{inv}	33. bars 77-80	M _{rh}
17. bars 47-50	U _{inv,rh}	34. bars 77-83	U _{augm}
		35. bars 80-83	M

(The table above lists the subject statements with a short comment regarding the specifications under which they appear: inverted statements, augmentations and rhythmically varied versions are marked (inv), (augm) or (rh) respectively.)

(ex. 19)



Apart from the usual adjustments in the tonal answer (see e.g. bars 3-6), the most frequent guise of the subject is the inversion in which all intervals appear upside down. Augmentations, i.e. statements in which each note value is twice as long, and rhythmic variations each occur three times. In these variations, the dotted-quarter-note value of the second subject note also "affects" the fourth and sixth notes, thus stretching the first subphrase in such a way that the second subphrase has to be shortened. Furthermore, two-part and three-part strettos occur frequently.

Beginnings and endings of subject statements suffer only small variations. The first note is shortened in bars 12 and 61, lengthened by anticipation in bar 26 and ornamented in bar 39. The final note is omitted in bar 50, delayed in bars 14 and 26; it is reached after an ornamenting escape note in bars 29 and 79, or after a chromatic passing note in bars 63/64. Finally, in the very dense three-part strettos of bars 52/53

and 54/55, only the first subphrase of the subject can be tracked, but even this contains irregularities at its end.

I/8.2.3 The counter-subject

This fugue does not contain a single counter-subject. Consequently, the sketch which performers draw to visualize the phrase structure and dynamic design as created in the combinations of primary material, would not rely on the blend of subject and counter-subject. Quite on the contrary, the intriguing juxtapositions are those three-part strettos in which one of the voices appears in augmentation. The sketch in ex. 20 shows bars 77-83, with

U: augmented statement,

M: rhythmically varied entry quickly followed by one in the original shape,

L: statement with ornamentation at the beginning and the end of the second subphrase.

(ex. 20)



I/8.2.4 The episodes

There are ten subject-free passages. As can be seen from a cursory glance at the music, episodes occur more often in those sections where the subject appears in separate statements, but they are very scarce – and short – within the context of the strettos.

E1 bars 6/7	E6 bars 50/51
E2 bars 10m-11d	E7 bars 56-57m
E3 bars 14 -19m	E8 bars 60-61m
E4 bars 33 -35	E9 bars 75-77d
E5 bars 41m-44m	E10 bars 83-87

None of the episodes is related to the subject. The only subject-related component between entries occurs in bars 22/23 where both the upper and the middle voices extend their respective subject statements by sequencing the second subphrase. These sequences, however, appear inseparably linked to the preceding entries. As they do not give the impression of a contrast between statements, these bars are counted here as a subject extension rather than as an episode.

None of the episodes establishes any independent motive. There are, though, note groups which reappear once or twice occasionally. They should be mentioned not because of their thematic importance but because a performer would wish to pay attention to shaping them consistently.

- In bars 14-16, the middle voice (C[#]-F[#]-E[#]-D[#]-C[#]) is imitated an octave higher (see upper voice, bars 16/17 from C[#]); it might also be recognized, with a variation in the first interval and a cut before the last, in bars 18/19 (see M: C[#]-B[#]-A[#]-G^x).
- Also in bars 17/18, the upper voice (C^x-D[#]-E[#]-F[#]-E[#]-D[#]-C[#]) is followed by a varied sequence (see U: bars 18/19 from D[#]). The same curve recurs in inversion twice in bars 33/34 (see U: from E[#]; M: from G[#] - varied), and six more times, in several slightly different variations, in bars 41-44 (see U: bar 41 from G[#], bar 42 from F[#], bar 43 from C[#]; M: bar 42 from C[#], bar 43 from F[#], bar 44 from F[#]). In bars 82-85, overlapping with the end of the preceding subject entry, the same curve recurs three times in inversion (see M: bar 82 from A[#], bar 83 from A[#], bar 84 from F[#]).
- Also in bars 82-85, the syncopated final note of the subject entry, together with the subsequent falling broken chord, set the model for a little curve which recurs twice (see U: bar 83 from A[#], bar 84 from F[#]).
- Finally, all three voices are involved in stating a four-note upbeat figure in bars 85-87.

Comparing the above-mentioned bars with the list of episodes drawn up above, one finds that the only episodes to develop any melodically lasting figures are E3, E5 and E10; these are not only the longest episodes in this fugue, but, as will emerge later, indicators of important structural caesuras. (Beyond this correspondence on a higher level, there is no further remarkable relationship between the episodes.)

All episodes without exception serve as periods of relaxation between the measures of tension built up by the subject statements. Only a few have any definite dynamic tendency:

- In E3, a decrease can be felt from bar 17 towards the cadence in bar 19;
- in E5, the descending sequences also express diminishing tension;
- in E6, the tension seems to rise, both because of the unrelentingly driving eighth-notes in all voices and because of the harmonic intensification towards the A[#] major chord in bar 52;
- E8 presents descending lines in all three voices;
- E10 begins with falling lines and relaxing tension but then approaches the last bar of the composition in a powerful tension-rise.

I/8.2.5 Character, tempo, articulation, ornament realization

Both the variety of note values (half-notes, quarter-notes, eighth-notes, sixteenth-notes and various syncopations) and the predominantly stepwise motion in the fugue indicate a *rather calm* basic character. The range of an appropriate tempo is suggested by two inherent characteristics of the fugue:

- The calm character requires a tempo slow enough to allow for each eighth-note to be felt with full

melodic impact;

- the augmented subject statements require a tempo fluent enough to allow for each subphrase to be felt in one breath.

(For performers: it seems a very good idea to establish a desirable tempo – and take note of the metronome mark – before starting to practice the details.)

The relative tempo of the prelude to the fugue can be simple:

one half-note	equals	half a bar
in the prelude		in the fugue

(Approximate metronome settings: prelude beat = 33 [quarter-note = 66], fugue beat = 66.)

The articulation which best expresses the character of this fugue is an overall legato, only interrupted by phrasing. These interruptions, which occur frequently, should be brought out very clearly.

The fugue contains only one ornament, a complex trill in the lower voice of bar 74. This ornament seems somewhat arbitrary: proving neither structurally important (like the trills in cadential closes) nor thematically consistent (like the typical subject-embellishing trills in many fugues), it appears redundant if not a bit confusing. (If it were played, it should consist of five notes: B[#]-C[#]-B[#]-A[#]-B[#].)

I/8.2.6 The design of the fugue

In this fugue, the design is obvious from the particular way the material is grouped:

- I The first section contains four separate subject statements: M U L / L. It is interesting to see that the regular lower-voice entry (bars 8-10) remains in the pitch range of a tenor while the fourth (redundant) entry sounds like a bass – thus giving the unsuspecting listener the illusion of a four-part fugue.
- II Bar 19 introduces the first of three strettos, all of them using the uninverted shape of the subject: M^U U^M U^M.
 - * In the first of these strettos, the imitation is at the octave at two quarter-notes' distance, with both voices equally faithful to the original. (The middle voice is in the lead merely because it enters first.)
 - * In the second stretto, the subsequent voice comes in after only one quarter-note but sounds in a rhythmic variation and with a shortened second subphrase.
 - * In the third stretto, the upper voice enters first but shows modifications at both the beginning and the end, while the middle voice gives a faithful rendition of the subject and also relates more immediately to the target key of F[#] major. This is why the middle voice should be regarded as the leading voice in this stretto.
- III The third section begins in bar 30 with three separate statements of the inverted subject: U(inv) M(inv) L(inv). As has been shown above, the closing episode of this section bears resemblance to that episode which ended the first section (compare bars 41-44 with bars 17-19), thus

confirming the structural analogy of these two sections.

IV Bar 44 introduces two strettos with subject inversions only: $L^U M^U$.

- * In the first of these strettos (just as in the first of the earlier strettos) the imitation is at the octave at two quarter-notes' distance, with both voices equally faithful to the original. (The lower voice is leading merely because it enters first.)
- * In the second stretto (just as in the second of the earlier strettos) the subsequent voice joins in after only one quarter-note but sounds in a rhythmic variation and with a shortened second subphrase.

V A new grouping is introduced with the three-part strettos in bars 52-55, together with the return, after a long stretch of inverted statements, to the original shape of the subject. These two strettos seem both to sum up and further expand the earlier developments in the fugue. They sum them up in that they bring, in rapid succession, the original subject and its inversion; the expansion is caused by the increase in number of entries involved in a stretto from two to three. Both strettos show the lower voice in the lead, followed by the middle voice and complemented by the upper voice. The imitations are at the octave and separated by one quarter-note each. All statements appear in a shortened version. After this quite dramatic buildup, a single entry in the original shape (bars 57-60) presents no new pattern but serves to release tension.

VI The final section of the fugue is distinguished from the previous ones by an entirely new feature: strettos containing an augmented subject entry. From bar 61 onward there are three such strettos: $L^{U_{inv}} L M^U L, M U^M$.

- * In the first two of these strettos, the augmented entry imitates an unaugmented one at a distance of two quarter-notes; another statement in original values follows once the first is completed, i.e. halfway through the augmented statement. All voices remain very close to the original shape. (The augmented voice is clearly in the lead because of its much greater impact.)
- * The second group is slightly extended in that the voice which carried the augmented entry follows with a "repeated statement" – a separate entry reminiscent of the similar one after the second stretto in the fifth section. As before, this entry may serve to release the tension before the forthcoming greater climax.
- * The last stretto is the densest of all; it brings a heightening combination of features from earlier processes:
 - (1) the augmentation of one of its entries links it to the two preceding strettos;
 - (2) the fact that it commences in three-part stretto with octave imitation recalls the strettos in the fifth section;
 - (3) the combination of the first two unaugmented entries recalls the second pair in the earlier two-part stretto sections: the subsequent voice enters after only a quarter-note and sounds in a rhythmic variation;
 - (4) as in the previous stretto there are four entries, yet the fourth one appears here integrated as the expected final subject statement which comes in after the end of the rhythmically varied entry. This stretto thus outranks everything the listener has heard so far in this fugue.

There are few explicit cadential closes in this fugue, above all a twofold harmonic development, with a return to the tonic and a new progression occurring roughly in the middle of the fugue. The first four separate statements are in D[#] minor, followed by a modulation to the dominant (A[#] minor; relevant cadence in bar 19). The first stretto then modulates to F[#] major which is reached in closing-formulas on the downbeat of bar 30. After this, the three separate inverted statements return to the home key of D[#] minor (from bar 39 onwards). The second stretto group sets out from the tonic and leads to the dominant on the downbeat of bar 52, thus repeating the harmonic process of the first section. Subsequently, the fifth section begins and ends in A[#], with a short detour to F[#] in the second three-part stretto. Similarly, the augmented-entry strettos begin and end in A[#] while the middle group touches several other transitory keys. It is left to the final episode to modulate back to the home key. Owing to this harmonic device, this impressive fugue ends without a coda. (For a sketch showing the design of this fugue, see ex. 21.)

I/8.2.7 The development of tension

Within the first section, there is a very gradual tension-rise which is supported by the growing ensemble. At the same time, this growth in tension is counteracted on various levels: by the strong tension-release in the subject itself, by the lack of contrapuntal tension and by the neutral character of the episodes. In the second, third and fourth sections, the dynamic development between one entry (or stretto) and the next is negligible; emphasis thus remains only on the contrast between subject-carrying bars and episode bars. The fifth and sixth sections allow to distinguish three levels: a first level of extremely high tension in the strettos, a second level of drastically reduced, medium tension in the sudden separate statements (bars 57 and 72), and a third level with a strong tendency towards relaxation in the subject-free passages.

The overall development in this fugue shows the outlines of continuous tension-growth, with two analogous departures and two small internal relaxations. The steep drop or rise in tension between adjacent sections is so pronounced that in comparison each section seems built on a solid plateau. The only remarkable increase within a section occurs in the sixth section; here the final augmentation-stretto is evidently conceived as a climax which outranks any preceding ones. The following simplified diagram shows the structural processes in relation to the dynamic levels:

I	II	III	IV	V	VI
separate	two-part	separate	two-part	three-part	three-part
entries	strettos	entries	strettos	strettos	strettos
(original)	(original)	(inverted)	(inverted)	(orig/inv)	(with augm)
				+ extra entry	+ extra entry
p - mp	mf	p - mp	mf	poco f	f - ff
	E	E	E	E	E
	dim	dim	cresc	dim	dim

WTC I/9 in E major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/9.1.1 The prelude-type

This prelude is composed in polyphonic style. Apart from a few missing rests and the not so unusual voice-splitting in the final bars, its three voices are presented in consistent part-writing. Prominent material within this prelude is based upon one motivic idea only. This composition can thus be regarded as being structurally built along the lines of an invention.

I/9.1.2 The overall design

The sections of this prelude are determined by harmonic patterns as well as by development of material. In addition, a striking structural analogy facilitates the recognition of a ternary form with coda.

The first harmonic progression ends on the downbeat of bar 3. It encompasses the following steps:

bar 1 = I - IV, bar 2 = I - V⁷, bar 3 = I.

This cadential close coincides with the end of the motive (see upper voice until bar 3 downbeat G[#]). For this reason, and also because the bass has so far not taken an active part in the polyphonic texture, this first cadential pattern cannot be regarded as a structurally self-sufficient unit.

The next harmonic progression concludes, after a modulation to the dominant, on the middle beat of bar 8. This cadence represents a much stronger close and serves as a structural caesura. The dominant key is actually reached for the first time in bar 4; in bar 5 it gives way to the dominant of the dominant (F[#] major) which, reinforced by sustained notes in the bass and repeated F[#] major chords in the upper voice, governs the three bars (bars 5-7) preceding the perfect cadence in B major.

There are altogether four structural sections in this prelude:

I	bars 1-8m	I-V	E major to B major
II	bars 8-13d	V-V/V	B major to F [#] minor
III	bars 13/14	V/V-V-I	stepwise return from F [#] via B to E which, however, turns out to serve as dominant to the ensuing A
IV	bars 15-24	IV-I	A major to E major, with an interrupted cadence in bar 22m, followed by a full cadence in bar 24

The first section recurs in the fourth (compare bars 1-8m with bars 15-22m). There are only two small deviations from a literal transposition:

- melodically, the ornamented note on the downbeat of bar 4 is substituted by a eighth-notes note-group at the beginning of bar 18;

- harmonically, the perfect cadence at the end of the first section is replaced by an interrupted cadence (see the C[#] minor chord in the middle of bar 22).

I/9.1.3 Practical considerations for performers

The choice of the basic character in this composition is ambivalent; however, the differences in articulation resulting from the two choices are only very small.

- On the one hand, the interval structure in the motive which determines this prelude contains an entire broken chord. If, with regard to the rhythmic pattern, one focuses on the polyphonically involved voices and their frequent three-eighth-notes groups against dotted quarter-notes, one would have to interpret the rhythm as simple. The underlying simple rhythm, in conjunction with the melodic surface features, could then be read as indicating a *rather lively* basic character. In this case, the dotted quarter-notes and quarter-notes would have to be played non legato while the eighth-notes would be (quasi) legato.
- On the other hand, one might read the melodic line in the first phrase as an elaborate hidden two-part structure based, after an initial rising sixth (E-C[#]), on the stepwise descent C[#]-B-A-G[#] which is accompanied in thirds (see M: A-G[#]-F[#]-E). In addition, one might consider the syncopations (see e.g. bar 3: U, bars 4/5: M) and the sixteenth-notes in the cadential figures and in "bridge" bar 14 as essential constituents of the rhythmic pattern. In this case, the piece would be interpreted as representing a *rather calm* basic character in which all melodic notes are to be played legato.

Before attempting to determine which notes would in fact sound differently in the two approaches, it seems crucial first to clarify that

- inside the motive, the sequential structure implies phrasing after both E's;
- cadential-bass notes (see bars 12 and 22/23) are non legato in any case;
- melodic do-si-do (keynote / leading-note / keynote) formulas (see bars 2/3: L, bars 12/13: M and bars 23/24: U) must be legato in any case;
- notes with tie-prolongation into a eighth-notes (see bars 1/2: M, bars 3, 4: U etc.) must be legato in any case. (What remains are the following notes, which are to be played
 - legato in a *rather calm*, but
 - non legato in a *rather lively* character:
 U: none
 M: bars 1: G[#], 5: E, 6: A[#], 10: all, 13: F[#], 15: C[#], 19: A, 20: D[#]
 L: bars 6: F[#], 7: G, 9: E[#], 10: all, 14: B, 20: B, 21: C.)

The tempo for the prelude does not necessarily differ too much in the two approaches. The compound time signature should be read, as always in Baroque pieces, as indicating that the dotted quarter-notes and not the eighth-notes are to be perceived as the pulse of the piece. At the same time, the ornaments and the written-out sixteenth-notes runs must be accommodated. A combination of these two criteria limits the tempo choices to a moderate pulse, with gently flowing eighth-notes.

There are several ornaments in this prelude. The principal motive, in its first presentation (bars 1-3d) and its recapitulation (bars 15-17d), carries two mordents; these are dropped in all shorter developments of the motive throughout the prelude. Both mordents begin on the upper neighbor note and thus contain four notes, the first of which falls on the beat. (For a written-out version of the mordent in bar 1, refer to ex. 26a below.)

The mordent which adorns the preparation of the cadence (see bar 7m) is not derived from Bach's manuscript but from a copy, as the brackets indicate. Because it is very appropriately placed and embellishes the piece in an unpretentious way, playing this ornament is a good idea. The performer who settles for this mordent should, however, be sure to remain faithful to Bach's concept of analogy and integrate an equivalent mordent on the middle beat (D[#]) of bar 21 as well. In both cases, the ornament begins on the main note because it is approached stepwise, and comprises only three notes (see ex. 26 b).

Finally, the compound ornament in bar 4 is launched from the lower neighboring note, as the little convex curve preceding the mordent symbol designates. For a performer with good finger dexterity, a rendition with 8 ornamental thirty-second-notes sounds most convincing (see ex. 26c). A longer ornament might blur the lower-voice entry of the motive.

(ex. 26a)

(ex. 26b)

(ex. 26c)



I/9.1.4 What is happening in this prelude?

The initial phrase, which ends in a perfect cadence on the downbeat of bar 3, introduces the motive of this "invention". This motive has several outstanding features, some of which are transitorily lost in the development and only recur in the transposed recapitulation.

After a rising broken chord topped with a prolonged octave (see the written-out inverted mordent E-D[#]-E), a melodic descent links the strong-beat notes C[#]-B-A-G[#]. The first two of these melodically focussed notes repeat the inverted-mordent figure, enhancing this lyrical embellishment by additional virtuoso ornaments (see the two mordent signs), and returning in-between with an escape note to the octave E which thus serves as a "background" layer. The last two melodic notes are then linked by a free ornamental line.

While this hidden two-part structure describes what appear as two simultaneous horizontal layers, one could also regard this motive as consisting of head and tail: the head is represented by the broken chord, the original inverted-mordent figure decorating the octave, and a melodic step downwards which entails a harmonically active step away from the tonic but could be represented by different pitches. The tail then consists of the gradual melodic descent following the climax, accompanied by an equally gradual harmonic return to the tonic.

The original accompaniment of the main motive consists, in the lower voice, of a protracted do-si-do formula, and in the middle voice, as was already mentioned, of a – differently embellished – melodic parallel to the descent in the motive's tail (see M, on the strong beats of bars 1-3: A-G[#]-F[#]-E).

The development of the motive uses only its head. It appears twice in the lower voice (bar 3 = tonic, bar 4 = dominant), before returning to the upper voice where it is heard twice on F# (V/V and V7/V respectively). Note that in these bars, the head of the motive continues into another broken chord. For a meaningful performance it is vital to distinguish between the original, active broken-chord rise, found here on the first beat of each bar, and the passive one which serves as a rhythmic extension to the melodic target note.) The remaining one and a half bars borrow the idea of gentle curves from the end of the original motive and close in bar 8 with a B major cadence.

Having observed that the original motive consists of "head" and "tail", it might be interesting to notice that, from a perspective of harmonic tension, the entire first section repeats this pattern on a larger scale. This large-scale "head" consists of the first phrase, firmly rooted in the tonic, followed in the partial imitation by an active harmonic step (see L: bar 3, the step from the E major chord to the inverted F#9 on the middle beat). The "tail" brings the gradual melodic descent (see the peak notes in U bars 3/4: G#, bar 5: F#-E, bar 6: E-D natural, complemented after a "lyrical ornament" in bar 8 with C#-B), accompanied by a gradual harmonic resolution onto the new tonic (see the F# major chord which is implied if not openly stated from the middle beat of bar 3 until the second beat of bar 8, and only then gives way to the new tonic B major).

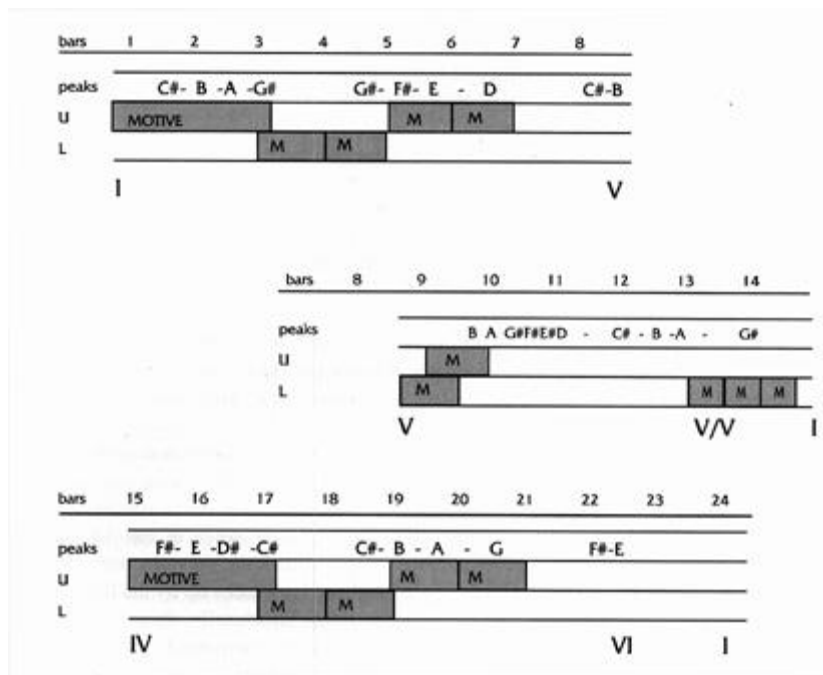
The second section begins again with two statements of the motive (see L: bars 8/9 and U: bar 9, both on B). These two motive entries sum up the motivic developments so far: the lower-voice statement uses the shorter version from bars 3 and 4, while the upper-voice statement takes up the version with the broken chord extension (compare bar 9 with bars 5 and 6).

On a larger scale, these motive statements can again be regarded as a "head" comprising the double confirmation of the key B major and the active harmonic step to the inverted C#9 chord in the middle of bar 9, followed by a "tail" encompassing a gradual melodic descent (see the peak-note line in U: bars 9-12: B-A-G#, D-C#-B-A) accompanied by the gradual resolution onto the new tonic F# minor on the downbeat of bar 13.

The short portion which follows encompasses, in the lower voice of bar 13, two statements of the motive which are even more shortened than the previous ones. The sudden sixteenth-notes runs, launched by the right hand and later taken up by the left, add to set these bars apart from the remainder of the piece. Structurally, these two bars serve as a retransition to the recapitulation in bar 15, while harmonically leading to the function which, in Baroque compositions, traditionally opens a recapitulation: the subdominant (see bar 15: A major).

The fourth section repeats the design of the first one, but ends in an interrupted cadence instead. The ensuing coda (bars 22m-24) presents three shortened versions of the motive in the split middle voice, before it closes the composition with a final cadence in E major. This cadence is of particular interest as it is a hybrid between a plagal cadence (represented by the bass step A-E) and an authentic cadence (represented by D# and C natural which stand for third and ninth of the dominant chord).

The following graph attempts to visualize the above analysis.
(ex.27)



WTC I/9 in E major – Fugue

I/9.2.1 The subject

This subject is very short. It begins on a secondary upbeat (the upbeat to beat 3 in the first bar), and ends already on the downbeat of bar 2, thus encompassing only six notes and one rest. The dominant which, in a homophonically accompanied representation, would fall on beat 4 where the unaccompanied line has a rest, resolves onto the tonic represented by the keynote E. (It is possible to assume a "female ending", i.e. an unaccented extension without any modification of the harmonic pattern, which would include the four subsequent notes until the G# on beat 2 of bar 2. However, a thorough analysis proves that it makes much more sense to relate these four notes to the counter-subject where they form an essential part of the first subphrase.)

Despite the conspicuous rest after the two initial notes, the subject should be interpreted as consisting of one indivisible phrase. The rest represents an implied harmonic step from the subdominant to the dominant and thus, occurring at the very height of harmonic tension, does not allow for any breathing.

The pitch pattern in the subject consists of seconds and one fifth interval. While the first small interval may be regarded as melodic, the stepwise motion at the end of the phrase already reveals the significance of the ornamental structure. This will become all the more obvious in the wavy lines of the counter-subject. The interval jump is matched later by occasional patterns of leaps (as in bars 5/6, 13-16 etc).

The rhythmic pattern in the subject itself includes three different note values: a quarter-notes, a eighth-notes and sixteenth-notes. A glance across the entire composition reveals that the prevailing rhythmic pattern remains simple, despite occasionally interspersed tied notes.

The harmonic background, as already mentioned above, is that of a simple cadence in which the subdominant harmony is replaced by a seventh chord on its relative minor:

(ex. 28)



The choice of the climax seems more than easy in this subject. The second note F# is both rhythmically prominent and harmonically enhanced by the subdominant function and the implied change of harmony on the rest – apart from being the undisputed peak of the pitch pattern. The rest after the climax sustains the tension which is then gradually released through the ensuing four sixteenth-notes.

I/9.2.2 The statements of the subject

The subject appears altogether twelve times in the course of this fugue.

- | | | |
|---------------|-----------------|------------------|
| 1. bars 1/2 M | 5. bars 7/8 M | 9. bars 20/21 U |
| 2. bars 2/3 U | 6. bars 9/10 L | 10. bars 21/22 M |
| 3. bars 3/4 L | 7. bars 16/17 M | 11. bars 25/26 U |
| 4. bars 6/7 U | 8. bars 19/20 L | 12. bar 28 L |

(ex. 29)



Only two of the subject statements are varied.

- The upper-voice entry in bars 20/21 includes an interesting octave displacement: a sixteenth-notes-group sets out from middle B. As this beginning is metrically one beat early, the extra time is filled with a figure which leads to the climax C# in the higher octave.
- The final entry also commences on the wrong beat. This time, however, no "corrections" are made. Instead, this statement concludes in its metrically anticipated position and thus allows for a subsequent accented cadential-bass jump to the tonic at the end of the piece.

I/9.2.3 The counter-subject

The fugue contains only one counter-subject which is almost omnipresent. It is introduced in the middle voice where it is pitted against the second subject statement (see bar 2 second sixteenth-notes until bar 3 downbeat).

This counter-subject is considerably longer than the subject. It commences immediately after the downbeat and thus bridges the three-eighth-notes rest which precedes the first subject note. The counter-subject's pitch pattern and perfectly even rhythm confirm the ornamental nature and, thus, the basic character of this fugue.

Spiraling motion around a center note (see in bars 2/3: around E) and obvious lack of harmonic or melodic features which might enhance tension, are counter-productive to any explicit dynamic shaping

other than a very soft rise at the beginning and a relaxation during the second half. For the same reasons and because of the very even rhythmic pattern, sub-phrasing is also unlikely.

Nevertheless, one can clearly distinguish two segments. They are of equal length (eight sixteenth-notes each, ending on a strong beat) which allows them to appear in various combinations. Separate or joined, they play an important role in the fugue.

- The first segment, which will be referred to as CS-a, consists of a scale section (D[#] to B) followed by a broken chord (B-G[#]-E);
- the second segment, named CS-b for this analysis, features an inverted turn (D[#]-E-F[#]-E) and its almost exact repetition (D[#]-E-F[#]-D[#]).

These segments appear both as companions to subject statements and as episode motives. It is therefore worth while to trace them in detail.

- As a companion to the subject, the complete version of CS-a + CS-b appears only against the subject entries in bars 2/3, 7/8, 20/21 and, with a slight variation, that in bars 21/22. Other subject entries are accompanied by
 - * CS-b + CS-b in sequential pattern (see bars 3/4, 25/26)
 - * CS-b + CS-b in a two-part imitative setting (see bars 9/10)
 - * a free figuration followed by CS-b (see bars 6/7)
 - * CS-b dissolving into a free figuration (see bars 28/29)
 - * no counter-subject material at all (see bars 16/17, 19/20).
- Within the episodes, the segments may appear in the counter-subject order of CS-a + CS-b (see bars 4/5 L: D[#]-D[#]; bars 8/9 M: A[#]-A);
 - * they may, in this order, build descending sequences (see bars 11/12 and 12/13 L: G[#]-G[#] and E-E; bars 13/14 and 14/15 U: B[#]-B and A[#]-A; bars 17/18 and 18/19 M: B[#]-B and G[#]-G[#]; bars 22/23, 23/24 and 24/25 M: D[#]-D[#], C[#]-C[#] and B-B);
 - * they may even incorporate small variations which change the harmonic outline (see bars 26/27 and 27-28 U: D[#]-G[#] and F[#]-B).

Or, the episodes may recall only one of the counter-subject segments,

- * either separately (see bar 3 first half U: A[#]-B)
- * or in ascending sequences of CS-a (see bars 5/6 L: C[#]-C[#], bars 15/16 U: G[#]-G[#])

In other words, there is not a single bar in the E major fugue which does not contain some kind of quotation of the counter-subject segments!

Because of its unusual nature which, as explained above, does not invite any explicit dynamic shaping, the counter-subject does not really challenge the subject's supremacy. Yet it is vital to distinguish different levels of intensity in its sixteenth-notes and a general tendency, particularly at the beginning: while the four ascending sixteenth-notes which end the subject constitute a strong diminuendo, the ensuing group of equally ascending sixteenth-notes represents an increase of tension (though a very mild one, due to the ornamental structure).

(ex. 30)

I/9.2.4 The episodes

There are seven subject-free passages in this fugue.

E1 = bar 3	E5 = bars 17 - 19m
E2 = bars 4m - 6	E6 = bars 22 - 25m
E3 = bars 8m - 9	E7 = bars 26 - 28d
E4 = bars 10m - 16m	

None of the episodes in this fugue is related to the subject; but all, as has been shown above, feature at least one of the counter-subject segments. This consistency of material throughout all structural portions creates a strong impression of unity.

Besides the counter-subject segments, the episodes contain three motives. While inconsequential for the design of the composition, their dynamic impact for the episodes is nevertheless important:

M1 appears in the upper voice of bars 5/6 (B D# F# B); its broken chord pattern, immediately imitated in the middle voice but never recurring thereafter, describes a graceful increase in tension.

M2 is of greater importance. Consisting of a syncopated appoggiatura and its resolution, it is introduced in the middle voice of bars 13/14 (A#-G#) and followed by two descending sequences (bars 14/15 and 15/16), each representing a strongly emotional accent and relaxation. Its accompaniment, a non-melodic eighth-notes figure in the lower voice which is also sequenced twice, finds its climax on the middle beat of each bar, preceding the high-tension interval (see the minor seventh jumps A#-G#, G#-F#, F#-E).

M2 is taken up in E6 where its appoggiatura-resolution pattern appears in the upper voice (bars 22-25: C#-B, B-A, A-G#). The accompaniment, again in the lower voice, is also a non-melodic eighth-notes figure in similar dynamic design, albeit in a different pitch pattern.

M3 is presented in the upper voice of E5 (see bar 17, G# to tied note A) and sequenced once in the next bar; it never recurs thereafter (although U: bar 9 could perhaps be regarded as remotely related). With regard to tension it describes a curve with the climax on the first sixteenth-notes.

Further attention should be drawn to two unequivocal closing-formulas within the episodes, particularly as these do not always appear at the end of a subject-free passage and thus provide essential information for a deeper understanding of the nature of the above-mentioned seven episodes.

The first closing-formula occurs between the middle of bar 4 and the middle of bar 5; the upper voice above all features the typical do-si-do figure. This observation allows the conclusion that E2 in fact consists of two halves of entirely different structural importance: the first bar provides a cadence in the

dominant key B major, while the second half introduces M1 and modulates back to the tonic (E major being re-established on beat 4 of bar 6).

The second closing-formula can be found in bar 12, with the cadential close in C[#] minor (relative minor to E major) completed on the downbeat of bar 13. Again it is the upper voice which presents one of the typical figures; and again this closing-formula appears in the middle of a subject-free passage. E4 is thus built similarly to E2; it also consists of two halves, of which the first provides the cadence while the second introduces a new motive: M2. (Speaking of closing formulas, it is interesting to observe that two other closing formulas appear in the context of subject statements. The first, with typical cadential steps in the lower voice, accompanies the middle-voice entry in bars 16/17; the second, with a similar lower-voice pattern and a keynote / leading note / keynote figure in the upper voice, supports the final entry in bars 28/29.)

Concerning structural analogies, E6 is definitely a variation of the second half of E4 (compare bars 13-16m with bars 22-25m). The role which the seven episodes play in the development of this fugue reveals a strikingly regular pattern:

- E1 serves as a bridge between the second and third entries; it sustains the tension which has already been built up without sounding too important (lest it diminish the premonition of the next subject statement).
- E2 brings a definite release of tension in its first half; after the cadence, the appearance of M1 provides a contrasting color with its own relaxing tendency.
- E3 like E1, serves as a bridge between two entries, but it is more extended.
- E4 like E2, brings a release of tension in the (also considerably extended) first half; after the cadence, the appearance of M2 provides an even more distinct contrast in shade. (M2 is more prominent than M1 both in length and further impact. It is also set more clearly apart from the mainly ornamental character of this fugue owing to the sudden melodic legato found in its appoggiatura-resolution figure.) The descending sequences of M2 also bring forth an overall dynamic relaxation.
- E5 like E1 and E3, serves again as a bridge. Because of the motive it introduces, this bridge sounds more individual than the two before. Like its predecessors E1 and E3, it also appears in two-part texture, with the lower voice resting.
- E6 repeats the color contrast and the overall relaxation of its model, the second half of E4.
- E7 again sustains the tension between the two final subject statements.

I/9.2.5 Character, tempo, articulation, ornament realization

The basic character of the E major fugue is *rather lively*. This is determined above all by the rhythmic structure which, from the middle of the first subject statement onward, presents an unbroken continuity of sixteenth-notes, and the ornamental structure in the pitch pattern of the sixteenth-notes figures. Several broken-chord figures (M1, M3, M2 accompaniment, lower voice E7 etc.) confirm this choice of character.

The appropriate tempo of this fugue is very fluent, almost virtuoso, with a swiftness which does not permit any heaviness. The articulation contains many nuances:

- an energetically bouncing non legato in the subject's upbeat,

- a lighter non legato in the broken-chord patterns of M1 and M3 as well as in all other upper- and middle-voice eighth-notes,
- a neutral, medium-length non legato in the M2 accompaniment and all other cadential-bass patterns;
- a crisp quasi legato in the sixteenth-notes figures,
- an ordinary legato in the melodic closing-formulas of the upper voice (bars 4/5, bars 12/13 and bars 28/29), and
- a particularly intense legato in the appoggiatura-resolution pairs of M2.

The relative tempo between prelude and fugue also allows for two choices, depending on just how fluent – or more gently flowing – the prelude is taken.

- If the prelude is played with a pulse of metronome 80 or above, the proportion can be a simple one:

$$\begin{array}{ccc} \text{one beat in the prelude} & = & \text{one beat in the fugue} \\ \text{(dotted quarter-notes)} & & \text{(quarter-notes)} \end{array}$$

- If the prelude is played in a considerably slower pulse, what works best is

$$\text{eighth-notes} = \text{eighth-notes}$$

(Approximate metronome settings:

- [a] 96 for the dotted quarter-notes in the prelude and the quarter-notes in the fugue;
- [b] 72 for the dotted quarter-notes in the prelude; 108 for the quarter-notes in the fugue.)

I/9.2.6 The design of the fugue

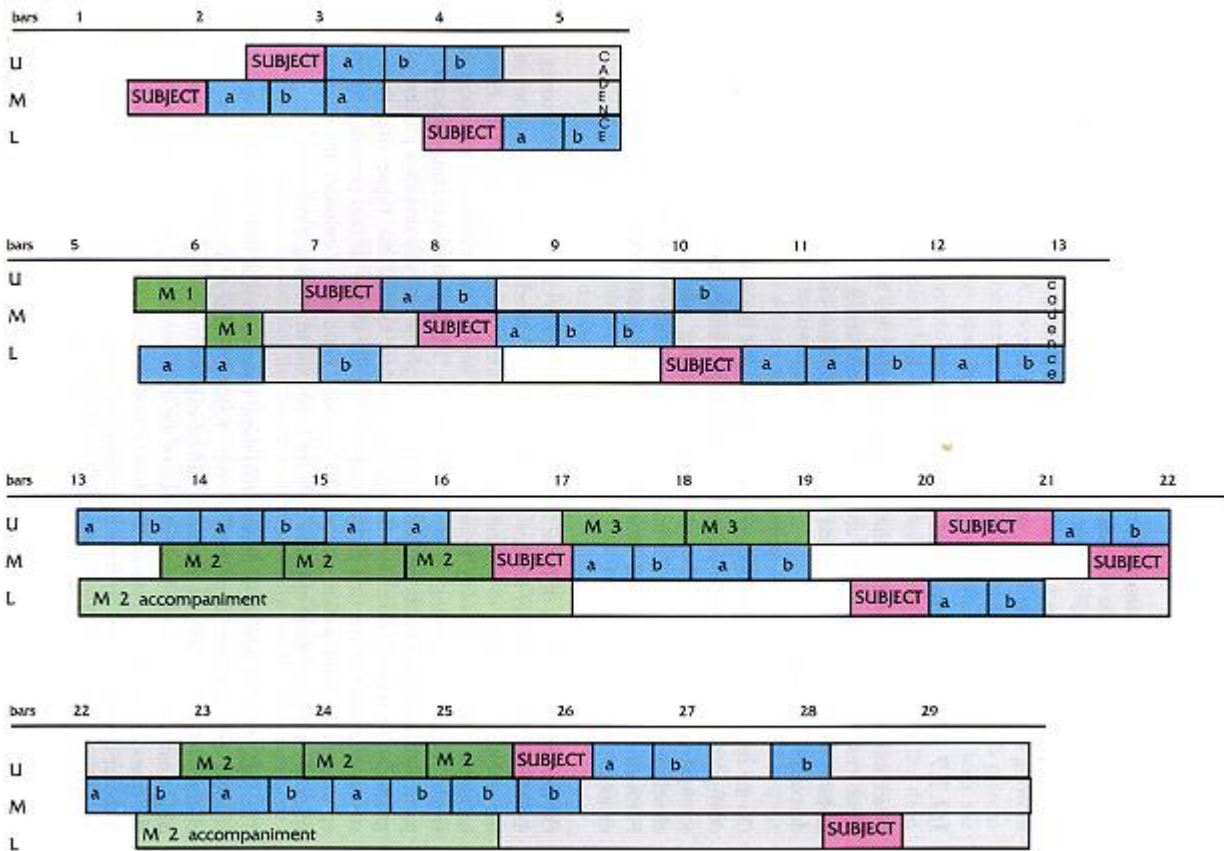
The paramount force determining the design of this fugue is to be found in the two explicit cadential formulas as well as in the structural analogies. Some of these correspondences were already mentioned above, some should be added here. Summing up, these are the factors determining the layout of the fugue:

- a) E2 and E4 both consist of two segments; the first segment in both episodes ends with a cadence emphasized by a closing-formula, while the second segment in both episodes creates a contrasting color by introducing a motive which is completely unrelated to the subject.
 - Interpreting these two analogous cadences as the ends of the first and second sections respectively, and looking backwards from these ends, one can observe that both are
 - * preceded by the same pattern of two subject statements (on tonic and dominant),
 - * followed by an episode which serves as a bridge,
 - * and completed by another statement in the third voice; (compare bars 1-4m with bars 6 (last eighth-notes)-11m).
 - What distinguishes the second section from the first one are extensions of roughly one bar's

length each at both sides, i.e. additional episode bars both before the above-mentioned pattern (see bars 5/6) and after it (see bars 11/12).

- b) Another analogy occurs between the second half of E4 and E6. Both present almost exactly the same material (although in different keys and with the upper and middle voices inverted).
- If the second half of E4 is regarded as the beginning of the third section in this fugue (which follows from what was said above), it would be logical to accept E6 as the beginning of the fourth section. Looking back again from the respective section endings one can detect the following analogy:
The three subject statements preceding the end of the third section recall those of the first section. Like them they are presented on the tonic, the dominant and the tonic; (compare bars 1-4m with bars 19m-22).
 - The episode which, in both the first and the second sections, served as a bridge inside this pattern, has moved and now connects the entire pattern with the additional subject statement earlier in the beginning of the third section.
 - While we found that the second section was extended in comparison to the first, we can now confirm that the third section continues this process of extension at least at the beginning;
 - * the episode-segment which opens the section is longer (compare bars 13-16m with bars 5m-6);
 - * the linking episode inside the section is also longer (compare bars 17-19m with bars 8m-9 and bar 3);
 - * there is an additional subject statement.
- c) While the third section revealed itself as related to the first by the key of its three subject statements, the fourth section similarly recalls the second one. The two statements in the fourth section take up not only the keys of the first and last statement in the second section, they even appear in the same voices; compare bars 25/26 with bars 6/7 (statement in U on the tonic) and bars 28/29 with bars 9/10 (statement in L on the dominant).

The harmonic progression in this fugue remains for the most part in the realm of the tonic and the dominant of E major. The only subject statement which is presented in a differing key is the extra one towards the beginning of the third section. This key confirms our earlier interpretation of this statement as a structurally redundant one, occurring within the context of the extension. The tonal area of this additional subject statement, the relative minor (C[#] minor), is reached in the second cadential close of the fugue (see bar 12/13). The ensuing episode-segment begins in C[#] minor and ends in its dominant (see bar 16d, G^{#7}). After the subject entry in C[#] minor, E5 sets out from this minor area but leads back to the tonic at the beginning of bar 19. (For a sketch showing the design of this fugue, refer to ex. 31)



I/9.2.7 The development of tension

When attempting to determine the dynamic design of this fugue, it is a good idea to recall both the features which are effectively outstanding in this work, and those features which, had Bach included them here, might have created distinct increases or decreases of tension.

On the one hand, the most conspicuous component of the material is the sixteenth-notes configuration of the counter-subject. As shown previously, this continuous flow of sixteenth-notes runs through the entire fugue, stringing subject entries and episodes closely together and creating the impression of overall unity above any small diversity. Furthermore, the ornamental character of these sixteenth-notes sets virtuosity above melodic intensity.

On the other hand, most of those features which typically create tension are missing; the fugue contains neither strettos nor any surprising variations or transformations of the subject, nor does it present truly independent contrapuntal material. Even harmonic progressions away from the tonic are kept to the minimum, with only a single statement sounding in a different mode. Finally, the occurring structural particularities do not create any build-ups. Although the analysis reveals a process of gradually increasing extension throughout the first half of the fugue (the three-statement pattern of the first section reappears in the second section preceded by an episode, in the third section preceded by episode / extra entry / episode), the relaxing tendency in each of these episodes does not contribute to creating greater tension.

The logical conclusion to be drawn from these observations is that striking curves of tension are not the objective of this fugue. Primary material (subject and counter-subject) as well as structural outline express simplicity and joyful liveliness. Slight increases in tension occur in each of the three-statement patterns, while each of the episodes provides decreases. The two related episodes (bars 13-16/22-25) present a

color contrast caused by their appoggiatura motive; yet even this melodic element is presented before a background of incessant ornamental sixteenth-notes.

WTC I/10 in E minor – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/10.1.1 The prelude-type

The category to which this prelude belongs can most clearly be defined by looking at its forerunner, the Little Prelude in E minor from the *Notebook for Wilhelm Friedemann*. This original version is only 23 bars long; it displays a sixteenth-note bass-line accompanied exclusively by block chords in recitativo style (chords in eighth-note length followed by three-eighth-note rests, on the first and third beats of each bar). In this earlier setting, the prelude clearly represents a harmonically determined composition.

The prelude as it is found in the *Well-Tempered Clavier* consists of altogether 41 bars. The first half (bars 1-22) rest on a sixteenth-note bass line which has been kept almost unchanged*. The recitativo-style block chords have also been retained; they appear now in the middle layer of the texture and often reduced to only two notes. These two layers are topped by a cantilena in highly elaborate fashion which is reminiscent of a violin-obbligato part in a baroque oratorio aria. This line sounds so unique that it might make the listener overlook the fact that it is only an ornamented variation of the highest notes in the original block chords. In other words, in its initial twenty-two bars the E minor prelude is essentially a harmonically determined piece wrapped in luxuriant adornment.

* [These are the notes in which the Wilhelm Friedemann version differs from the Well-Tempered Clavier version:

- The G on the downbeat of bar 9 avoids the seventh jump downwards by appearing one octave higher; the line is thus smoother, but the bass-note descent from bar 6 to bar 9 is less satisfactory without its expected target in the lower octave.
- In bar 13, the re-sharpening of the F already occurs in the second half of the bar and not, as in the later version, only in bar 14.
- In the second half of bar 15, the original version features the harmonically logical figure G-B-C-D-C-D-C-B which, in the adaptation, is modified to G-A-B-C-B-C-B-A in favor of an assimilation with the ensuing bars.
- Bars 21/22 are 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 bars are changed to support the intended modulation.]

The second half of the prelude (bars 23-41) carries the tempo indication *Presto* which, although literally only indicating a change in the pace of the prevalent pulse, leads performers and listeners alike into expecting entirely new material. It may therefore come as a surprise that these nineteen bars rest on a sixteenth-note figure which, on closer inspection, reveals a striking relationship with that of the first half.

What is new is that here, the right-hand part also appears in sixteenth-notes which, for the most part, move in parallel to the bass but nevertheless create the impression of ornamented broken chords. Although the final nine-bar portion features several details which will deserve special mention later, we can safely maintain that this part of the prelude is also, above all, harmonically determined.

I/10.1.2 The overall design of the prelude

The first harmonic progression concludes in bar 4 (see bar 1: i, bar 2: ii⁷ inverted, bar 3: V⁹ inverted, bar 4: i). This harmonic close comes with a melodic caesura (with phrasing in bar 4 after the middle beat). On the last three eighth-notes of bar 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 in bar 9m. This progression coincides again with a melodic phrase.

Throughout the entire prelude one can distinguish 8 structural sections. The group into two more embracing parts:

I	1	bars 1 - 4m	(complete cadence in E minor)
	2	bars 4m - 9m	(modulation to G major)
	3	bars 9m -15d	(modulation to A minor)
	4	bars 15m -21d	(modulation back to E minor)
	5	bars 21m -23d	(modulation to A minor)
II	6	bars 23 -26m	(complete cadence in A minor)
	7	bars 26m -28d	(modulation back to E minor)
	8	bars 28 -41	(confirmation of E minor)

There are several portions in the first half of the prelude which recur in the Presto.

- The initial four-bar cadence in E minor reappears, at the beginning of the Presto, transposed to A minor (compare bars 1-4 with bars 23-26; see particularly the faithfully corresponding bass line).
- The diatonically descending bass line of bars 14-17 (C-B-A-G-F#-E-D#) is taken up in bars 27-30 of the Presto (G-F#-E-D-C-B-A), surrounded by an analogous harmonic pattern.
- The return modulation from the end of the first half is used to close a phrase in the middle of the Presto (compare bars 19-21 with bars 31-33).

To sum up, one can state that, the final eight bars aside, the Presto presents a recapitulation in a chain, without links, of three separate passages from the first half of the prelude:

bars 23-26	correspond to	bars 1-4
bars 27-30		bars 14-17
bars 31-33		bars 19-21

I/10.1.3 Practical considerations for performers

The choice of tempo in this prelude is tricky because it has to accommodate the change of speed in the middle of the piece in such a way that the second half develops as naturally as possible from the first. The simplest and the most balanced way of achieving it is to play the *Presto* sixteenth-notes twice as fast as the sixteenth-notes in the first half of the prelude.

With regard to the articulation one can assume that the first half of the prelude, with its cantilena in highly complex rhythmic pattern, represents a *rather calm* basic character while the *Presto* obviously indicates a

contrasting character. The sixteenth-notes in the first half should therefore sound in true legato, while those in the second half benefit from a crisper touch. The melodic line in the first half is also very much legato (Bach's paired slurring in bar 3 and the uncommon interruptions of the trills just before the suffixes in bars 10 and 12 take care of some deliberate variety in this pattern), while the remainder of the original block chords in the middle voice fits best if played in a neutral shade of non legato articulation. In the Presto, as in any lively piece, longer note values should be detached; yet apart from the leap in bar 24 (upper voice) and the half-notes in bars 36-37 (middle voice) and 38-39 (upper voice), there are no other notes to which this would apply.

The first half of the prelude contains 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 left-hand sixteenth-note). For those 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:

- a) The fastest occurring note values, the thirty-second-notes, all appear in a strictly ornamental context; these groups could be interpreted as spelled-out unaccented ornaments and embellishments (see e.g. bar 1: an upbeat turn; bar 3: an embellishment of the step A-G; etc.). It would therefore make sense to play those ornaments which appear in sign notation in the same motion.
- b) Four of the five trills end in suffixes which are also spelled out. This is either because an interrupted trill is normally not expected to conclude with a suffix (as in bars 10 and 12), or because Bach desires suffix notes different from those according to the rules (as in bar 14). Note, however, that the very regular suffix in bar 1 is also written out. These suffixes appear in thirty-second-note notes, a fact which supports the rendition of the entire trills in thirty-second-notes.

Having settled the question of "how fast?", the next issue is "how to begin?". Four of the five trills (bars 1, 10, 12 and 20) are approached in note repetition and thus commence on the upper neighbor note. The fifth (bar 14), preceded by stepwise motion, begins on the main note which is held for a sixteenth-note.

Finally, the "how to end the trill?"-question is special in this prelude. Only the trills in bars 1 and 14 feature regular motion right into the written-out suffix. The others are either interrupted by a sudden rest (which just cuts out one thirty-second-note pair but leaves the remainder of the trill intact; see bars 10 and 12), or end in an anticipated resolution (see bar 20) which requires a *point d'arrêt* stop shortly before the anticipation note. The complete rendition of these trills with their respective approaches can be seen below – in the slower of the two possible speeds.

(ex. 37)



I/10.1.4 What is happening in this prelude?

The question of dynamic development is a special issue in this prelude. In the first half of the prelude, it 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 closed cadences, the harmonic climax falls on that beat where the subdominant harmony first emerges (in bars 1-4, on the downbeat of bar 2; in bars 23-26, on the downbeat of bar 24). In bars 23-26, both hands support this design. While this is presented, in bars 1-4, by the left-hand line and the chords in the middle of the texture, the cantilena is obviously headed towards a melodic climax on the middle beat (A) of bar 3.

In passages where the original prelude featured clearly discernible sequences, separate rules which override those of the immediate harmonic relationships apply. Such a sequence pattern can be found in bars 5-8 (see both the bass notes E-D, D-C, C-B, B-A and the paired pattern of the double thirds in the middle). In the model (bar 5), the chord in the first half of the bar relaxes towards the chord in the second half of the bar (the inverted B minor chord being the resolution of the inverted F^{#7} chord). Throughout the four-bar descent, this pattern of tension/resolution should therefore be repeated, each time on a slightly softer level. The final chord of this section, the G major harmony in bar 9, thus sounds as a soft ending. The cantilena enhances this by preparing each of the seventh chords with an elaborate upbeat while sustaining a long note at each of the moments of resolution.

Another succession of sequences appears in bars 9m-13m. Here the model is two bars long; the bass line G-G-F[#]-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 sequence model falls on the step which actively leaves the momentary tonic, i.e. on bar 10d, after which the tension subsides gradually until bar 11m. This dynamic pattern is then taken up, slightly softer because of the generally descending direction, in the sequence. The cantilena supports this pattern again by approaching these climax points in large leaps (see bars 9/10 = octave, bars 11/12 = minor sixth).

Similarly, in passages where a clearly distinguishable bass-note pattern creates a superimposed line, this line will outrank any small-scale increases and decreases in the harmonic tension. In bars 14-17 and bars 27-30, the bass descends in diatonic half-bar steps. The superimposed harmonies represent an increasing tendency, except for one definite resolution at the respective ends of the short modulation (onto A minor on bar 15d, onto E minor on bar 28d). The bass line Bach composed reflects this break in the dynamic line by a break in the straight pitch line (see in bar 15 where the A appears an octave higher than expected, and in bar 28 where the same holds true for the E.)

This descent is prolonged with a chromatic descent which, as it surpasses the boundaries of the home key and brings with it very high-tensioned harmonies, creates an even stronger increase in tension (see bar 17m to bar 20d). The ensuing resolution onto E minor brings a relaxation.

The corresponding phrase in the *Presto* features an extension over a diatonic bass line which reaches its climax on the chord which corresponds to the one mentioned above (i.e. that on bar 32d). 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 bar 33 is inverted. In all these developments, however, the right-hand part supports the general harmonic design.

Finally, what remains are the final bars of each half of the prelude. In the first half, bars 21/22 modulate actively towards A minor and therefore represent an increase in tension. In bars 33-41, a rather abrupt increase (see bars 33/34) leads to the considerably softer beginning of the pedal note B. During the length of this pedal (see bar 34m until bar 39), the dynamic growth is that generally associated with an extended pedal note: it is very 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 bar 34 with bar 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 bar 40, after which the home-key tonic is approached in an overall diminuendo.

The simplified outline of the prelude in E minor given in ex. 38 tries to capture these processes.

WTC I/10 in E minor – Fugue

I/10.2.1 The subject

The subject of this fugue is slightly over two bars long; it commences on the downbeat of bar 1 and ends on the second eighth-note of bar 3. As it modulates one fifth up to B minor, the closing cadence is represented by the dominant of this target key, i.e. the F[#]-A[#]-C[#] in the latter part of bar 2, and its resolution falling on the first beat of bar 3. This subject consists of a single, indivisible phrase.

The reason why the second eighth-note in bar 3 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 next one, lies in the particular melodic structure of the subject. The pitch pattern is unusual in that the single line is in fact composed in hidden two-part structure. In an attempt to determine which notes belong to the melodic part of the structure and which to the (harmonic) background, the following layers are revealed:

- The melodic part of this structure 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 bar 2; the end of the line is then provided by the A[#] on the second beat in bar 2 and the two upbeat groups G-F[#]-G and F[#]-E-D.
- The harmonic background is represented first by the chord notes of the tonic harmony, and then by a keynote pedal (in an offbeat repeated-note pattern). This part of the harmony is concluded by the ornamented keynote pedal (E-D[#]-E) after the downbeat of bar 2. The modulation to B minor shows on this "background" level in the offbeat notes C[#] and A[#] (5th and 9th sixteenth-notes in bar 2) which find their resolution onto the target key on the equally offbeat B (second eighth-note in bar 3).

A written-out version of this hidden two-part structure with possible variations in the first beat would look as shown here (ex. 39).

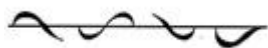
Neither parallels of the subject nor strettos are used in this fugue.

I/10.2.3 The counter-subject

As this fugue is conceived in only two voices, one is not surprised to find only one counter-subject. It is introduced against the second subject statement but is shorter at both ends, beginning after beat 2 in bar 3 and ending on the downbeat of bar 5.

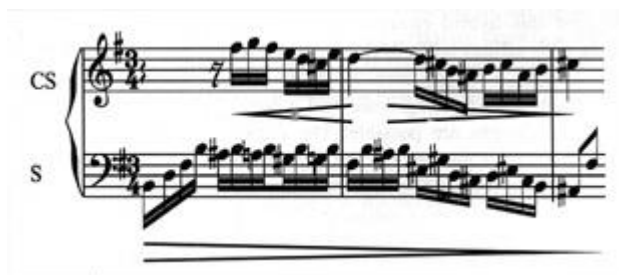
The predominant note value in the counter-subject (as in the subject) is the sixteenth-note. The only longer note appears in the middle; it is a quarter-note on the downbeat which is tied into an additional sixteenth-note on beat 2. Following this interruption, the original sixteenth-note motion resumes.

It seems worth noting that the counter-subject is not composed in *hidden two-part structure* but in a regular one-track pitch pattern consisting of various ornamental figures. An analysis of the melodic structure reveals that each of these four-note groups consists of three neighboring notes, one of which is repeated as an axle note. These figures are different from one another. The design depicts their various shapes by placing the axle note in each figure on the line (ex. 42).

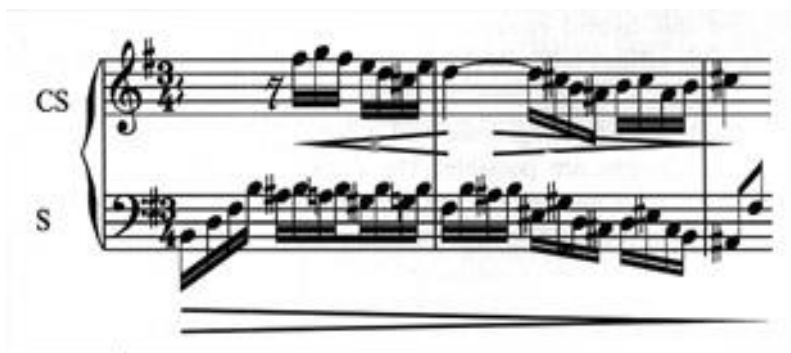


The choice of a climax poses no problem whatsoever; it falls on the sudden long note value which, in addition, represents a strong metric position.

The two sketches show the phrase structure and dynamic design in the E minor fugue. The first one represents the two-part result as it is apparent in the written version (ex. 43):



A more accurate depiction of the effect created in a listener would look like this (ex. 44):



I/10.2.4 The episodes

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

E1 bars 5 - 10 E3 bars 24 - 29

E2 bars 15 - 19 E4 bars 34 - 42

The second half of E4 recalls segments of the subject (compare U: bar 39 and L: bar 40 with the first subject bar, as well as U: bars 41/42 with the second half of the subject). E1 and E3 quote the counter-subject; instead of the expected final note, however, one hears a very surprising large jump downwards, followed by the rising sixth which completed the subject.

Against this hybrid episode-motive (which could be described as "counter-subject body with subject tail") Bach places the first genuine, i.e. independent episode motive (see U: bars 5-7). M1 consists of two rising broken chords, followed by a four-note ornament, a descending scale and a long ending note. In this episode motive, two dynamic designs are possible. The climax can either fall on the peak note of the broken chord sequence (e.g. the G in bar 5), or on the rhythmically exposed tied note (e.g. the D in bar 6). The first rendition allows the motive to appear more independent while the second choice, because of the analogous length of the climax note with that in the counter-subject, makes it sound like a free imitation of the other voice.

The other two episodes, E2 and E4, provide two more motives. The lower voice in bars 15/16 introduces M2 which is characterized by a simple broken chord (complemented by the repetition of the third and octave) in eighth-note motion. The upper voice contrasts this with M3 which consists of two descending scale sections in uninterrupted sixteenth-note pattern. A very balanced effect in these two motives is achieved by subtle means: the two ascents in M2 are contrasted in M3 by two descents; while in M2 the four-note broken chord was followed by the shorter two-note jump, M3 begins with the shorter scale section which is then followed by the longer one.

The presentation of M1 and the hybrid "counter-subject body with subject tail" motive is followed by a descending sequence and rounded off by two bars of almost complete parallel structure in the two voices (see bars 9-11 and 28-30). Similarly, the combination of M2 and M3, covering only a single bar, is followed by double imitation and a descending sequence of original plus imitation; thereafter, this episode-type too is rounded off by parallel motion of the two voices (see bars 19/20 and 38/39).

The relationship between the episodes is thus a very straightforward one: E1 recurs in E3 as an inversion of the voices; E2 is equally recapitulated, also hands inverted, in the first half of E4 (compare bars 15-19 with bars 34-38).

The role which 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 contrast of color. 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 double descent in the parallel-motion bar create a distinct effect of relaxation.
- E1 and E3 are more closely related to the primary material of the fugue and thus create less contrast. The descending sequence certainly depicts a release in tension, but the ensuing parallel-motion bars build a powerful curve which brings about its own virtuoso climax, so that this episode-type ends on a level similar to that from which it commenced.
- The fugue's three final bars (see bars 39-42) serve as a coda with a clearly relaxing tendency. This effect is due not only to the decreasing tendency in the subject which is partially quoted here, but also to the softening shift towards the major-key close and to the graceful ornamental arpeggio (see bar 42) which replaces the more austere sixth jump originally closing the subject.

I/10.2.5 Character, tempo, articulation, ornament realization

The simplicity of the rhythmic pattern, combined with the ornamental structure in the sixteenth-notes and the leaps and broken chords in the eighth-notes, leaves no doubt about the *rather lively* (most probably even very lively) basic character of the E minor fugue.

The tempo requires moderate beats in the 3/4 time signature, so that the eighth-notes will sound swift and the sixteenth-notes truly ornamental. (Ornament symbols do not occur in this fugue.) The articulation encompasses few non legato notes; these include only 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 second last bar. All sixteenth-notes as well as the quarter-notes tied into a sixteenth-note are quasi legato, i.e. played with a basic technique of legato but with "crisp fingers".

The relative tempo of the prelude to the fugue is in this case certainly determined by the continuity of the sixteenth-note motion. As the character of the fugue allows for a fairly swift tempo, the pulse of the Presto-section in the prelude can be continued directly into the pulse of the fugue. The overall proportion is thus:

$$\begin{array}{l} \text{one eighth-note} \quad = 1 \text{ quarter-note} \quad = 1 \text{ quarter-note} \\ \text{(prelude, basic tempo)} \quad \text{(prelude, Presto)} \quad \text{in the fugue} \end{array}$$

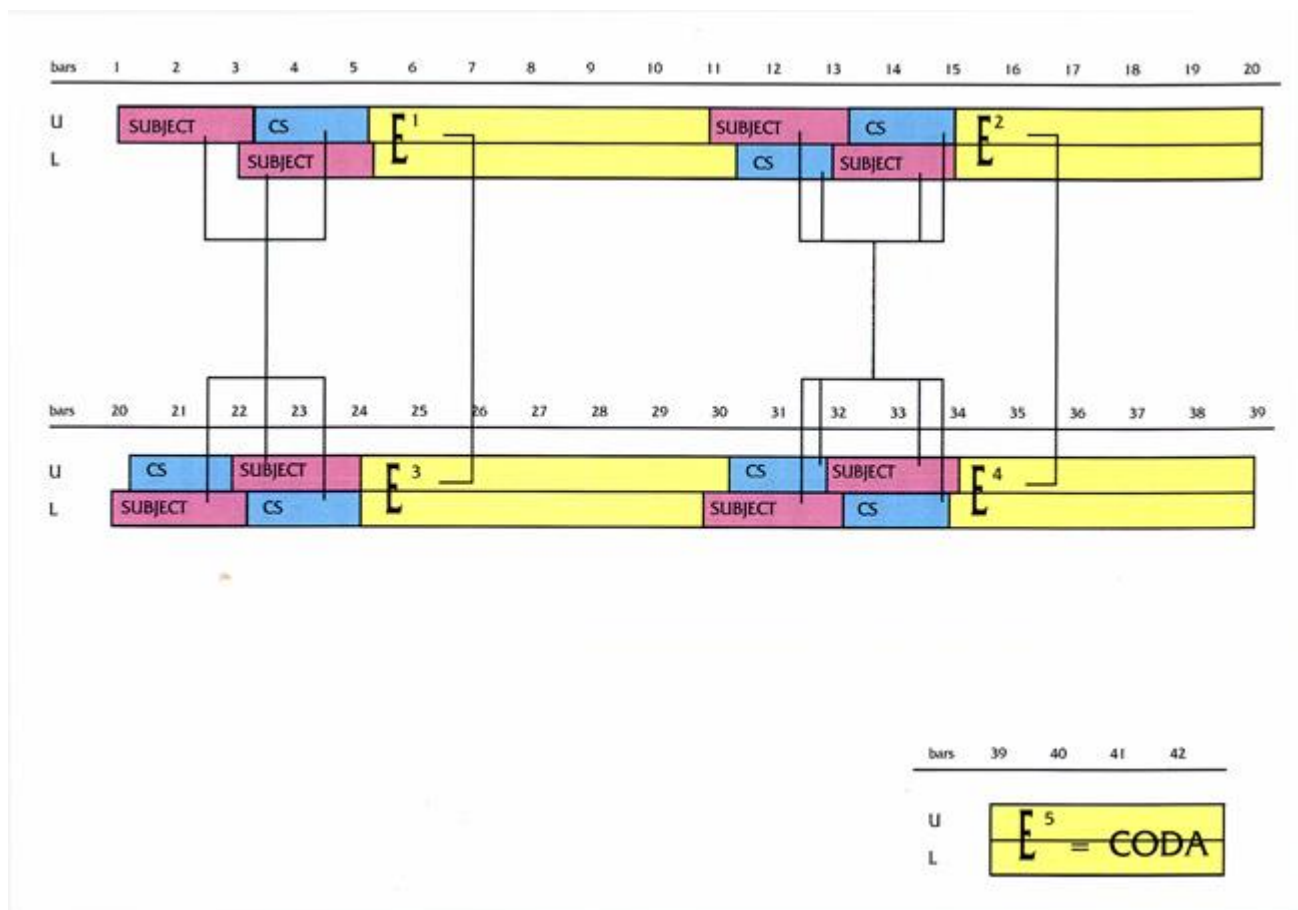
(Approximate metronome settings: prelude:
basic beats = 60, Presto beats = 120; fugue beats = 120)

I/10.2.6 The design of the fugue

The design of the E minor fugue is reflected unequivocally in its analogies. The analogy of, on the one hand, E1 with E3 and, on the other hand, 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 (compare bars 1-19 with bars 20-38) is then complemented by the three-bar coda which, 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 leads inevitably two fifths up, one wonders how and when the composition can smoothly find its way back to the home key. Bach solves this ingeniously by commencing 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. (For a sketch of the fugue, see ex. 45.)



The tonal areas as represented by the subject entries are as follows
(D/ = dominant of, S/ = subdominant of):

1. bars 1-3 E minor (tonic) - B minor (minor dominant)
2. bars 3-5 B minor (minor dominant) - F# major (D /dominant)
3. bars 11-13 G major (relative major) - D major (D/ relative major)
4. bars 13-15 D major (D/ relative major) - A major (D of D/ relative major)
5. bars 20-22 A minor (subdominant) - E minor (D/ subdominant) (= t)
6. bars 22-24 E minor (D/ subdominant) - B major (D of D/ subd.) (= D)
7. bars 30-32 D minor (S/ subdominant) - A minor (D of S/ subd.) (= S)
8. bars 32-34 A minor (S) - E major (D/ subdominant) (= T)

I/10.2.7 The development of tension

The dynamic outline also displays a symmetrical design on several levels.

Within each pair of subject statements, the second statement is slightly enhanced in comparison to the first. Within each section, the second pair of subject statements represents a higher level of tension than the first: it is composed like a rising sequence (compare bars 1-4 with 11-14 and bars 20-23 with 30-33), and the tonal area in the second pairs represents once a switch to the major mode (section I), once the return to the long-abandoned tonic (section II).

The two episodes which link the pairs in each section (i.e. E1 and E3) serve as bridges in the dynamic design. The initial relaxing tendency in the descending sequences is counterbalanced by the energetic curve in parallel motion. The two episodes which conclude the symmetrical sections (i.e. E2 and E4a) are composed in such a way that they bring forth a natural release in tension, commencing in the four-bar imitative pattern and continuing into the descending parallels of the final episode bar.

The coda may commence with another small impulse; this should, however, not sound so assertive as to be mistaken for the beginning of a third section.

WTC I/11 in F major – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/11.1.1 The prelude-type

This prelude, written in almost consistent two-part texture, is determined by a figure made up of consecutive broken chords with occasional auxiliary and passing notes. Invented in sixteenth-notes with twenty-four values to each bar of compound time, this figure dominates the entire piece without a single interruption.

I/11.1.2 The overall design of the prelude

The first cadence appears at the end of the figure's first statement, i.e. shortly before the end of bar 2; this harmonic close thus defines the material itself and should therefore not be regarded as a structural close. The next harmonic progression brings forth a modulation to the relative minor key, which is firmly reached in bar 6m. Contrary to the first cadential close which only marked the end of the figure, this one indicates the completion of a structural process.

There are altogether three structural sections:

1. bars 1-6m F major to D minor
2. bars 6-12m D minor to G minor
3. bars 12-18 G minor back to F major

The F major prelude contains one striking symmetry in its first two sections:

- | | | |
|-----------|-----------------|--|
| bars 1-2m | correspond with | bars 6m-8d (transposed, voices inverted) |
| bars 3-6m | correspond with | bars 9-12m (transposed only) |

I/11.1.3 Practical considerations for performers

As the entire prelude consists of broken-chord patterns – both in its sixteenth-note figures and their eighth-note accompaniment – and does not contain any truly melodic passages, a very swift tempo is indicated. An ideal rendition is one which allows the listener to feel the four-beats-to-a-bar meter implicit behind the written compound-time designation. The appropriate articulation requires a light non legato for the eighth-notes and quarter-notes and a very light, *leggiero*-style touch for the sixteenth-notes.

The most noticeable ornaments in this prelude are the compound trills on the half-notes in bars 3, 4, 9, 10, 12, 13; the long trill in bars 14/15 may be included here as it fulfills basically the same function. The execution is as follows:

- the speed of all these ornaments is in thirty-second-notes;
- each of them ends with a suffix (the ones in U: bars 4 and 9 including the raised lower neighbor notes B natural and F# respectively);

- the beginning is as indicated by the curved lines:

Concave curves signify a beginning from the upper neighbor note, followed by main note/
lower neighbor/ main note and then the usual trill motion,

convex curves signify a beginning from the lower neighbor note, followed by main note/
upper neighbor/ main note and then the usual trill motion.

In other words, the ornaments begin with the following notes:

U	bar 3:	A	L	bar 3:	D
U	bar 4:	D	L	bar 4:	E
U	bar 9:	A	L	bar 9:	B
U	bar 10:	E	L	bar 10:	A
U	bar 12:	A	M	bar 13:	F
			L	bar 14:	C

(It is interesting to observe that Bach's basic idea seems to be that of a trill "from below"; but wherever such beginning from the lower neighbor note would clash with a pitch just heard before, he substitutes this beginning for the opposite one; see e.g. in U: bar 4, a beginning on the lower neighboring note B would clash with the Bb in the preceding figure; in U: bar 9, a beginning on F# would sound wrong after the recent F natural.)

The ornament in the final bar is a *point d'arrêt* trill, consisting only of a four-note shake followed by a stop before the final sweep. The same applies to the ornament in U: bar 17 which should stop well before the end of the dotted-quarter-note value because the resolution is delayed by a tie-prolongation.

The example below gives the execution for one representative of each ornament-type.

(ex. 52)



I/11.1.4 What is happening in this prelude

There is only one relevant figure, the broken-chord sixteenth-note figure introduced in the upper voice in bars 1/2. For the purpose of gaining a better understanding, it can easily be reduced to the harmonic progression shown.

(ex. 53)



This figure describes a sequence of chords in which a harmony turns seventh or ninth chord and resolves, only to find the resolution itself now turning seventh chord and resolving again. The dynamic development equivalent to this harmonic process is twofold: the slight waves of tension-increase and relaxation appear under the umbrella of an overall diminuendo, either from the beginning of the entire figure to the return to the tonic (as in bars 1/2) or, in the shorter versions later on, only through a single chord/seventh-chord/resolution group.

In its development, the figure is shortened and complemented by a trill; as such, it occurs in stretto imitation (see bars 3/4). As the harmonic progression departs from the tonic, the expected resolution is substituted in several cases by an entirely foreign note (see the C major seventh chord followed by C[#]) without changing the basic pattern.

The dynamic outline of the first section presents an S-curve. After a fairly assertive beginning and the two-bar tension-decrease mentioned above, the modulation to D minor features an increase, with each figure in the stretto beginning slightly louder than the previous one. This leads to a climax (which should, however, be gentle enough not to rival the section-beginning) followed by a gradual decrease until the end of the section.

The second section commences similarly with a two-bar decrease in tension (see bars 6m-8d). The passage which brings the development of the figure is preceded by an extra bar (bar 8) which initiates the increase of tension, although it does not contribute to the forthcoming modulation. From the middle of bar 10 onwards, a gradual decrease in tension leads to the end of the second section.

The third section sets out with two stretches of one-and-a-half bars length each; both feature continuous ornamental motion in one hand and a new development of the figure in the other, and in both cases the harmonic progression moves in active steps (i.e. in a pattern of ascending fourths; see bars 12m-13: g⁷-C-F-B*, bars 14-15m: d⁷-g⁷-C⁷-F). These developments engender a rise in tension much stronger than any of the previous ones, with the climax of the composition falling on the middle beat of bar 15. In the final descent, the "false imitation" which begins in L: bar 16m should be given some extra emphasis, but neither the trills nor the eighth-notes in bars 17/18 should interrupt the gradual relaxation which continues through to the last bar. The prelude ends on a very gentle note.

WTC I/11 in F major – Fugue

I/11.2.1 The subject

The subject of the F major fugue is slightly less than four bars long. It begins with a eighth-note upbeat and ends on the downbeat of bar 4 where the A represents the resolution onto the tonic, after the dominant harmony of bar 3.

The material of this subject includes two features which indicate sub-phrasing; both occur in bar 2 after the downbeat:

firstly, there is a change in the rhythmic pattern – the continuous eighth-notes give way to sixteenth-

note runs with eighth-notes only at their ends;

secondly, there is a considerable shift in the pitch level – so far the notes had circled narrowly around the C on which the subject commences; thus the sixteenth-note-run from a sixth lower sounds almost like a new beginning.

The rhythmic pattern is very simple, consisting only of eighth-notes and sixteenth-notes. The interval structure contains no surprises either; apart from the above-mentioned shift in pitch level, all intervals in the subject are seconds. It might be interesting, however, to detect that there is a hidden superimposed line, created by the downbeats of the four bars in the subject: D-C-B^b-A. Harmonically, the steps of this line represent the steps of a simple cadence.

When pondering the dynamic outline of this subject, three questions demand an answer:

- What is the shape in each of the two subphrases?
- How do the two subphrases relate to one another?
- How does the line created by the four downbeats influence the overall shape?

All these questions are relatively easy to answer. Within the first subphrase, the D on the downbeat of bar 1 represents harmonically the subdominant, and as no rivaling melodic or rhythmic features claim attention, this D is the obvious choice for a climax. Within the second subphrase, the eighth-note B^b represents the dominant-seventh chord; it is also the only longer note value and, because of the ascending scale leading to it, the note with the greatest melodic emphasis.

The combination of the two subphrases results in two structurally very similar curves. The first is more exposed both harmonically (the step to the subdominant being more active than that to the V⁷) and rhythmically (the eighth-notes sounding more forceful than the ornamental or scalar sixteenth-notes). So far, the dynamic outline is therefore as shown here (ex. 54):



When taking into consideration the line created by the four downbeats, the above concept may be modified slightly so as to accommodate the continuity behind the two-subphrase structure. This means that the C in bar 2 is no longer the almost complete relaxation which it would be if seen only as the end of the first subphrase, but appears integrated in the superimposed diminuendo D-C-B^b-A. The result, which incorporates the peak-note structure without abandoning the individual shaping of the subphrases, is this (ex. 55):



I/11.2.2 The statements of the subject

There are fourteen statements of the subject.

1. bars 0-4	M	8. bars 36-40	U
2. bars 4-8	U	9. bars 38-42	M
3. bars 9-13	L	10. bars 40-44	L
4. bars 17-21	U	11. bars 46-50	L
5. bars 21-25	M	12. bars 48-52	M
6. bars 25-29	L	13. bars 50-54	U
7. bars 27-31	M	14. bars 64-68	U

(ex. 56)



Besides the adjustment of the initial interval in the answer – an adjustment occurring only once (compare U: bars 4/5 with M: bars 0/1), the subject allows for two other variations. Both are introduced towards the end of the fugue.

- Three statements feature a fill-up sixteenth-note immediately after the second climax (see bars 49/51/53: L, M, U); the second subphrase thus consists only of sixteenth-notes, reinforcing the contrast to the all-eighth-note first subphrase.
- The final statement introduces even more sixteenth-note variation by substituting the four eighth-notes in the upbeat and the first bar with an ornamental line (see U: bar 64, from last sixteenth-note C, and bar 65).

On three occasions, statements follow each other with considerable overlapping (see statements nos. 6/7, 8/9/10 and 11/12/13). In the latter two groups, strictly speaking, the third statement is not in stretto with the first one; however, the fact that the two consecutive voices in each compressed group repeat the leading statement literally (on the same step of the key, with the same variation) supports a stretto-group interpretation. Parallel subject entries do not occur.

I/11.2.3 The counter-subject

There is only one companion to the subject in this fugue, and it is not a particularly steady one. It is introduced in the middle voice against the second subject statement (see bar 4, second sixteenth-note G, to bar 8d C). Already when accompanying the third subject statement (bars 9-13), CS appears shortened at its beginning. The fourth statement then finds a considerably distorted version of CS shared between two voices (see M: bars 18/19, complemented by L: bars 19-21, from C onwards). The fifth statement again features the complete counter-subject as a companion. The two following statements, which build the first stretto, are surrounded by what can be clearly recognized only as the second half of CS (see U: bars 26-29). Hereafter, the counter-subject is no longer heard.

The phrase structure of the counter-subject displays one indivisible unit; the sequence inherent in the first two bars is ornamental in nature. With regard to the dynamic shape, the swift three-eight meter clearly

favors the downbeats, and in the absence of any special tension-enhancing features, the climax will fall on that downbeat which is highest in pitch (e.g. on E in bar 6).

A sketch showing the phrase structure and dynamic design in subject and counter-subject follows in ex. 57.

I/11.2.4 The episodes

There are altogether six subject-free passages in this fugue:

E1	bars 8/9	E4	bars 44-46
E2	bars 13-17	E5	bars 54-64
E3	bars 31-36	E6	bars 68-72

None of the subject-free passages is immediately related to the subject; however, material from the counter-subject appears in partial (see E1, where the first bar from CS is anticipated in the upper and middle voices) or even whole quotation (see E2, lower voice).

No genuine episode motives are newly invented, but short sequence-models appear several times:

- in E2 the model established in bar 13, U+M, is sequenced in bars 14, 15;
- in E3 the complementary model which picks up the end of S/CS is introduced in bars 31/32, U+M, and sequenced in bars 33/34;
- in E5 a little one-bar figure (see M: bars 56/57) is imitated through all voices (bars 57-61 and 63/64).

E4 consists of nothing but a cadential close. The same holds true for the first segment of E5, which repeats this cadence in varied transposition (compare bars 54-56 with bars 44-46). The final episode of the fugue is also in reality only a slightly more elaborate cadential formula. This relationship between the cadential closes aside, the episodes in this fugue show neither analogies nor other structurally relevant patterns.

The role each episode plays in the development of this composition can be easily deduced from what has been observed so far:

- E1 which anticipates the ensuing counter-subject appearance, links two statements;
- E2 which quotes the entire counter-subject against rising sequences, also links two statements;

- E3 with its descending sequences
brings a slight release in tension;
- E4 which acts as a cadential close
represents a definite relaxation;
- E5a creates the same effect of relaxation;
- E5b is determined by its ascending eighth-note scales
(see L: bars 56-59 and 64/65, U+M: bars 60-63) and thus
creates the impression of an increase in tension;
- E6 sets out with the same ascending eighth-notes (L: bars 68-70)
but then relaxes in the final cadence.

I/11.2.5 Character, tempo, articulation, ornament realization

The simple rhythmic pattern in this fugue, together with the scalar or ornamental structure of the sixteenth-notes, clearly speaks for a *rather lively* basic character. The tempo should be fast enough to reflect the bouncing character of the eighth-notes and the ornamental nature of the sixteenth-notes. The appropriate articulation is legato for the sixteenth-notes and non legato for all eighth-notes except those in appoggiaturas and closing-formulas (i.e. in bars 45, 55 and 71 where the ornamented notes in the upper voice are not detached from the notes which follow; likewise in the middle voice, the *do-si-do* (keynote / leading-note / keynote) figure in bars 55/56 is legato despite the eighth-note-note values).

The relative tempo of the prelude to the fugue poses a little problem because of the inherent triple meter in both movements. The simple proportion, given below under (a), is certainly possible. It strings the two pieces together very firmly, but almost to the point of blurring the confines of each. Also, there is the danger of monotony in two consecutive pieces which both feature mainly two note values in exactly the same pulse. Another proportion may seem complicated but has the advantage of giving a more lively, interesting result; see (b) below:

- | | | |
|---------------------------|------------------|-----------------|
| (a) one eighth-note | corresponds with | one eighth-note |
| in the prelude | | in the fugue, |
|
 | | |
| (b) three sixteenth-notes | correspond with | one eighth-note |
| in the prelude | | in the fugue. |

(Approximate metronome settings: (a) all dotted quarter-notes = 63;
(b) prelude dotted quarter-notes = 72, fugue eighth-notes = 144.)

The different speed of all note values in the second concept helps considerably to differentiate the touch and color in the (heavier) eighth-notes of the fugue from those (lighter ones) in the prelude.

The F major fugue contains mainly two kinds of ornaments: a long trill on the second-to-last note of the counter-subject and mordents in the typical closing-formulas.

- The trill in the counter-subject abides by the same rules that would apply to a similar trill in the subject:
 - * it is approached stepwise and thus begins on the main note;
 - * its speed is in thirty-second-notes as these are twice as fast as the shorter written-out note values;
 - * it ends in a suffix before resolving stepwise.
- The ornaments in the closing-formulas (see bars 45, 55 and 71) are short mordents because their resolutions are in each case anticipated and fall before the next strong beat, thus demanding a *point d'arrêt*:
 - * they all begin on the upper neighbor note;
 - * their speed can be in thirty-second-notes (or slightly faster);
 - * in the two cases with dotted-note rhythmic figures, the ornament stops short before the third eighth-note beat.

The ornament in bar 28 is a variation of the long trill mentioned above (since the upper voice in bars 26-29 features a variation of CS); although shorter here, its beginning, speed and end are as described for the long trill.

Finally, the mordent in bar 48 (see U: bar 48d) contains four notes; commencing on the upper neighbor note, it fills the note value with four swift sixty-fourth-notes. (As this ornament seems somewhat out of keeping with the remainder of the piece, it may be worth considering whether one might ignore the indication.)

I/11.2.6 The design of the fugue

There are several features in this fugue which give indications as to its design.

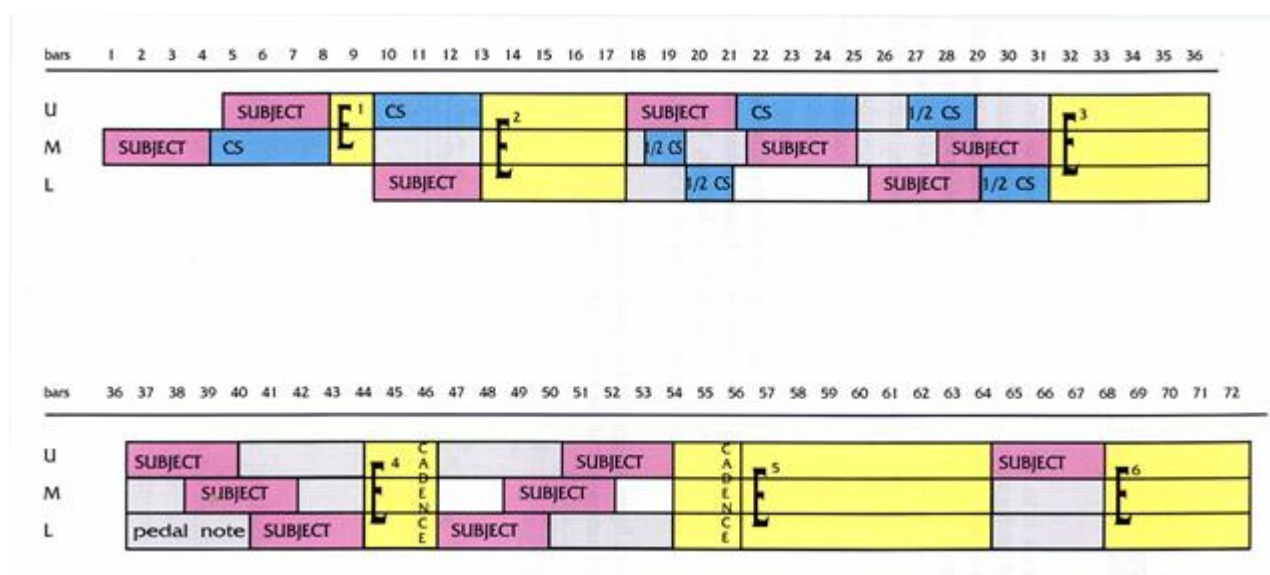
- The subject statements which begin in bars 21 and 46 appear in reduced number of voices and should be earmarked for possible section beginnings. In a third instance, the stretto which commences in bar 36 is accompanied by a sustained pedal (see L: bars 36-40) and thus also creates the effect of not actively involving all three voices.
- The episodes between the second and third statements (E1) and between the third and fourth ones (E2) are both related to the primary material insofar as they quote the counter-subject; they thus suggest a link between consecutive entries of a single structural section. Furthermore, both episodes have an ascending pitch outline. E3, on the contrary, serves as a kind of extension to the preceding subject statement and shows a descending pitch line.
- The triple stretto + closing-formula in bars 36-46 is structurally analogous to the triple stretto + closing-formula in bars 46-56. Furthermore, the final cadential close of the fugue is also built along the same pattern as the two preceding ones (compare particularly bars 71/72 with bars 45/46).

Harmonically, the fugue remains rooted in F major until bar 31. The subsequent bars describe a shift to D minor (see bar 32, reinforced by its dominant, the A major chord in bars 34 and 36), which becomes the basis of the triple stretto from bars 36 onwards. A cadence in this relative minor key closes this segment in bar 46.

The following bars pick up the triple stretto in inverse order of entering voices and in G minor (the relative minor to the subdominant); this key is also closed with an explicit cadence (see bar 56). Two bars after this cadence (bar 58) the fugue is back in the home key of F major, in which the final, varied subject statement appears. This is again rounded off with a cadence formula similar to the two previous ones. The design which becomes apparent from these observations is unusual insofar as it reveals a fugue consisting of "parts" rather than "sections".

- The first part, encompassing two sections, is united by the home key; its two sections are glued together by the bridging power of E2 (which does not allow for phrasing before the fourth statement, although the entering order would suggest this) and by the density of material immediately afterwards (which does not allow for phrasing after the fourth statement either, although the reduced texture would suggest this). This "part" is rounded off by the relaxing episode in descending sequences which introduces the modulation (see E3).
- Although the second "part" does not literally encompass several sections, the explicit closing-formulas in E4 and E5a give the impression that this part consists of three segments.

For a sketch showing the design of the fugue in F major, see ex. 58.



I/11.2.7 The development of tension

Any discussion of the development of tension in the F major fugue must deal with a multiple-layered composition, i.e. with the sections or segments within each "part", with their combination into a "part", and with the relationship of the two halves of the fugue into a whole.

- I Within the first "part" (i.e. within the combined first two sections of this fugue), the dynamic outline is that of a gentle rise. It is gentle not because the mood or spirit of the piece is anywhere near mild, but rather for the opposite reason: since the first unaccompanied subject statement is already

energetic and almost rustic, very little intensification of character takes place with the entry of the other two voices; at the same time, there is a complete lack of any active harmonic development.

This gentle rise in tension created by the increasing ensemble is carried through the first two episodes which bring only a slight color change but no relaxation. The fourth entry of the subject may, because of its pitch position, give a false impression of the soprano entrance in a four-part fugue. Although any performer who has analyzed the piece knows that this is a deception, the fact that Bach has composed in this way and has designed the preceding episode as a bridge (both in material and rising direction and tension) is a good reason to play this statement as the first climax.

The ensuing subject entry is presented in reduced number of voices and thus suggests a dynamic level which is a bit more relaxed than that in the preceding bars. It is followed by the first stretto which thus brings forth the second and slightly more prominent climax. The first "part" of the fugue is then rounded off with the third episode which is the first passage in the piece to insinuate a release in tension because of its material, descending lines, and harmonic shift. However, the imperfect cadence with which the new key D minor is confirmed in bar 36 discourages a complete relaxation. (Note that the eighth-notes in L: bars 34-36 had better not be played, as is sometimes heard, as a "false entry". Such a rendition would be both melodically and structurally confusing for the listener.)

- II The second "part" of the fugue is much more straightforward: it consists of three truly powerful buildups of tension, each followed by definite declines. With regard to the succession of the three segments, two conclusions are possible:
- One concept is to begin the triple stretto in D minor as the absolute climax of the fugue, followed by a slightly less outgoing triple stretto in G minor and a softer shaded episode (bars 56-64), into which the varied subject statement is then blended like an afterthought.
 - Another concept is to regard the triple stretto in G minor as a confirmation and fortification of the one in D minor, and the fifth episode with its ascending eighth-note scales as a final powerful run for the crowning climax which then arrives with the final statement of the subject.

In the first case, the fugue in its overall shape describes an almost perfect curve; the final cadence returns to a level of tension similar to that from which the fugue commenced. (Such a result may delight us in our need for balance, but it seems somehow too smooth for this fugue).

In the second case, the entire fugue expands in two grand sweeps and the final cadence is still filled with the triumphant power of the towering last subject statement.

WTC I/12 in F minor – Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/12.1.1 The prelude type

This prelude is truly intriguing as there are, or so performing pianists convince us, three quite different approaches to its interpretation.

a)

The melodic intensity in the sixteenth-note lines compels concentration on these as the primary feature of the composition (ex. 63a):



b)

By contrast, the almost uninterrupted string of pulse-giving quarter-notes elicits interpretation of the composition as a metrically determined piece conveying a meditative character (ex. 63b):



c)

Finally, the frequent recurrence of the figure exposed in the soprano of the first bar, in the context of an almost consistent four-part writing, allow taking the prelude for an "invention" (ex. 63c):



The examples give hints as to what is exactly at stake. In view of these choices, performers obviously face a host of interesting decisions; melodic intensity, texture coloring and tempo, to name just a few, will be different in each of the three cases.

I/12.1.2 The overall design of the prelude

The first harmonic progression concludes in bar 2m. (The subdominant falls on bar 1 beat 2, the dominant, as a ninth chord, on bar 2d.) In terms of an "invention", this cadence coincides with the second entry of the motive (see T: bar 2m) and should therefore not be regarded as a structural break.

The larger harmonic progression ends on the downbeat of bar 9 in A^b major, the relative major key. An explicit closing-formula (see bars 8/9) reveals this cadence as an obvious structural caesura.

Altogether there are four sections in this prelude. Three of them constitute closed harmonic progressions, while the fourth one ends in an interrupted cadence which can only be ascertained as structurally relevant because of its obvious correspondence: the beginning of the prelude recurs as a seeming recapitulation

which then turns somewhere else; compare bars 1-2m with bars 16m-17. This is the only structural analogy.

I	bars 1-9	i - III	F minor to A ^b major
II	bars 9-12 end	III - V	A ^b major to C major
III	bars 13-16m	V - i	C major to F minor, ending with interrupted cadence on D ^b bass
IV	bars 16-22	i	confirmation of F minor

I/12.1.3 Practical considerations for performers

In this prelude, the appropriate choice of tempo, dynamics and articulation depends largely on the performer's interpretation of the prelude-type (refer to paragraph 1).

- a) Performers who feel that the message of the composition is conveyed primarily by the sixteenth-notes, will have to choose a tempo slow enough to allow these note values to develop full melodic expressivity.
 - * In this case, the main concern is with the arabesque-like lines winding through all voices. They will require careful and expressive shaping provided with all shades of emotional quality, while great care is taken to ensure the constant flow of a segment in one voice into the next.
 - * As for the articulation, the calm character requires that notes contributing on any level to the melodic fabric be played legato, and only cadential-bass patterns and consecutive leaps be non legato. However, since the first note in several of the leaps is at the same time a quarter-note in another voice and therefore cannot be shortened (see e.g. left hand: bars 4, 5), the few eighth-notes which actually sound detached appear above all in the context of cadential formulas (see e.g. left hand: bars 6, 8/9, 11/12) or in similar bass lines (see e.g. lowest voice bars 9/10, 13).
- b) Performers who wish to express a meditative character by means of focussing on the continuous quarter-note pulse, will have to choose a faster tempo so as to gear the listener's attention to the metric feature rather than the surface structure.
 - * In this case, all emphasis will be on the four beats in each bar which will then be perceived as a regular rocking motion with a very low-key melodic intensity. The sixteenth-notes (and to a lesser degree the eighth-notes) will be treated as purely ornamental and played with extremely light touch, like delicate lace-work behind more solid lattice.
 - * As for the articulation, all quarter-notes and eighth-notes will be gently detached.
- c) Performers who decide to draw on the inherent structural features and interpret the prelude as an invention, are free to choose any tempo as long as this allows for the thematic figures to be perceived as units.
 - * In this case, the interpretation will emphasize a kind of touch and dynamic shading which distinguishes clearly between the different components of material, giving most intensity to the main motive and its possible companion, less to any other recurring figures and least to all

other passages.

- * As for the articulation, either of the two approaches mentioned under (a) and (b) is possible, depending on whether the sixteenth-notes are regarded, and played, as essentially melodic (a) or as ornamental figurations (b).

There are four kinds of ornament in the piece, all appearing within the first ten bars.

- The symbol which decorates the counter-motive (i.e. the regular contrapuntal companion to the main motive, as introduced in U: bars 2/3; for more details see below) denotes a long trill which begins on the upper neighboring note, moves in thirty-second-notes and ends in the suffix as indicated by Bach. This ornament recurs three times in the course of the prelude (see the fourth beats in bars 3, 4 and 10).
- The symbol in bar 5 also designates a note-filling ornament which commences here on the main note and accommodates five notes, including a suffix.
- The trill in bar 8 is composed in such a way that it lacks a resolution – both rhythmically (since it does not fill the time up to the next strong beat) and with regard to pitch (since the resolution note A follows only after three intermittent notes). This is thus a short ornament – a mordent which, launched from the upper neighbor note, contains only one double shake.
- Similarly, the trill on the middle beat of bar 10 is also a "*point d'arrêt* trill". It includes five notes (as it is introduced stepwise) and stops short with noticeable separation from the following sixteenth-note.

I/12.1.4 What is happening in this prelude?

As any description of a composition sets out from a premise as to what the distinguishing features are, the F minor prelude allows for three fairly different descriptions, depending on the three choices expounded above.

a) If the prelude is regarded as a melodically oriented piece,
the features which determine the performance will all be sought in the sixteenth-note lines.

Within the first section (bars 1-9d) there is an initial curve in which the focus is entirely in the upper pitches and the climax falls on the prolonged D^b on the downbeat of bar 2, with a subsequent diminuendo until the middle beat of the same bar. This curve is followed by the first of many embellished parallels (see bars 2m-3, soprano A^b-B^b-C and tenor F-G-A^b). These parallel ascents, different in detail but joined in their general outline, are sequenced twice (see bars 3m-4 and 4m-5) and create a gradual crescendo. From bar 5 to the middle of bar 6, the tension decreases slightly as all melodic figures point downwards (see in the soprano the central notes C-B^b, in the alto the descending sequence, and in the bass the target notes B^b, preceded by its leading-note A natural, and A^b, preceded by cadential steps). The extended parallel ascent in bars 6m-7m, in which all four voices participate, then provides an even more intense increase of tension which peaks on the syncopated high F, relaxing afterwards towards the cadential close on bar 9d.

The second section is distinguished from the first by a much higher degree of those intervals engendering melodic tension (see particularly in the soprano the first half of bar 9 and the first half of bar 10). The recurrence of the hidden parallels (bars 10/11) prepares the ascent to the climax in bar 11m, after which

the successive leading-note / resolution pairs in bar 12 bring about a prompt relaxation (see alto: B-C, F[#]-G; tenor: B-C; alto: F-E; tenor: F-E). The ensuing three and a half bars of the third section contain two tension-curves: a gentle first one in bars 13/14 and a slightly steeper one beginning with the last sixteenth-notes in bar 14, climaxing on the second beat of bar 15 and ending in the interrupted cadence of bar 16m. The fourth section commences with a dynamic curve identical to that at the beginning of the piece; its descent, however, is extended here until the end of bar 18. A final curve (short increase and longer decrease) concludes the prelude on a soft note.

In the overall design, the moments of highest tension are at the end of the first section (where the drive is greatest in the extended parallel) and at the beginning of the second section (where the interval intensity is highest). It is further worth noting that in this interpretation which renders the sixteenth-note motion as an uninterrupted line catered for by complementing voices, no melodic phrasing occurs.

b) If the prelude is regarded as a metrically oriented piece, the features which determine the performance will be sought in the quarter-notes. The focus in the texture tends towards the lower voices, and all dynamic inflections are of a delicate nature.

Within the initial section, a first gentle curve with a climax in bar 1m is followed, from bar 2m onwards, by sequencing one-bar groups. As the bass in these groups moves ever further down, a gradual diminuendo results. This leads to a state of floating weightlessness in that bar (see bars 5m-6m) where the quarter-note motion is temporarily suspended. The following extended ascent leads to a slightly more pronounced climax on the downbeat of bar 8, followed by a relaxation through the cadential close.

The two sections which build the middle of the composition are less regular in their pulse, featuring several passages where the quarter-notes are interspersed with half-note beats (see the first halves of bars 9, 10 and 12 as well as the second half of bar 14). This impairs the effect of meditative calm which prevails in the outer sections.

The soothing continuity of the quarter-note beats is restored with the interrupted cadence and not broken again before the prelude ends. Dynamic increases and decreases are even more subdued in this section than in the preceding ones, concluding the composition in a state of complete calm.

c) If the prelude is regarded as a structurally oriented piece with the outline of an invention, the focus will be on the components of the thematic material.

All these components, which occur regularly in the prelude, are introduced within the initial two bars. Ex. 64 shows these components, in the order of importance in the composition, with their inherent dynamic shape (ex. 64):

the main motive

its regular companion



the relaxing link

the syncopated figure



The main motive appears eleven times, more often than not with a variation of its end. These are its statements: (ext = extended, var = varied; inv = inverted)

bar 1	S	bars 6/7 ext	T	bars 13/14 var	T
bars 2/3	T	bars 9/10 var	T	bars 15/16 inv	B
bars 3/4	T	bars 10/11	T	bars 16/17	S
bars 4/5	T	bar 13 var	S		

In four of these eleven statements, the motive is accompanied by its regular companion (see bars 2/3, 3/4, 4/5, 10/11); on two other occasions it comes with a varied version of the stepwise ascent which characterizes the companion (see bars 6/7 and, in inversion, bars 15/16). The syncopated figure (see bars 2, 4, 5, 6, 11, 17) and the relaxing link (see bars 2, 3, 5, 5/6 (l.h., var), 12, 15, 17, 18 (2x), 19 (2x), 21 (2x)) account for much of the remainder of the piece.

The first section is thematically dense, with main-motive entrances in almost every bar and, after a short relaxation in bars 5/6, an extended quotation of the motive in the left-hand part. The two sections which form the middle of the prelude feature thematic bars interspersed with cadential closures or imperfect closures. The last section brings a liquidation of thematic material. In this structurally oriented interpretation, this fact together with the extended pedal bass determines this last section as one overall relaxation in which the pitch-curve in bars 19/20 plays only a subordinate role.

WTC I/12 in F minor – Fugue

I/12.2.1 The subject

The subject of this fugue is three bars long. It commences on beat 2 of a 4/4 bar, thus giving the impression of a long upbeat. Its ending is defined by the return to the keynote after the half-note G which represents the dominant.

With regard to the phrase structure, two views are theoretically possible: The subject can be regarded as a single phrase, or as consisting of a main subphrase (through the first six quarter-notes) followed by an "afterthought" (see the descent B^b to F). One might, however, feel that this "afterthought" is not quite substantial enough to represent a subphrase of its own. The most convincing concept, then, is a combination of the two ideas; in this case the paramount buildup and decline of tension takes place within the first six notes, followed by a mere extension of the previous dynamic decrease in the remaining descent.

The pitch outline of this subject is most intriguing. Commencing from the elevated position of the fifth scale degree C, the stepwise motion touches first the natural leading-note to C (i.e. the minor sixth D^b), then the artificial leading-note below C (i.e. the raised fourth B natural). This triggers an unusual step: not only is the expected resolution to the leading-note omitted, but what is more, the interval which follows, while looking like nothing more special than a perfect fourth, is in fact located entirely outside the F minor scale! To top it all, its target is yet another leading-note (the raised seventh leading upwards to the keynote) followed by its resolution F. The ensuing descent seems to pick up from the recently heard B natural and continues through three chromatic steps before falling onto the lower F.

Within the subject itself, the rhythm consists only of quarter-notes and one half-note. However, a cursory glance beyond the boundaries of the first subject statement reveals that throughout the fugue, eighth-notes and sixteenth-notes are values to be reckoned with on a regular basis.

The harmonic background of the subject is unusual in that it sets off from the dominant, reaches the tonic for the first time in the middle of bar 2 and only then continues in an ordinary subdominant /dominant /tonic progression. Another extraordinary feature in the harmonic outline is the fact that the first steps (which melodically approached the two leading-notes to C) are both composed as interrupted (or "deceptive") cadences:

- the dominant (i.e. the implicit harmony under the initial C) proceeds not to the tonic F minor but to D^b major;
- the ensuing F⁷ chord (i.e. the implicit harmony under the next C) which one expects to move into B^b minor leads instead into a G⁷ chord.

Ludwig Czaczkes, in his very thorough two-volume work *Analyse des Wohltemperierten Klaviers* takes into account all transitory harmonies created by the counter-subjects. The full harmonization of the subject as Czaczkes conceived it is shown here first (ex. 65a);

The image shows two staves of music. The top staff is in treble clef and shows the subject melody in F minor. The bottom staff is in bass clef and shows the full harmonization of the subject. Below the bass staff, Roman numeral analysis is provided for the chords: V vi i⁷ V⁷ V⁷ i iv i V⁷ i.

A Roman-numeral analysis follows (ex. 65b).

The dynamic outline should certainly mirror the melodic and harmonic particularities mentioned above. The beginning on the exposed fifth degree already requires a slightly elevated dynamic level for the first note. The ensuing step towards the natural leading-note, followed by one to the artificial leading-note creates a powerful increase in tension. After this, the extra-scalar fourth interval which reaches the third leading-note represents the apex of this dynamic curve. (For any wind or string instrument, the climax would be between the two notes B natural and E natural – a solution unfortunately not open to keyboard players!)

The resolution onto the keynote F brings such a relief after all those daring harmonic twists that it involves an almost complete decrease of the tension built up until then. What little tension is left will then abate gradually through the chromatic descent.

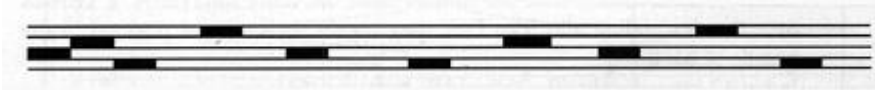
I/12.2.2 The statements of the subject

There are only ten subject statements in this fugue of 58 bars.

- | | | | | | |
|----|------------|---|----|--------------|---|
| 1. | bars 1 - 4 | T | 6. | bars 27 - 30 | B |
| 2. | bars 4 - 7 | A | 7. | bars 34 - 37 | A |

3.	bars 7 - 10	B	8.	bars 40 - 43	T
4.	bars 13 - 16	S	9.	bars 47 - 50	S
5.	bars 19 - 22	T	10.	bars 53 - 56	B

(ex. 66)



The variations in the appearance of the subject throughout the fugue are minimal. The adjustment of the initial interval in the tonal answer occurs only once (bar 4), and the final note is only once delayed by a tie-prolongation of the half-note before it (see S: bar 50). No parallel or stretto of the subject are used.

I/12.2.3 The counter subjects

Bach invents three counter-subjects of very distinct character.

CS1 is introduced against the second subject entry in bars 4-7. It consists of five subphrases, thus creating the greatest possible structural contrast to the subject. The predominant note value is the sixteenth-note, another major contrast to the subject and its prevailing quarter-notes. The first subphrase of CS1 (see T bar 4: F-G-A^b--Ab-B^b-C) presents a slight increase in tension. This is separated from the remainder of the counter-subject by a leap of a minor ninth, and thus launches a completely new rise in tension. The second to fifth subphrases are then built as sequences which ascend towards a peak (and dynamic climax) on the syncopated C.

CS2 is first heard as a companion to the third subject statement in bars 7-10. It encompasses three subphrases. A first short one contains four eighth-notes, with a gentle climax on C. The second subphrase begins almost like a partial sequence (F-E^b-D in bars 7/8 can be heard as a sequence of C-B^b-A^b in bar 7), with the stronger climax on its first note F and an extended descent to the lower F (the rest is here a tension-sustaining one and does not indicate phrasing, as in CS1). A third small subphrase ascends to the dotted B^b as its mild climax, and relaxes throughout the last three notes.

CS3 only appears twice in the fugue. It is introduced in its expected place, i.e. against the fourth subject statement. Beginning at a later point of the subject than any of the other counter-subjects (see from the upbeat C-D-E^b at the end of bar 13) it ascends in a gradual sweep which, though interspersed with eighth-note rests, represents only one single phrase, with a climax on D^b.

The further use of the counter-subjects includes several irregularities which may make their detection (or, at least, the convincing rendition of their phrase structure and dynamic design) difficult. These are the two most confusing details:

- a) Voices cross over each other in several places.
 - In bar 7 immediately after the middle beat, the tenor interval A^b-F crosses over the descending alto leap F-E; they regain their normal position in the middle of bar 8.
 - In bar 13 immediately after the middle beat, the same tenor interval moves the voice into what

seems like alto position; when the alto comes in with the upbeat to bar 14, it does so considerably lower than the tenor; they recoup their ordinary places with the fourth beat of bar 14.

- From bar 29 beat 2 to bar 30 beat 3, soprano and alto cross.
- In bars 47/48, there is such a gap between soprano and alto that one easily mistakes the alto for a lower voice. When the tenor comes in an octave above the alto, the confusion is complete. However, the voices disentangle on the last beat of bar 48.

b) Counter-subjects are adventurous enough to swap subphrases!

- In bar 19, the alto begins with the first subphrase of CS1 but carries on with the remainder of CS2 (which, on top of everything else, involves an octave displacement on beat 2 of bar 21). At the same time, the soprano (after having set off, in bar 19, with notes not belonging to the primary material) takes over CS1 which the alto had abandoned and concludes it properly.
- In bars 27m-30, the tenor quotes CS1 but reduces its ninth leap to a simple second. The alto presents the first subphrase of CS2 (see G-C-B^b-A^b), continues with notes which ape the large leap missed out by the tenor, and from the middle beat onwards finds itself in CS3. The soprano, after three non-consequential notes, completes the interrupted CS2.
- In bars 34-37, the first subphrase of CS1 is heard in inversion in the tenor, while the remainder sounds in the soprano. The final trill is prevented by a tied note and a completely avoided resolution.
- Finally in bars 47-50, CS2 appears in the (alto-positioned) tenor, deprived of its first subphrase and with a drastically varied ending. Similarly, the CS1 statement which begins in the alto is allowed neither its ninth leap nor its final trill, which is substituted by a written-out figure-work.

The following sketch shows the phrase structure and dynamic design in the primary material of the F minor fugue as found in bars 13-16 (ex. 67):

I/12.2.4 The episodes

The F minor fugue contains eight subject-free passages.

E1 bars 10 - 13	E5 bars 37 - 40
E2 bars 16 - 19	E6 bars 43 - 47
E3 bars 22 - 27	E7 bars 50 - 53
E4 bars 30 - 34	E8 bars 56 - 58

None of the episodes is related to the subject. Instead, all seem to derive, in one way or another, from the first counter-subject. It is helpful to distinguish two main types of episode in this fugue:

- a) E1 is dominated by a motive which uses the first subphrase of CS1 and continues with a segment from CS2 (compare A bars 10m-11d with T bars 8m-9d: a quarter-note which, after a sixteenth-note-tie or rest, is followed by a descent in sixteenth-notes). The CS1-segment is imitated in the bass (with a new ending) which in turn is partly doubled by the tenor. The ensuing bars sound like descending sequences. (There is no way to make the actual notation heard which has alto and tenor inverted; this fact would therefore appear inconsequential for the interpretation.)

This episode recurs in exchanged voices and with some variation in E4. Here, the bass is the leading voice, imitated by the tenor, while the soprano adds an extended parallel to the descent. (Performers should be careful with this soprano segment: it is the least important part of this episode.)

E6 also relies on the same material; this time, the alto takes the lead. (Here Bach strings the motive to its sequence by filling the phrasing space with an additional sixteenth-note; see the D natural after the middle beat of bar 44.) The imitation is presented in the bass, and both soprano and tenor are accompanying voices.

- b) A second episode-type is established in E2. Here the initial impulse is given in the soprano by a three-note figure which quotes only half of the first CS1 subphrase. A counterpart enters with the bass which derives its figure from the inversion of the same first CS1 subphrase (the extension bends back upwards). The texture is completed by the imitation of the bass figure, sounding in the alto (with the extension of the inverted CS1 subphrase continuing downwards). As in the first episode-type, this one-bar model is also sequenced twice (compare bars 16/17 with bars 17/18 and 18/19).

This episode recurs in the first half of E3 (compare bars 16-19 with bars 22-25). Here, the leading voice is the alto (a fact which is not at all easy to convey under the parallel soprano!); its main counterpart lies in the tenor, with the imitation in the soprano. The second half of this episode is based on the same material but uses it freely.

E7 is another episode to follow the model of this second episode-type. The texture is very similar to that found in E2; the soprano is in the lead, while the lowest voice (here the tenor) sounds the counterpart and its imitation appears in the alto (compare bars 16-19 with bars 50-53).

The two remaining episodes, E5 and E8, do not follow either of these models. E5 contains a figure derived from the first CS1 subphrase (see bass bar 37, sequenced in bar 38, and bar 39, sequenced in 40). The other two voices involved in this episode recall the tied-quarter-note-plus-three-sixteenth-note figure from CS2, matched here with free extensions. E8 finally features one bar presenting nothing but this CS2 segment in four-part texture, followed by two cadential bars.

The role played by each episode in the dynamic outline of this fugue is determined mainly by their ascending or descending sequence patterns. Descending sequences are found in E1, E4 and E8. Episodes which embark on a relaxation before suddenly turning into a final crescendo are E3, E5 and E6, while in

both E2 and E7, the ascending motion dominates (though not without drawbacks towards the end of each of these episodes).

I/12.2.5 Character, tempo, articulation, ornament realization

Both the complexity of the rhythmic pattern in this fugue and the high degree of intensity expressed in the interval structure indicate a *rather calm* basic character. The tempo is confined by features inherent in the composition. On the one hand, the sixteenth-notes must be calm enough to allow for the expression of melodic intensity; on the other hand, the quarter-notes must convey the impression of stringent movement in order to be felt as the relevant pulse (instead of surrendering this task, as often happens, to the eighth-notes).

The articulation which corresponds with this character is legato in all melodic parts. With regard to the components of the material in the fugue this means:

- All notes in the subject and its three counter-subjects are legato; exceptions occur only where phrasing separates a note from the beginning of the next subphrase (see particularly in CS1 and CS2 after the first subphrases respectively).
- Non-thematic parts may feature consecutive skips or cadential-bass patterns, as in bars 34/35, bars 40/41 and bar 43 (bass); these must be taken non legato.
- In the episodes, octave leaps and cadential steps in the lower part must be detached (see B in E1: C, C, D^b etc.; similarly in E6; also in E3).

The relative tempo of the prelude to the fugue varies, of course, depending on which view a performer adopts regarding the prelude-type (refer back to the distinction made between melodically determined, metrically determined and "invention"-style prelude under paragraph 1 of this chapter).

- a) In the interpretation which finds the melodic intensity in the sixteenth-note lines of the prelude, the appropriate proportion is a simple 1:1; i.e.

one quarter-note	corresponds to	one quarter-note
in the prelude		in the fugue.

- b) In the interpretation of the prelude as a metrically determined piece, the ideal proportion is the more complex 3:2; i.e.

three quarter-note beats	correspond to	one half-note
in the prelude		in the fugue,
	or	
six sixteenth-notes	equal	one quarter-note
in the prelude		in the fugue.

- c) In the interpretation of the prelude as an invention, either of the two proportions is possible, depending again on how one perceives the prelude sixteenth-notes.

A last comment on this matter of tempo choice: One should not neglect that the tempo of the fugue, too, may vary depending on the character of the preceding prelude. Thus after a metrically oriented prelude in which the shortest note values served as mere lace-work, the fugue may give extra weight on the melodic quality of its sixteenth-notes and sound slightly slower than after a rendition of the prelude in which the smaller values were granted full expressive power. (Approximate metronome settings: (a) all beats = 66; (b) prelude beats = 84, fugue beats = 56.)

The fugue contains two kinds of ornaments. One is part of the thematic material where it marks the end of the first counter-subject; the others are cadential ornaments decorating the final closing-formula in bars 57/58. The trill at the end of the counter-subject abides by the same rules which apply to a trill in a subject. As the note it ornaments resolves properly onto the following downbeat, this is a note-filling ornament; it commences on the main note (having been approached in stepwise motion), shakes in thirty-second-notes and ends with a suffix. As an integral part of the thematic material, this trill must be transferred without changes to the following bars:

bar 9	S	bar 30	T
bar 15	B	bar 55	S
bar 21	S		

The two cadential ornaments are also note-filling trills. The one on the soprano-E begins on the main note, while the compound ornament in the tenor commences as indicated from below. Both then move in thirty-second-notes and end in parallel suffixes. A written-out version of this final closing-formula is given below (ex. 68).



I/12.2.6 The design of the fugue

One salient feature in this fugue is that the episodes show unusual endings. All of them close on an imperfect cadence, and several, in addition, present these as unresolved chords (see E1 bar 13: F suspended into chord on C, also E2 bar 19 and E3 bar 27). Both features make the episodes of this fugue appear ill-suited to provide section endings. By contrast, the only distinct cadential pattern (before that in the final bars) to convey the impression of a structural closure occurs in the context of a subject statement, at the end of the tenor entry in bars 40-43. These observations invite the conclusion that in this composition, episodes do not round off previous statements but prepare the ensuing ones; they thus open sections and do not close them.

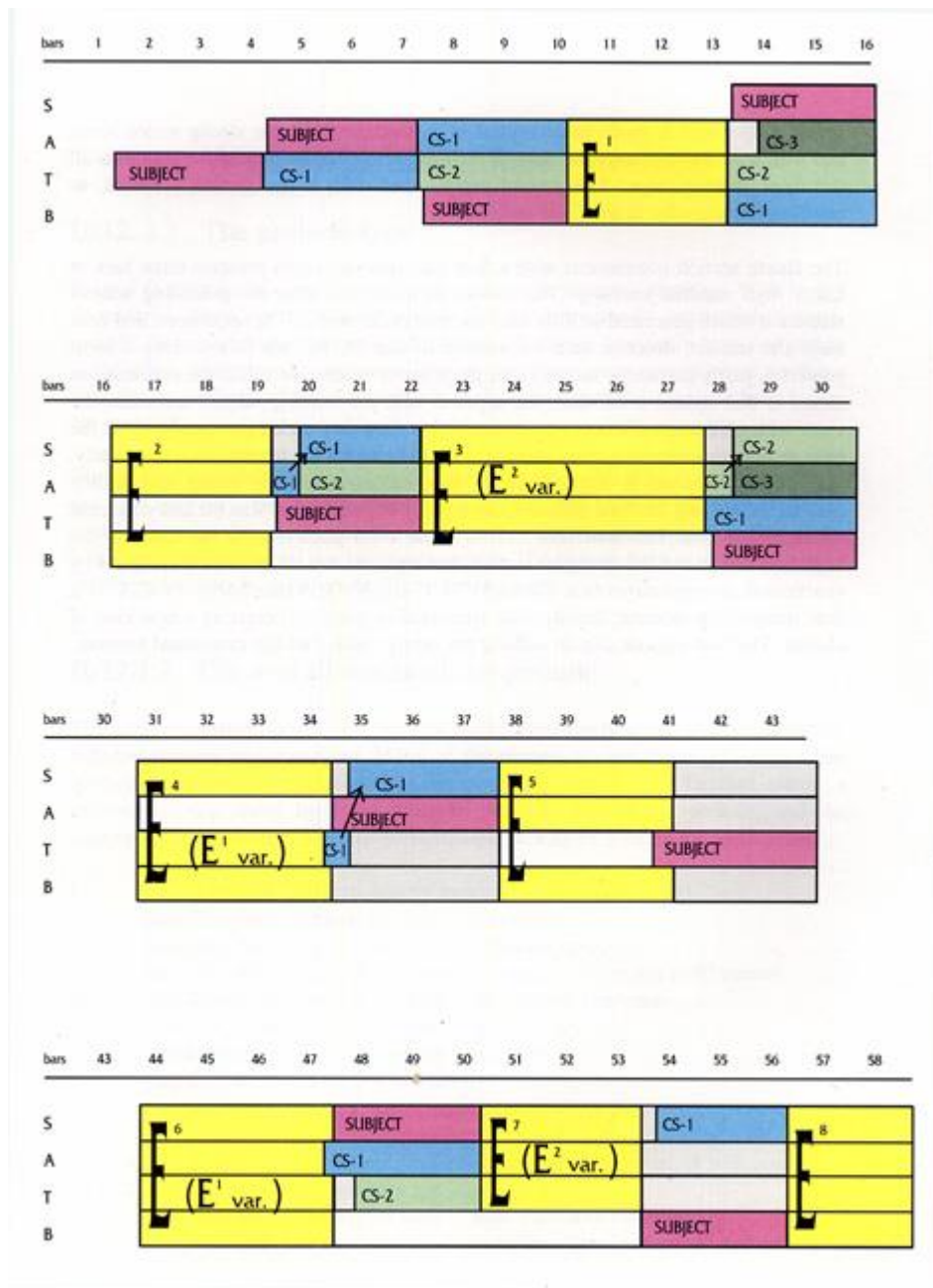
A factor which might provide further enlightenment regarding the structure of this fugue is Bach's use of the ensemble. There are two subject statements which appear in reduced number of voices (see T: bars 19-22 and S: bars 47-50); both are therefore likely to mark section beginnings.

The harmonic background to the subject statements seems very straightforward. The first six statements appear in the tonic area; four of them commence like the first entry on C, only two in the dominant position on F (tonal answer, bar 4) or G (real answer, bar 19). The seventh and eighth statements belong harmonically to the area of the relative major; the former (see bars 34-37) seems to represent the tonic position of A^b major but is harmonized in such a way that it refers back to F minor; the latter reads like the dominant of A^b and ends accordingly. However, it may be worth noting that in the detailed steps of their harmonic progression, both are not in keeping with the original harmonization of the subject. The final two subject statements are back in the F minor key, representing the dominant and tonic positions respectively.

The conclusions to be drawn from these findings for the design of the fugue are as follows:

- The two statements in reduced ensemble (tenor entry in bars 19-22 and soprano entry in bars 47-50) must be regarded as first statements in their respective sections. These two sections therefore commence with E2 (in bar 16) and with E6 (in bar 43) respectively. The latter section-beginning is confirmed by the explicit cadential-bass pattern at the end of the preceding statement.
- The two statements which harmonically refer to the relative major belong together and form a section of their own. They are further united by their harmonization of the subject which deviates from the pattern established earlier in the fugue, and by the fact that the subject appears abandoned by its counter-subjects: CS2 and CS3 are completely missing in both statements, CS1 occurs only against the first of these entries and is varied at both ends (see S: bars 34-37). This section thus commences with E4 and ends with the cadential-bass steps in bar 43.

For a sketch showing the design of the fugue in F minor, see ex. 69.



I/12.2.7 The development of tension

Within the first section, the tension rises steadily from one subject entry to the next. An increasing density of the material, up to the texture which confronts the subject with three counter-subjects, supports an equally growing intensity. The episode which precedes the fourth statement grants a transitory change of color together with a short relaxation, but it is then hit by the full force of four thematic voices. The end of this section seems somewhat unresolved since a suspended G mars the final F minor chord (see bar 16); this creates the effect of stringing this section together, if only by a thin thread, with the second one.

The second section begins with an episode of rising tension, so that its first statement appears already on a somewhat elevated level. The ensuing episode generates a decrease of tension in its first half (until the transitory cadence to A^b major in bar 25m) but then seems to turn on its heels and prepare for the ensuing subject statement by a dynamic increase (see bars 26/27). This statement equals the final statement of the first section in the density of its material and, consequently, in its intensity. Its ending furnishes the long-expected perfect cadence in F minor which, this time, sounds unimpaired by any suspending voice.

The episode opening section III provides a more drastic change of color because of the position of its material: the two motivic parts are in the bass and tenor, the alto is resting and the soprano contributes only a parallel, without independent force of its own. This darker color is enhanced in the descending sequences. The episode linking the two entries of this section is built similarly to that linking the two statements in the second section. Its first bars feature descending sequences, followed (after a transitory cadence in E^b major in bar 39m) by a last-minute preparation for the approaching subject entry. The two statements in this section, too, create much less tension than those of the preceding sections, for three reasons: with regard to texture, because of the much lower density in thematic material; with regard to melody, because of the major sixth which is much more neutral in its tendency than the strong minor sixth; and with regard to harmony, because of their dissimilar harmonization which omits all the most striking steps. The second entry – and with it the section – closes, as mentioned repeatedly, in a definite cadence.

The fourth section commences with a four-part episode which presents three bars of rather high material intensity. This comes as a surprise after the preceding subject statement which generated so little thematic motion around it. The sequences, and with them the tension, descend until the middle of bar 46, but are followed by a most powerful, partly chromatic ascent in the three lower voices. To fulfill the expectations raised in this sudden crescendo, the soprano with the ensuing subject entry and the tenor with CS2 begin almost two octaves higher than they ended previously. With the bass resting, this creates a most striking shift and propels the tension up immediately. The linking episode in the middle of this section combines rising and falling tendencies, leaving the final subject entry equally unprepared as was the last statement in the first section. This statement returns to the lower pitch level in the center of the keyboard and to the full four-part texture, but replaces two of its counter-subjects by syncopated appoggiaturas (see T bars 53/54: C-B^b, A^b-G; A bars 54/55: D^b-C, G^b-F), thus substituting thematic density with emotional urgency and creating a new kind of climax. The final episode can do nothing but gently resolve all this cumulated tension.

WTC I/13 in F[#] major - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/13.1.1 The prelude type

This prelude is determined by two features, one rhythmic and the other thematic. The rhythmic pattern is introduced in bar 2 and continues, with only short interruptions, through the entire piece. Its significant trait is a syncopated right hand figure which omits the beats given by the left hand line; in other words a *complementary rhythm*.

The thematic material of this prelude is based on three components.

- One is a six note broken-chord figure wound up by a repetition of the last note (see bar 1); this component is regularly followed by an imitation.
- The second element is a figure in the above mentioned *complementary rhythm* (as introduced in bars 2/3).
- The third component consists of a cadential bass matched by a rhythmically varied closing formula in the upper voice (first heard in bars 5m 6m).

These thematic components follow one another but never oppose each other contrapuntally, as would be the case in a motivically determined piece of this style. In fact, the second and third components are presented exclusively in homophonic settings. Only the first component contains a polyphonic element.

I/13.1.2 The overall design of the prelude

The first cadence concludes on the downbeat of bar 4. As can easily be seen from the continuing lines in both hands, this cadence does not indicate a structural break.

The subsequent harmonic progression ends on the middle beat of bar 6. It encompasses a modulation to the dominant key which is already approached from the first appearance of the B[#] in bar 4 onwards. This cadence is presented with an explicit cadential bass pattern and an embellished version of a typical closing formula in the upper voice (see U bars 5m 6m: ornamented of C[#] --- B[#]-C[#]). This close marks the end of the first section in this prelude.

The F[#]-major prelude contains six sections:

I	bars 1-6m	tonic to dominant
II	bars 6m-12d	modulation to the relative minor of the tonic
III	bars 12-15m	modulation to the relative minor of the dominant
IV	bars 15m-18m	modulation to the relative minor of the subdominant
V	bars 18m-24m	modulation back to the tonic
IV	bars 24m-30	VI tonic confirmed

As there are only three components of thematic material in this piece, several portions sound reminiscent of one another. Genuine analogies, however, do not occur.

I/13.1.3 Practical considerations for performers

The choice of tempo must be based on the understanding that the compound time signature does not designate the number of beats in a bar but only aims to facilitate reading. The pulse is in fact felt in 4/8 time, with continuous triplets inside each eighth-note. This eighth-note pulse should be moderately flowing.

There are two equally possible solutions for the corresponding articulation: under the assumption that the "flowing" quality prevails over the moderate mood, the non syncopated longer values (i.e. the dotted eighth-notes) would be taken gently *non legato* and all other notes *quasi legato*; by contrast, for performers who feel that this composition exudes calm beneath its ornate surface, the articulation would be mainly *legato*. (This second option has proved slightly more listener friendly.) Both options demand a precise distinction between those dotted eighth-notes which form part of the melodic bass line and others which belong to a cadential bass pattern. Also, careful phrasing, particularly within the *complementary-rhythm* pattern, is essential to assure that lines "breathe".*

* Observing these two requirements, we obtain the following bass line:

<i>legato</i>	bars 1 3 (E#); phrasing before C#; <i>legato</i> bars 3 5 (C#-C#)
<i>non legato</i>	in the cadential pattern bars 5/6
<i>legato</i>	bars 7-10 (E#); phrasing before D#; <i>legato</i> bars 10 11 (D#-D#)
	(<i>non legato</i> also possible)
<i>non legato</i>	in the cadential pattern bars 11/12 (downbeat)
<i>legato</i>	bars 10-14 (A#); <i>non legato</i> bars 14 (A#) 15
<i>legato</i>	bars 16 (first half); <i>non legato</i> bars 16 (C#) 17
<i>legato</i>	bars 19-20 (F#); phrasing before B
<i>legato</i>	bars 20 (B)-21 (C#), phrasing,
<i>legato</i>	bars 21 (D#)-22 (G#); <i>legato</i> bars 22 (F#)-23 (F#)
	(<i>non legato</i> also possible)
<i>non legato</i>	in the cadential pattern bars 23 (A#)-24 (F#)
<i>legato</i>	bars 24 (F#)-27 (tied C#); <i>non legato</i> up to the end.

In the right hand, phrasing only needs a mention within the *complementary-rhythm* passages. In fact, each subphrase within these passages ends with a momentary interruption of the syncopated rhythm, and is thus not too difficult to spot. On the other hand, since the final note of this pattern often overlaps with the beginning of a closing formula, no cut is possible between the two components.*

*Phrasing in the upper voice occurs as follows:

bar 4, after downbeat A#	bar 7, after middle beat F#
bar 10, after downbeat G#	bar 21, after middle beat F#
bar 29, after downbeat A#	

The prelude contains one regular ornament in connection with the first thematic component, the broken-chord figure which ends in a note repetition. This ornament is indicated by different symbols throughout the fugue; it might, however, be preferable to decide in favor of one version and retain this in all cases. Transferal of the trill to structurally analogous notes which appear unornamented is not appropriate in this piece since the notes to which this might apply (e.g. the downbeat of bar 2) are at the same time the beginning of the second thematic component.

At any rate, the trill is not a note filling one since its resolution does not fall on the strong beat but is always both delayed and approached indirectly.

Possible executions of this thematic ornament are:

as a mordent as indicated in bar 1;
in this case it includes four or (better) six notes whenever it begins
on the upper neighbor note (as in all cases of note repetition), and

five notes when it begins on the main note (as on the downbeat of bar 12)

as a compound ornament as indicated in bar 7;

in this case it comprises eight notes, commencing always on the upper note, describing a turn to the lower neighbor and back to the main note, and ending with two trill pairs.

The appropriate rhythmic position of this interrupted ornament is such that the point of interruption avoids any beat. Ex. 2 gives two possible solutions for each version:



I/13.1.4 What is happening in this prelude?

The initial section contains all three thematic components. The broken-chord figure begins in the upper voice and is imitated in the lower voice; the *complementary-rhythm* figure consists of two segments with overlapping phrase endings in the two parts (see the phrasing in U: after bar 4d, in L: after the third dotted eighth-note in bar 3; for more details see footnotes 1 and 2 above). The closing formula commences in the right hand part on the middle beat of bar 5, in the left hand part on the second dotted eighth-note of the same bar. The harmonic outline of this section describes a modulation from F# major to the dominant C# major.

In the second section, the three components appear with a different emphasis. The broken-chord figure is merely transposed; the *complementary-rhythm* figure is very much extended. Two descending subphrases in the upper voice (see bar 7, after the middle beat, to bar 8 middle beat and bars 8 middle to 10 downbeat) are accompanied in the lower voice by a single unphrased descent (bar 7 middle beat to 10 downbeat), followed by an additional curve (bar 10). The closing formula, however, is only represented by its bass part (see bars 11/12 where the lower voice quotes the cadential steps) while the upper voice continues in the *complementary-rhythm* pattern. The harmonic progression leads from C# major to D# minor, the relative minor key.

The third section is considerably shorter but features all components in compressed versions. It commences on bar 12d with the broken-chord figure in the lower voice, imitated in the upper voice but returning once more to the bass (see bar 13, first half). The lower voice then gives way almost directly to an extended cadential pattern. In the upper voice, a little link (bars 13m-14d) precedes a very condensed *complementary-rhythm* figure (bar 14d-14m), followed then by the complete closing formula.

The structure of the fourth section is similar but even more compressed since the first component commences in the upper voice and thus does not "need" the extra imitation of the previous section (compare bars 12/13 with bars 15/16). Harmonically, these two sections lead from D# minor to A# minor (the relative minor to the dominant) and to G# minor (the relative minor to the subdominant) respectively.

The fifth section begins with an extended imitative pattern of the broken-chord figure which recalls the third section (see bars 18m-19d: U, 19-19m: L, 19m-20d: U, 20-20m: L inverted). This leads to an extended *complementary-rhythm* figure, with phrasing in U: bar 21 after the middle beat and, almost imperceptibly, bar 22 middle, and in L: bar 21 middle (separating the seventh interval) and bar 22m. This

segment is strongly reminiscent of the second section, especially in the ensuing cadential pattern in which the closing formula of the upper voice is omitted (compare bars 23m-24m with bars 5m 6m). The fifth section returns to F# major, the home key of the prelude.

The final section confirms the home key. Here the broken-chord figure is stripped of both its ornament and its polyphonic reply. Instead, after a short quotation of the *complementary-rhythm* component, the broken-chord element is re-stated (L bar 26) and followed by a short dominant pedal with non thematic figures in the right hand part. The composition ends with the two subphrases of the *complementary-rhythm* figure over a non melodic bass and the original closing formula, completed in the upper voice by a very graceful, unaccented F#-major-chord descent.

WTC I/13 in F# major - Fugue

I/13.2.1 The subject

The subject of this fugue spans exactly two bars. It commences in bar 1 after a eighth-note rest and ends on the downbeat of bar 3. This downbeat marks the return to the tonic after the dominant seventh chord which was represented by B, G# and C# in the second half of bar 2.

The pitch outline in the subject is very symmetrical. The first and last intervals are skips while in between all notes follow each other in stepwise motion. The rhythmic pattern contains, in the subject itself, eighth-notes, sixteenth-notes, thirty-second-notes in the trill and its written-out suffix, and one quarter-note; counter-subjects and episode motives add several types of syncopation, so that the overall effect is one of considerable variety in note values. The way in which the various rhythmic values in the subject are introduced is interesting to observe. The initial eighth-notes give way first to sixteenth-notes and then to the thirty-second-notes of the trill. After this continuous acceleration, there is a sudden stop on the quarter-note (prolonged by the rest), before the initial eighth-notes are resumed.

This rest in the middle of the subject raises a question: does the halt in the sound flow signify an interruption of the tension, or is the tension carried through the silence? The harmonic development in the subject, as shall soon be seen, reaches its climax on the downbeat of bar 2. As mentioned above, this note also marks the center of the symmetry in the pitch and rhythmic patterns. One can therefore deduce that the comparatively long note value, enhanced by the ensuing rest, serves to sustain this climax before the stepwise descent which follows. The subject thus consists of a single indivisible phrase.

Although harmonizations of the subject occurring throughout the fugue feature a number of intricate (and varying) progressions, it can nevertheless be said that in its main steps, the harmonic background of the phrase is that of a simple cadential progression. The active step from the tonic to the subdominant (or its relative minor) takes place on the downbeat of bar 2, followed by the dominant chord in the second half of bar 2 and the tonic on the final note.

(ex. 3)



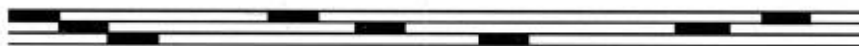
The climax of this subject, the D# at the beginning of bar 2, is supported in an ideal way by various features: (a) it represents both the subdominant harmony and a sudden rhythmic stop; (b) it is composed as a kind of axle in this very symmetrical layout the preceding pitches show a rising tendency (see the first skip C#-F# and the step from the trill C# to D#), while the ensuing ones are all falling (see the descent D#-C#-B-A#-G# and the final skip C#-A#).

I/13.2.2 The statements of the subject

The fugue contains eight statements of the subject.

1.	bars 1-3	U	5.	bars 15-17	M
2.	bars 3-5	M	6.	bars 20-22	L
3.	bars 5-7	L	7.	bars 28-30	M
4.	bars 11-13	U	8.	bars 31-33	U

(ex. 4)



The only variations in the subject occur at its beginning and end; both are very common modifications. The initial interval is adjusted in the answer of bar 3 but never again thereafter, and the final interval is on two occasions enlarged to a fifth to include a drop to the keynote (see bars 6/7 and bars 21/22). No stretto or parallel statements of the subject appear.

I/13.2.3 The counter-subjects

The F[#]-major fugue contains two counter-subjects of very different character and importance.

CS1 is introduced at the expected place, i.e. against the second subject statement (see U: bars 3 5). Among its two subphrases, the first commences with an ascending octave followed by a circling figure and comes to a halt on the syncopation; the second is an extended transposition of the first, beginning with a longer preparation and closing in an additional *do-si-do* (keynote / leading note / keynote) formula.

(Cf. bar 3 F[#]-E[#]-F[#]-G[#]-D[#]-E[#]-F[#]-G[#] with bars 3/4 D[#]-C[#]-D[#]-E[#]-B[#]...A[#]-B[#]-C[#].)*

The climaxes in the two subphrases could fall either on the analogous syncopations (this results in a somewhat saucy expression) or in the bend before each of them (i.e. on E[#] and A[#] respectively, which underpins the tender note of the counter-subject). As the second subphrase is conceived as a descending sequence, it sounds generally softer than the first one.

Although CS1 is an almost constant companion to the subject, it undergoes significant modifications on its way through the fugue. Its initial interval, which was originally the very assertive octave leap, appears gradually smoothed away. Reduced first to a seventh (see bar 5: C[#]-B), then substituted by a three note figure which commences with a fifth (see bar 11: G[#]-C[#]-B), it is finally leveled to a stepwise figure (see bar 15: A[#]-G[#]-F[#]; similarly in bars 20 and 31). Together with the gradual retreat of the originally energetic beginning, CS1 also loses momentum at its end. In bars 11 13, the last syncopated figure is substituted by a quarter-note followed by an appoggiatura which resolves belatedly, after a tie suspension. In bars 15 17, the second subphrase turns into a cadential bass pattern (similarly in bars 31 33). In bars 20/21, only the first subphrase of CS1 appears, and in bars 28/29, this counter-subject is entirely missing.

The point at which one normally expects the second counter-subject to be introduced is against the third subject statement, in bars 5 7. The line presented here by the upper voice, however, reveals itself as a rhythmic parallel of the subject. It is therefore necessary to look further, to the ensuing entry of the subject in bars 12 13, in order to find the true second counter-subject.

CS2 begins belatedly half a bar after the subject (see L: bar 12). It is characterized by a rising scale interspersed by pairs of the repeated keynote. In keeping with this straight gesture in the ascent, the development of tension also depicts only a single direction: no subphrasing scans the continuous crescendo until the upper F#.

This counter-subject only accompanies the subject three times altogether; after its introduction it recurs in U: bars 20 22 and in U: bars 28 30.

- Another line which accompanies the subject twice and might, at a first glance, appear as a counter-subject is that in U: bars 15 17 and in M: bars 31 33. Upon closer inspection one detects that its end is composed as a complement to the CS1 which has turned into a cadential bass, and is actually making up, in a somewhat free style, for the omitted final syncopated figure of the first counter-subject. This note group should therefore not be regarded as a new component of the primary material.

The following sketch shows the phrase structure and dynamic design in the primary material of this fugue.

(ex. 5)

The musical sketch consists of three staves labeled S, CS1, and CS2. The top staff (S) shows a melodic line with a trill and a fermata. The middle staff (CS1) shows a rhythmic accompaniment with a trill. The bottom staff (CS2) shows a bass line with a trill and a fermata. The sketch illustrates the phrase structure and dynamic design in the primary material of the fugue.

I/13.2.4 The episodes

The F#-major fugue contains six subject-free passages:

E1 bars 7-11m	E4 bars 22-28d
E2 bars 13m-15d	E5 bars 30-31m
E3 bars 17-20d	E6 bars 33m-35

The cadential close in bars 22 23d partitions E4, distinguishing between a very short segment E4a and a much longer E4b. The remaining episodes, none of which is further divided, fall into two groups. The material employed comprises both components of the subject and of the counter-subjects, as well as an independent episode motive.

The subject appears, complete or represented by a segment, in all six episodes.

- a) It is quoted most completely in E2 and E5. In the upper voice of E2, the following segments can

be observed:

- the first four notes are a transposition of the subject's head motive (compare bars 13/14: A[#]-D[#]-C^x-D[#] with bar 1: C[#]-F[#]-E[#]-F[#]);
- the fourth note has the value of a quarter-note followed by an eighth-note rest, and is thus reminiscent of the climax in the subject (compare bar 14: D[#] + rest with the same in bar 2);
- the ensuing six eighth-notes constitute a free inversion of the subject's second half (compare bars 14/15: E[#]-F[#]-G[#]-A[#]-F[#]-D[#] with bars 2/3: C[#]-B-A[#]-G[#]-C[#]-A[#]).

The middle voice in this episode sets out as an imitation, then omits the climax portion and joins the end of the upper voice figure in parallel thirds. E5 is a transposition of E2, with the upper and middle voices inverted; here the middle voice carries the more complete version of the subject and is thus leading, while the upper voice is second in importance. (Not easy to play!)

b) Another quotation of subject material appears as a bracket around the first episode:

- The head motive opens this episode in the lower voice, stating a re arrangement of the original pitches but retaining the eighth-note rhythm (compare bar 7: F[#]-E[#]-C[#]-F[#] with bar 1: C[#]-F[#]-E[#]-F[#]).
- The middle voice concludes this episode with the second half of the subject, retained almost exactly in the shape of the original (compare M bars 10/11: G[#]-F[#]-E[#]-D[#]-D[#]-E[#] with bars 2/3: C[#]-B-A[#]-G[#]-C[#]-A[#]).

The opening segment in its particular re arrangement of pitches recurs twice in the fugue: at the beginning of E3 (where it is even sequenced; see L: bars 17/18) and at the beginning of E6 where it is taken up faithfully.

c) Finally the head motive alone, in its original shape, reigns in the largest portion of E4 where it is presented first in an imitative texture of upper and middle voice (see bars 23/24), then in a pattern of descending sequences in the lower voice (see bars 26/27).

Mcs2 is a figure which is derived from CS2; it can also be found in all six episodes. However, while CS2 was characterized by a hidden two part structure consisting of a complete ascending scale over a repeated pedal, the episode figure mostly plays with two moving lines and creates distinct little gestures of varying length. Mcs2 occurs as follows:

- in E1 see bar 7 U, bars 7/8 L, bar 8 M, bars 8m 10 L
(it is interesting to observe that Mcs2 actually appears earlier than the counter-subject from which it stems);
- in E2 see bars 13/14 L;
- in E3 see bar 17 M, bars 17/18 U, bars 18 20 L;
- in E4 see bars 23 25m L, bars 25/26 M, bars 26/27 U, bar 28 L
(bar 28 L belongs to this episode in view of its material, although there is an overlap with the beginning of the next subject entry);
- in E5 see bar 30 L;
- in E6 see bars 33/34 U, bar 34 L, bars 34/35 M.

M1 is an *independent episode motive* which occurs only in E1, E3 and E6, and only ever in the upper voice. It is made up of an ascending fourth leap followed by syncopated notes in various guises which, more often than not, feature a descent. M1 is introduced in E1 (see bars 7/8 C[#]-F[#]-E[#]-D[#]-C[#]-B[#]); it is then sequenced freely in bar 8 (D[#]-G[#]...) to bar 10 (...B[#]) and again in bars 10/11 where the syncopations accommodate the *do-si-do* (keynote / leading note / keynote) closing formula. In its second version it reappears in E3 (see bars 18/19). Its shortened third version is taken up in E6 (see bars 34/35).

The two episodes which, as was mentioned above, appear corresponding due to their fairly complete quotation of the subject (E2 and E5), share a further feature: both of them are interwoven with their

ensuing subject statement by an anticipation of the CS1 beginning. At the end of E2 (see L: bars 14m-15d), the note group from G# to G# anticipates the subsequent group from A# to A#; the same recurs at the end of E5 (compare L in the first half of bar 31, still part of the episode, with the note group in the second half of that bar, serving as the beginning of the first counter-subject).

Finally, cadential bass patterns can be observed at the ends of E1 and E6 respectively, as well as in E4a which is the only episode segment in this fugue clearly serving as nothing but a cadential close. While in E1 and E6 the formulas in appear embedded in episode material, E4a features none of the above mentioned components or motives. Instead, both the upper and the lower voices present obvious closing formulas, thus underpinning the determined concluding gesture of this bar.

As has certainly become obvious from the above analysis, several relationships exist between the episodes of this fugue.

E2 corresponds directly with E5;

E1 is related to E3 which is a shortened version, and to E6 which repeats its beginning literally (compare bars 33m 34m with bar 7);

E4b carries analogies within itself; the segment in bars 23 26 corresponds largely with that in bars 26 28.

The details which have been unraveled above allow discernment between three types of episodes:

- One type, represented by E2 and E5, is very closely related to the primary material, not only because it quotes the largest portion of the subject, but also because it is intertwined with the ensuing subject statement through its CS1 anticipation. This type serves as a bridge.
- Another type, represented by E1, E3 and E6, gains limited independence by using a distinct episode motive. In both E1 and E6, a cadential close is present, whereas this more definite ending is missing at the tail of E3. (It may not seem too far fetched to speculate that this missing close of E3 is made up for by E4a which, as was shown, presents an explicit cadential formula.) This episode type provides a color contrast to the primary material and conveys the impression of a structural closure.
- The third type is represented only by the five bars of E4b. Utilizing only segments from subject and CS2 and carrying these through various harmonic steps, this episode seems purposefully to delay the ensuing subject statement. (It reminds one faintly of that episode portion in the C#-major fugue which served as something like the "development section" in the "sonata form" fugue. The reader may wish to refer to chapter WTC I/3.2.4. in volume I.) The message of this episode type is therefore neither bridging nor closing but delaying.

I/13.2.5 Character, tempo, articulation, ornament realization

The material of this fugue does not express only one character. In the subject, the first counter-subject, the episode figures derived from these and the independent episode motive M1, the complex rhythmic pattern and the overall stepwise motion clearly indicate a rather calm basic character. By contrast, the second counter-subject and the episode figure derived from it (Mcs2) feature simple rhythmic structure and a pitch pattern which consists exclusively of skips, thus designating a *rather lively* basic character. The conclusion to be drawn from these observations should accommodate both facts.

The tempo is moderately flowing; swift enough to convey liveliness in the sixteenth-notes of CS2, but moderate enough to convey calm in those of CS1. The articulation will have to take into account the two characters represented by the material. In the subject and the motives derived from it as well as in CS1 and M1, all notes are *legato*; in CS2 and Mcs2, all notes are *quasi legato*. (For the sound balance within

these components it is of greatest importance that the frequent note repetitions do not cause a greater degree of detachment than the other intervals; any effect of slurring should be carefully avoided.) *Non legato* articulation is appropriate in the cadential bass notes of bars 11, 16, 22, 33 and 34 and in the octave jump of bar 25.

The relative tempo of the prelude to the fugue is ideally represented by the compound relationship of 3:2. This translates as follows:

three dotted eighth- notes in the prelude	equal	two quarter-notes (half a bar) in the fugue
---	-------	---

Approximate metronome settings: prelude beats (dotted eighth-notes) = 96, fugue beats = 63.)

The composition contains two ornaments. One decorates the subject and has to be transferred to all subsequent subject entries (slight technical inconvenience is no excuse!); the difference of symbols in bars 1, 3 and 15 should probably not be read to indicate different executions. This trill is a note filling one. It begins on the main note since it is approached stepwise, moves in thirty-second-notes and ends with the suffix which, in all cases but one, is written out. The other ornament appears in the cadential bar of E4a. It is a mordent which commences on the upper neighbor note G# and then touches down on F# twice. Its shakes can be in thirty-second-notes or slightly faster.

I/13.2.6 The design of the fugue

As has been shown above, the fugue contains two explicit cadential formulas. One of them marks the end of the first episode. The other, following the sixth subject statement, was identified as the only subject-free segment devoid of all the components which characterize the material of the other episodes; it is a typical cadential close.

While these cadential formulas already provide an important clue for the design of the fugue, earlier observations regarding the episodes and their role in the development of the composition also contribute to the understanding of structure. E2 and E5 were acknowledged as bridging episodes which each string together two statements belonging to the same section; E1 and E6 were found to exert concluding power, while E3 showed similar tendency but lacked a final closure (to be complemented by E4a). Finally, E4b was analyzed to be neither bridging nor concluding; one might therefore assume that its position is neither in the middle nor at the end of a section.

Having said all this, it is time to state one noteworthy analogy in the fugue. Three separate facts had already been recognized:

- the correspondence of E2 and E5;
- the relationship in material of E3 and E6;
- the correspondence of the subject entries in bars 15 17 and 31 33; both are accompanied by a variant of CS1 in which the end appears substituted by a cadential bass pattern, and by a third voice which in its second half makes up for the abandoned tail of CS1, at least in its rhythmic idea.

To sum up:

bars 11m-18 subject statement + CS2 bridging episode	correspond with	bars 28-35 subject statement + CS2 bridging episode
--	-----------------	---

subject statement
with CS1 irregularity
E3

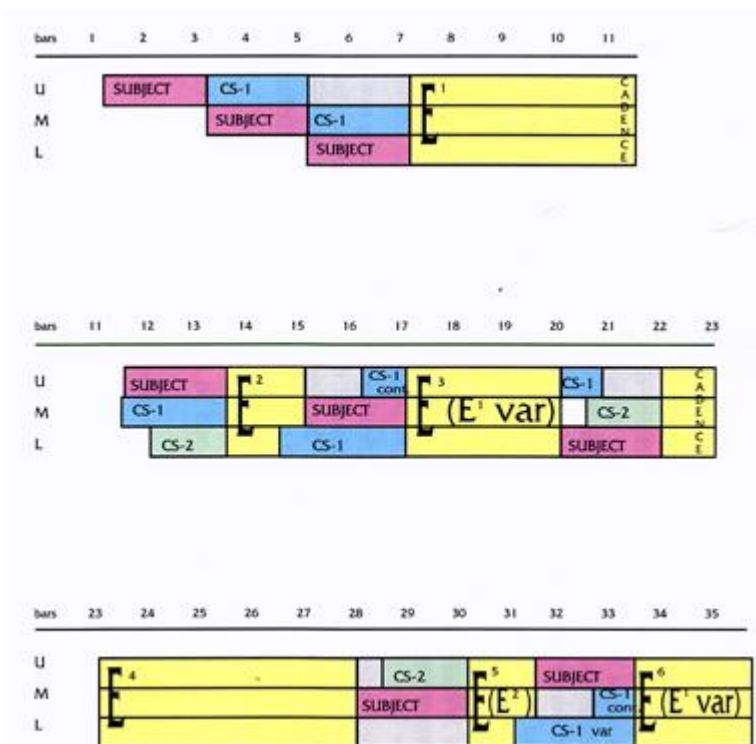
subject statement
with CS1 irregularity
E6

The overall harmonic development in the fugue begins, after three statements in the realm of F# major, with a modulation to the dominant, leading to a close with a C#-major cadence at the end of the first episode. After an immediate return to the home key, the third episode modulates from C# major to the relative key which, after a subject entry in D# minor in bars 20-22, is confirmed in the cadential bar 22/23. E4b undertakes the return to the home key before the next subject entry. Thus all but one of the subject statements appear in F# major, either on its tonic or on its dominant.

These are the conclusions to be drawn from what was observed:

- The first section encompasses three subject statements and one episode; the cadential formula at the end of E1 concludes this section.
- The second episode contains two statements which appear strung together by the bridging E2, followed by the episode type which elsewhere in this fugue is concluding but here lacks the final cadential close. The ensuing statement appears thus almost as a redundant one, an impression which is enhanced by the fact that it is the only one in the minor mode. The cadential bar of E4a concludes this second section in bar 23d.
- The third section begins with an opening ("delaying") episode, followed by the passage which was recognized as structurally analogous to the second section without its quasi redundant entry. In this section, the third subject statement is now completely stripped off.

For a sketch showing the design of the fugue in F# major, see ex. 6.



I/13.2.7 The development of tension

Within the first section, the tension is growing from the first to the second subject entry along with both the increase of voices and the emergence of the contrasting first counter-subject. However, from here to

the third entry, there is almost no increase as the upper voice does not contribute independent material but runs a rhythmic parallel to the subject. The ensuing episode commences with a distinct color contrast. It then allows for a slight increase in tension as M1 comes in and is sequenced upwards, only to give way to the relaxing cadential close which ends both the episode and this section.

The beginning of the second section can be regarded as the climax not only of this section but of the entire fugue because the juxtaposition of the subject with its two counter-subjects creates the greatest degree of polyphonic contrast. The bridging episode sounds softer than the surrounding subject statements but not necessarily as different in color as E1 did. It is followed by an entry which makes no use of the newly introduced CS2 and thus sounds less assertive than the preceding one. The ensuing episode commences again with a color contrast and a slight increase in tension in connection with M1; its relaxation is interrupted by the quasi redundant entry which is the most subdued both in this section and in the fugue.

The third section sets off in an almost floating atmosphere. The remaining two entries and two episodes repeat the development of the second section, omitting, however, both the climax and the anticlimax; the first subject statement of this section is accompanied by CS2 but not CS1 and thus sounds less polyphonically thrilling, and the quasi redundant entry is completely dropped here.

WTC I/14 in F[#] minor - Prelude

from Siglind Bruhn

*J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation*

I/14.1.1 The prelude type

With the exception of very few bars, this prelude shows strict two-part polyphonic writing. When perusing the thematic material one finds that the opening idea (see U: bars 1/2) is not only imitated in the lower voice immediately after its first statement but also recurs constantly in the course of the piece. As the initial imitation is placed on the fifth, there is a strong case for suspecting that this prelude is composed in adherence to the principles of a fugue.

I/14.1.2 The overall design of the prelude

The first harmonic progression already concludes on the downbeat of bar 2. As this harmonic conclusion coincides with the initial statement of the "subject", this cadence does not represent a structural break. Similarly, any further statement will conclude in a perfect cadence. These are thus not the cadences one is looking for when trying to determine structural units. The only conspicuous cadence formulas outside the subject statements occur in bars 12, 18/19 and 21/22. The first and third are perfect cadences, one in the dominant (bar 12), the other in the tonic (bars 21/22). The third formula designates an imperfect cadence (see bars 18/19, subdominant /dominant of F[#] minor).

Structurally relevant analogies are scarce in this prelude. Only the two bars immediately following the two above mentioned perfect cadences are composed alike (compare bars 12m 14m with bars 22d-24d, transposed from C[#] to F[#]). Their three-part texture with a sustained note in one voice and a eighth-note and rest figures in another refer to the beginning of the piece (compare bars 12/13 and 22 with bar 1).

I/14.1.3 Practical considerations for performers

The basic character of this prelude is without doubt *rather lively*. This follows both from the simple rhythmic pattern which consists predominantly of sixteenth-notes and eighth-notes in a straightforward setting, and from the pitch pattern which contains leaps in the eighth-notes and a mixture of ornamental figures and broken chords in the sixteenth-note segments. In fact, there seem to be hardly any notes at all which would require emotional depth; so the tempo, reflecting this truth, should be very swift. Articulation demands a light quasi legato for the sixteenth-notes and an effortless *non legato* for the eighth-notes.

The only ornaments in the prelude are the three cadential trills. All of them appear in that pattern which is typical for Baroque closing-formulas, a dotted note followed by the anticipated resolution. All three trills (see bars 12, 18 and 21) are therefore *point d'arrêt* trills: they stop short a considerable distance before the succeeding sixteenth-note on the half beat eighth-note or slightly before. The trills in bar 12 and bar 18 both begin - on the upper auxiliary and, moving in thirty-second-notes, contain four notes. The ornament in bar 21, as it is approached stepwise, begins on the main note and features only three notes (two thirty-second-notes and a syncopated eighth-note).

I/14.1.4 What is happening in this prelude?

The prelude in F[#] minor has been unmasked as a composition built along the lines of a two-part fugue. How strict a fugue it is, and where it deviates from the fugal pattern, will be the main question to be discussed.

The subject is introduced in the upper voice (bar 1, second eighth-note until the return to the tonic on bar 2d. Whether the A on bar 2d itself or the third sixteenth-note F[#] constitute the intended melodic ending is almost impossible to decide.) This initial subject statement brings about the first deviance from the fugue model -- a deviance that is, however, frequent in preludes composed as fugues: it is not presented as an unaccompanied line but comes with two additional "voices". As was mentioned earlier, one of these voices moves in eighth-notes interrupted by eighth-note rests and doubles the peak notes of the subject in parallel compound thirds; the other consists of a sustained tonic keynote and its octave displacement. In the course of the fugue it can be detected that the two structurally analogous statements, those after the perfect cadences in bars 12/13 and 22/23, are also presented in a sudden three-part texture, each time with one voice acting as a pedal and the other moving in parallels to the subject peak notes. (For reference, this line of parallel eighth-notes will here be called "C", for "companion".)

The following two subject statements allow for two fake counter-subjects to make their appearance. Both, as will be shown, derive from the "companion".

C1 is introduced in the expected position against the second subject entry in bars 2/3. It consists of leaping eighth-notes and, if regarded as a *hidden two-part structure*, describes in its lower part the same compound third parallel to the subject peak notes as the companion of the opening entry. (More clearly than in bars 2/3 where it accompanies the answer this can be seen in bars 9/10.)

C2 makes its first appearance in bars 4/5 against the third subject statement. It is characterized by broken chords filled each with one additional passing note. The line built by the lowest notes of these chords is, once again, a parallel to the subject's peak notes.

The following example documents the relationship between the subject and its three companions; the undue eighth-notes in the first bar are revealed, in the light of the two following regular counter-subjects, as a feature to be taken seriously since both derive strikingly from it. For easier comparison, all examples are transposed to the tonic and appear with the subject in the upper voice (ex. 13)



A third companion to the subject is introduced only in the second half of the composition. This companion appears in block chords which strike in eighth-notes separated by eighth-note rests; its rhythmic pattern is thus that of the first-bar companion, and the descending scale derived from the compound third parallel to the subject's peak notes is also present (see in the right hand part of bars 14/15 the lowest notes E-D-C[#]-B). This figure thus continues the development we have so far witnessed from one mutation of the companion to the next in a logical way - from single notes via *hidden two-part structure* and broken chords to block chords. (As these chords show no attempt whatsoever to establish any melodic line, one would not normally give them the name of a companion. However, for the sake of easier identification and because of their striking analogy with the other companions these chords shall here be referred to as C3.)

What is truly surprising is that only this C3 accompanies the inversion of the subject, and thus does not build the usual parallel. As a consequence, the ensuing subject entry, also an inversion, is then accompanied by the compromise: one descending (originally parallel) and one ascending (now parallel) line (see bars 15/16). Finally in bars 19/20, things appear upside down in that the subject is here returned

to its original shape but the scale in the accompanying chords is ascending (see bar 19 upper notes of right hand; the immediate relationship between these chords with the chords in bars 14/15 is revealed when one compares the lower notes here with the upper pitches there.)

The fourth and final step in the development of the companion is the direct parallel in compound thirds. This is accomplished in bars 20/21 and does not ever recur.

The subject statements in this "fugue" and their respective companions thus present the following picture (S_{inv} = subject inversion, S_{par} = subject parallel):

bar	1	2	3	4	5	6	7	8	9	10	11		
U	S	C1		C2		S	C2		S				
L	C	S		S		C2	S		C1				
bar	12	13	14	15	16	17	18	19	20	21	22	23	24
U	S	C2	C3	S _{inv}			C3	S		S	C2		
L	C	S	S _{inv}	C3			S	S _{par}		C	S		

The few subject-free passages in this "fugue" are episodes in the usual sense. Some take their material directly from the primary features; see e.g. the episodes in bars 3/4 and 5/6 which display a motive (in imitation) composed of the subject's turn figure and a leap that recalls C1. The lower voice in bars 8/9, the upper voice in bars 10/11 and the lower voice in bars 16/17 make use of the same motive, while bars 11/12 and bars 17-19 constitute motivically free extended closing-formulas. Shorter cadential formulas are found in the two remaining passages (bars 21/22 and bar 24).

To answer the question about the structure in this "fugue" by grouping the subject statements into sections would probably mean carrying the exercise too far. The only relevant structural caesuras in this highly virtuoso piece occur at the cadential closures mentioned above; thus the performer should try to convey a polyphonic composition in two sections followed by a coda, and not the (theoretically possible) six fugal "rounds".

WTC I/14 in F[#] minor - Fugue

I/14.2.1 The subject

The subject of the F[#] minor fugue is four bars long. It begins after a rest with the second quarter-note of the 6/4 bar, thus conveying the impression of an extended upbeat. Its conclusion is reached on the downbeat of bar 4 where the melodic line returns to the keynote F[#] after an ornamented G[#] which harmonically represents the dominant. The length of the final note is exceptional in bar 4; later subject statements end frequently with only a eighth-note as the closing note.

The pitch pattern in the subject (as well as in the entire fugue) features predominantly stepwise motion, with very few skips. The rhythmic pattern is highly varied, containing eighth-notes, quarter-notes, dotted quarter-notes etc. up to the tied four quarter-note value in the subject. Syncopations appear frequently, two of them already in the subject.

Phrasing in this subject permits two options which create quite different effects.

- On the one hand, there are three similar note groups which can be interpreted as varied sequences: F[#]-G[#]-A is sequenced in contracted note values in G[#]-A[#]-B, and sequenced again (after an additional A[#]-G[#] pair) in A[#]-B[#]-C[#]. It is therefore possible to view the subject as consisting of three consecutive ascents of which only the last one is complemented in a descending motion. In this case, subtle subphrasing after the long notes which end the first two ascents (i.e. after A[#] and B in bar 2) is

adequate.

- On the other hand, it is also possible to imagine these same notes as expressing one single gesture: an ascent through F[#]-G[#]-A---B---C[#] (or even F[#]-G[#]-A-A[#]-B-B[#]-C[#]), in which the long notes are directed forward (instead of serving as transitional endings), and in which the tension between one long note and the next is further enhanced by additional artificial leading notes (A[#], later B[#]). If this is what the performer feels, the subject should not be broken into smaller units but conceived as a single curve. (By the way, the short instances of backtracking during the ascent find their equivalent in the descent which also falls in two sweeps.)

The harmonic layout of the subject is simple in its large steps but fairly complex in the small ones; this is caused both by the artificial leading notes in the subject and by the high degree of chromaticism throughout the fugue. The main steps of the simple progression are represented by the three long notes, with A (bar 1) for the tonic, B (bar 2) for the subdominant, both C[#] and the ornamented G[#] (bar 3) for the dominant and the final F[#] (bar 4) for the return to the tonic. The more complex harmonic progression which Bach uses e.g. in bars 15-18 is shown in ex. 74 below. The Roman numerals show how Bach actually passes through the keys of B minor and C[#] major -- subdominant and dominant in his harmonization of the subject (ex. 14):

The image shows a musical score for the subject of the F# minor fugue, consisting of four measures. Below the score, Roman numerals indicate the harmonic progression. The progression starts in B minor (F# minor) with the tonic (i), moves to the subdominant (vii i), then to the dominant (V). In the second measure, it moves to the subdominant of the dominant (V⁷_{IV} IV) and then to the tonic (vi). In the third measure, it moves to the dominant of the dominant (V⁷_{IV} IV) and then to the tonic (vii i). In the fourth measure, it moves to the dominant (V⁷) and then to the tonic (i).

Depending on which of the two interpretations mentioned above the performer chooses, the dynamic outline of the subject will come out slightly different. The climax is the same: the goal of the ascending sequences or, in the alternative interpretation, the target of the powerful ascent with its enhancing chromaticism, lies on the highest pitch C[#] on the downbeat of bar 3. However, the preparation of the climax and, with it, the degree of urgency expressed in the subject, is very different in both concepts. In the first case, the climax is reached in consecutive sweeps each of which commences newly in a relatively relaxed way. (A string or wind player would decrease volume on the long notes.) In the second case, the tension grows constantly and thus much more powerfully through all notes. (A string or wind player would increase volume during the long notes so as to incorporate them into the long crescendo.) The character expressed in the two different interpretations has a considerably different impact.

I/14.2.2 The statements of the subject

The subject appears nine times throughout the F[#] minor fugue (ex. 15).

1.	bars 1-4	T	6.	bars 25-28	S
2.	bars 4-7	A	7.	bars 29-32	T
3.	bars 8-11	B	8.	bars 32-35	B
4.	bars 15-18	S	9.	bars 37-40	S
5.	bars 20-23	A			

The subject suffers hardly any modification in the course of the fugue. The answer is real, with all intervals kept intact, and only in one statement is the beginning slightly varied (see in bar 25 the 3 eighth-note upbeat C[#]-F[#]-D[#] instead of the simpler 2-quarter-note approach C[#]-D[#]). However, a more significant modification, the inversion of the subject, does occur twice. It is introduced with the alto entry in bars 20-23 and recurs in the bass statement in bars 32-35. Neither stretto nor parallel are found in this piece.

I/14.2.3 The counter-subjects

The F[#] minor fugue contains two counter-subjects. One is conceived as a fairly regular companion to the subject while the other materializes only twice.

CS1 is introduced against the second subject statement, in bars 4-7 (tenor). It consists of two clearly distinct halves. The second segment presents the extended version of a closing-formula see the typical leaps D[#]-G[#]-C[#] and the do-si-do (keynote / leading-note / keynote) figure with its classic syncopated rhythm, while the first half is characterized by frequent note repetition. On closer inspection one detects that this pattern actually consists of note pairs: C[#]-B, B-A[#], A[#]-B and so on. These pairs are harmonically conceived either as main note + anticipation of the next (see bars 4/5 and 13/14) or as *appoggiatura-resolution* (see e.g. bars 8/9). Whichever their harmonic background, these patterns are well known in Bach's music, particularly in his vocal music, under the name of "sigh" figures. In the context of this counter-subject it is important to distinguish between those pairs which constitute genuine "sigh" figures, and those which do not and should therefore sound different. (The two notes in a true "sigh" figure are usually neighboring notes; they always represent different harmonic steps. Skips and leaps, especially if they occur within a single harmony, are therefore not "sighs" and should not be played as pairs. Examples for such notes which appear in the context of "sigh" figures but do not belong are: the octave jump in bar 15 middle (the lower F[#] is in fact the end of one little subphrase, and the higher F[#] is the beginning of the actual CS1); similarly in bar 19 middle, bar 22 middle, bar 29 middle and bar 32 middle.) Dynamically, the first subphrase represents a gradual diminuendo to the long G[#]. The second subphrase follows with a crescendo up to the half-note C[#] and ends in a final relaxation.

CS2 first appears against the third subject statement, i.e. in bars 8-11 (tenor). It begins on the second quarter-note (C[#]) and consists of three subphrases. The first ends on the dotted half-note B; its ending is then sequenced in diminution (see bar 9: E[#]-C[#]-F[#]), after which the third subphrase sets out from the syncopated C[#] with an ascending portion of the melodic F[#] minor scale followed by a descent in natural F[#] minor. This subphrase, and with it the entire counter-subject, should regularly end with the resolution on the downbeat of the final bar; in this first statement, however, the resolution note A appears delayed.

Several dynamic representations are possible for this counter-subject. The climaxes of the first and second subphrases could fall either on the long B and the F[#] in the diminished partial sequence respectively, or on the initial notes in these subphrases (i.e. in bar 8 on C[#], in bar 9 on E[#]). In the third segment, the syncopated C[#] competes for the climax with the highest pitch of this subphrase, F[#]. This counter-subject recurs only once in its entire length, and even then it is heavily varied (compare A: bars 29 -32 with T: bars 8-11). In addition, the third subphrase of CS2 appears separately in bars 16-18 (tenor).

The example below shows the phrase structure and dynamic design in the subject and its two counter-subjects (ex. 16):

I/14.2.4 The episodes

The F# minor fugue contains six subject-free passages.

E1	bars 7/8	E4	bars 23-25
E2	bars 11-15	E5	bars 28/29
E3	bars 18-20	E6	bars 35-37

Three episode motives can be distinguished; two of them are remotely related to the primary material:

M1 in its simple shape of four ascending notes is the most prominent episode motive in this fugue. Both its rhythmic gesture which consists of three eighth-notes followed by a three eighth-note value, and its pitch pattern which contains artificial leading notes, recalls a segment from the middle of the subject (compare E1: E-F#-G#-A, F#-G#-A#-B and B-C#-D#-E, C#-D#-E#-F# with bars 2/3: G#-A#-B#-C#). The dynamic shape of M1 is a crescendo.

M2 The initial six notes of CS1 with their upbeat, two "sighs" and a final note are employed in E3, E4 and E6. This figure will be called M2. Dynamically it takes up, within an overall diminuendo, the subtle groupings from the counter-subject.

M3 appears exclusively in E2 is only vaguely defined; it seems conceived as a concave curve with the climax in the middle, at or close to the lowest point of the curve. Ex. 17 illustrates this with the help of the extract from the score.

(ex. 17)

The fourth episode stands out as different from the others because it emerges from the preceding subject statement without any clear beginning. The soprano in bars 23/24 continues the descent in syncopations begun towards the end of the subject entry (see bars 22/23 F# E, continued in bars 23 25: D-C#-B). At the same time, the bass presents sequences of that variation of the CS1 beginning which accompanied the end of the inverted subject (compare bars 22/23: D A# with bars 23/24: B-F# and, shorter, bars 24/25: G#-E#). Similarly, the alto also extends the end of the subject statement in varied sequences (compare bar 23: G#-A-B-C# with the ensuing groups F#-B and E-F#-G#-A). This entire episode can thus best be regarded as an extension of the preceding subject statement.

The structure of the episodes and their inter relationship is interesting.

- E1 recurs faithfully (except for the octave displacement) in E5 and thus creates a distinct symmetry.

- E1 also reappears, slightly varied and with an accompanying voice, as the first part of E2 (see T+B: bars 11/12) and of E3 (see S+B: bars 18/19).
- The second segment of E3 contains a parallel presentation of M2 in the outer voices (soprano and bass) followed by imitation, also in parallel, in what seems like the inner voices (but is actually the alto and the bass after an octave displacement, since the tenor is resting). This pattern is taken up in E6, in bar 35 with a sequence in bar 36. This creates a second structural analogy.

Finally, there are two cadential formulas in this fugue, apart from the one in the final bar. One appears in bar 20 where the key of C# minor is confirmed in a perfect cadence. The other formula, with a dangerously similar looking bass line, marks the end of the above mentioned subject extension (see bar 25). This one, however, is not only an imperfect cadence but also overlaps with the beginning of a new subject statement in the soprano. It may therefore not be regarded as a structural caesura.

The features described above are also those which determine the role played by each episode in the dynamic development of the composition.

- E1 and E5 both commence slightly softer than the end of the preceding subject entry, after which they prepare the subsequent entry in a two fold crescendo.
- E2 begins with a similar build up. This is followed by a very gradual release generated by the overall descending direction of the M3 appearances. A complete relaxation is, however, held at bay by the frequent quotations of the outgoing M1 in the bass (bars 13/14).
- E3 again sets out with the same active gesture, followed by a gradual diminuendo in bar 19 and a complete relaxation in the perfect cadence.
- E6 picks up this gradual release; it is a bridge to the subsequent entry.
- Finally, E4 continues the diminuendo of the subject ending and thus, in a moment of particularly low tension, creates a kind of anti climax.

I/14.2.5 Character, tempo, articulation, ornament realization

Both the pitch pattern with its overwhelming use of stepwise motion and the rhythmic organization with its variety of note values are unequivocal in determining the basic character of this fugue as *rather calm*. The frame for the tempo is set on the one hand by the required tranquility of character, and on the other hand by the rather long note values which still need to be perceived as "alive". In other words, the eighth-notes must be slow enough to convey serenity, but not so slow as to impede the listener from taking the entire subject on one breath, and thus cause the subject to fall to pieces.

The articulation is generally *legato*. Only the first half of the first counter-subject as well as the episode motive derived from it contain slurring in pairs, following the pattern of the "sigh" figures (refer back to ex. 15). The only notes to be played *non legato* are the consecutive leaps in the second half of the counter-subject (see e.g. bar 6: D#-G#-C#) and the cadential bass patterns in bars 20, 25 and 39/40.

For the relative tempo of the prelude to the fugue, a good and feasible solution is:

one bar	corresponds with	half a bar
in the prelude		in the fugue

(Approximate metronome settings: prelude beats = 112, fugue beats = 84.)

The only ornament in this composition is the trill incorporated in the subject. As it is duly complemented by its resolution, it is a note-filling trill. Approached in stepwise motion it commences on the main note,

retains this for the length of a eighth-note and then shakes in sixteenth-note motion, ending with a suffix (altogether seven trill notes). This trill, being an integral part of the subject, must be transferred to

- bar 6 D[#] and bar 10 G[#] (where it is indicated in brackets);
- bar 17 G[#] and bar 31 G[#], i.e. on the second-to-last notes of original-shape entries;
- bar 23 B and bar 34 E[#], i.e. on the second-to-last note of inverted entries. (Students sometimes ask whether trills are also upside down in inverted statements. The answer is: no, ornaments are not to be inverted.)

In the final statement of the subject, the Picardy third of the fugue ending impedes execution of the trill. The ordinary trill on G[#] would shake with A as its upper note; this A, however, clashes with the A[#] in the middle voice. A trill with A[#] is obviously also out of the question because of the preceding A natural. This subject ending must therefore go unornamented.

I/14.2.6 The design of the fugue

The entering order of the voices and their respective surrounding texture, in conjunction with the explicit cadence at the end of E3, clearly determine the binary structure of this composition:

- The full ensemble of four voices is reached in the fourth subject statement (bars 15-18).
- The cadential formula closes this section in C[#] minor, the minor dominant of F[#] minor (middle beat of bar 20).
- The entries which follow manifest in a very subtle way a protracted suspension before the renewed full ensemble:

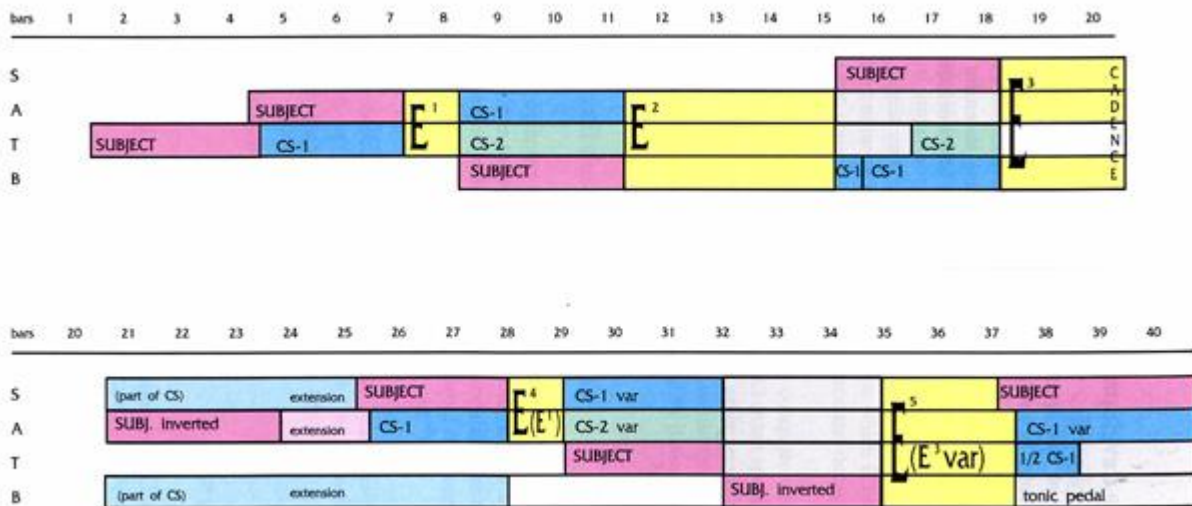
*	bars 20-23, statement in inversion,	3 voices, no CS
*	bars 25-28, statement in original shape,	3 voices, with CS1
*	bars 29-32, statement in original shape,	3 voices, with CS1, CS2
*	bars 32-35, statement in inversion,	4 voices, no CS
*	bars 37-40, statement in original shape,	4 voices, with CS1

The utilization of counter-subjects and the scheme of the episodes displays a certain analogy between the two sections of this fugue.

<i>section I</i>	<i>section II</i>
statement 1, no CS	= statement 1, no CS
statement 2, CS1	= statement 2, CS1
E1 (only M1)	= E5 (only M1, = E1)
statement 3, CS1 + CS2	= statement 3, CS1 + CS2
(E2)	(statement 4, no CS)
statement 4, CS1 + 1/2 CS2	∨ E6 (M2 = 2nd segment E3)
E3 (M1, M2)	∧ statement 5, CS1

The harmonic outline of the composition is very straightforward. The four subject statements of the first section are all in F[#] minor (on the tonic, dominant, tonic and tonic respectively); the episode which concludes this section modulates to the key of the dominant. The five statements in the second section are again all in F[#] minor (on the tonic, dominant, tonic, subdominant and tonic respectively). In other words, the harmonic succession is the same in both sections, with only the "additional" statement in section II on an unprecedented step.

For a sketch showing the design of the fugue in F# minor, see ex. 18.



I/14.2.7 The development of tension

In both sections of this symmetrically built fugue, the tension rises gradually but constantly from entry to entry. The episodes E1 and E5 have bridging functions with proceeding direction, while E2 and E6 have bridging functions with receding direction, and E4 is conceived as an extension of the preceding statement without any explicit change of color. Only E3 with its cadential formula has concluding character.

WTC I/15 in G major - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/15.1.1 The prelude type

In the G major prelude, the overall picture is dominated by sixteenth-notes. They appear in triplet groups, with eight such groups to each 4/4 bar. (Bach's two-fold time signature in the first bar makes things look more complicated and treacherous than they really are since it is obviously not the treble part alone which features the triplets.)

These sixteenth-note triplets appear in three different grades of melodic quality, and these are indicators for the basic interpretation of the prelude. A large portion of the triplets displays broken chord patterns (see bars 1-3 and 6-8, as well as the bass part from bar 11 onward); here the prelude is harmonically determined. In other instances, the sixteenth-notes present a *hidden two-part structure* (see bars 4/5 and 9/10); melodically rather neutral peak note lines emerge here. One step further on, the sixteenth-notes appear in one-track melodic patterns (see treble part from bar 11 onwards); this is the realm where small motives might surface.

The prelude cannot therefore be described with a single general term. It sets out as a harmonically determined piece, but tentative melodic features soon arise and develop more and more into independent entities.

I/15.1.2 The overall design of the prelude

The first harmonic progression already concludes in the second half of bar 2. However, as the pattern continues uninterrupted, this cadence should not be regarded as a structural break. Instead, the end of the first section follows with the subsequent abrupt modulation to the dominant. As this concurs with a visible change of pattern from bar 4 onwards, one can safely assume a structural caesura here (see U: bar 3 before the final eighth-note D; L: end of the bar).

The second section sets out in bar 4. A first miniature cadence which already resolves in bar 5 does not interrupt the progression of the material. The next harmonic close confirms the dominant key of this section on the downbeat of bar 11, thus concluding the second section of the prelude.

The prelude consists altogether of four structural sections:

- | | | |
|-----|--------------------------|--|
| I | bars 1-3 | tonic confirmed and modulation to dominant |
| II | bars 4-11d | dominant |
| III | bars 11-13 ₁ | dominant |
| IV | bars 13 ₂ -19 | return to the tonic |

No larger segment of the piece recurs. Although the eye is caught by the obvious similarity between bar 5 and its transposition in bar 9, the position of both bars in the structural context is entirely different. Bar 5 is the second in a pair of *hidden two-part structure* bars and represents a harmonic resolution, while bar 9 is the first in the pair and harmonically active.

I/15.1.3 Practical considerations for performers

The basic character of this prelude is easy to determine as *rather lively*, due to, on the one hand, the obviously simple rhythmic pattern with only two note values and, on the other hand, the frequent broken chords (in the triplets) and leaps (in the eighth-notes). Like the fugue which it precedes, the prelude is downright virtuoso and should be played accordingly, in a very brisk pace. It does not contain any ornaments.

With regard to articulation one should differentiate the coarse level of simple contrast - *non legato* for the eighth-notes and *legato* for the sixteenth-notes - from the level of subtler shades. This includes:

- non legato* in a light, neutral touch for the accompanying eighth-note jumps
- non legato* in a more expressive touch for the eighth-notes in the *hidden two-part structure* bars, i.e. those in predominantly stepwise motion
- quasi legato* with a crisp touch for the sixteenth-notes in the broken chords
- legato* in a moderately expressive touch for the sixteenth-notes in the *hidden two-part structure* bars
- legato* with some melodic expressivity in the sixteenth-notes which form motivic figures
- legato* with high melodic intensity for the eighth-notes in U: bars 11-13 as they represent pairs of *appoggiatura / resolution*

I/15.1.4 What is happening in this prelude?

The G major prelude can be regarded as consisting of two larger sections, each of which embodies a shorter introductory portion followed by a longer one which develops and complements the material introduced before.

The first of these encompassing sections includes bars 1-11d. It is based on a harmonic idea introduced in the right hand with virtuoso broken chord patterns, accompanied by a pedal note with rhythmic grouping and octave displacement. Inside the first simple cadence (bars 1/2), the descending pitch direction of the broken-chord pattern is so dominant that it overruns all considerations for shaping along harmonic lines. Faithful to the character of this virtuoso figure, the piece thus begins with a rather energetic tone color for the first downbeat followed by a plain diminuendo through two bars. The third bar is composed as a harmonic sequence; it takes up the V⁷-I pair from bar 2 and relocates it to D major. The equivalent to this feature in performance is a sequence also in the dynamic process, i.e. a repetition of the second half of the previous diminuendo. The question whether the dynamic level in bar 3 is generally louder or softer than that in bar 2 can be solved with the help of three observations: (a) the pitch level in the second half of bar 3 is slightly lower than in the second half of bar 2, and descending sequences are usually played in diminishing line; (b) the second half of bar 3 features rests in the right hand part, and this thinner texture adds to the effect of decreasing intensity; (c) bar 3 was earlier recognized as the end of the first short section, and a definite relaxation serves to underscore this fact in performance.

A new pattern is presented from the last eighth-note beat of bar 3 onwards. Retaining the virtuoso quality of the beginning, bars 4/5 nevertheless expand this idea by changing the texture into that of a *hidden two-part structure*. In U: bar 4, a line with stepwise motion in eighth-note rhythm builds the melodic foreground, while the background consists of a pedal on D (the tonic of the newly established key) which is ornamented regularly by its leading note C#. In bar 5, the foreground line continues while the background figure is transferred to the left hand. (This should obviously be executed without any audible difference between the two bars.) The melodic part is further paralleled in the left hand of this bar.

Bars 6-8 return to the texture and material of the first bars but vary it slightly. Harmonically, bars 6/7 and 8/9 recall the earlier sequences with their dominant-seventh / tonic resolution. The chords appear here extended to whole-bar lengths and feature varied accompaniment figures. Very important for the understanding and performing of this section is that the harmonic functions in the leading bars of these

pairs represent a sudden and very powerful increase in tension: the chord in bar 6 is vii⁷ of A (the dominant in D major); the chord in bar 8 is vii⁷ to E (step ii or the relative to the subdominant in D major).

Bars 9/10 return to the *hidden two-part structure*. The pedal note change between the two bars reveals the cadential steps: E-A which are steps ii-V of D major. The melodic parts of both voices set out in parallels and only separate in the second half of bar 10.

The dynamic equivalent to the processes described above for the first half of the prelude could be rendered somewhat like this:

bars	1	2	3	4	5	6	7	8	9	10	11	
	<i>f</i> ⁺	<i>mf</i> ⁺	<i>mp</i> ⁺	<i>p</i> ⁺	<i>mp</i>	<i>mp</i> ⁺	<i>poco f</i>	<i>mf</i>	<i>f</i> ⁻	<i>mp</i>	<i>mp</i> ⁺	<i>mp</i>

The second encompassing section, covering the remainder of the piece (see bars 11-19), is based on motivic figures in the treble part which introduce a new expressive quality. Already in the first little motive (see bar 11 beats 2/3, with three sequences until the E D on bar 13 beat 1), the melodically conceived sixteenth-notes followed by the *appoggiatura-resolution* pair in the eighth-notes add charm and grace to the prelude. (Note the dynamic shaping with U: crescendo to the appoggiatura, L: diminuendo from each strong beat onwards. Well intentioned imitations would thus be ill placed here.)

The second motive can be seen as a development of the first. It is twice as long, more elaborate in its triplet figures, and the *appoggiatura* is now an indirect one (see bar 14: D E embedded in D E F E). This motive also incites sequences (see bars 14₂-15₂ and from there to bar 16₂.) The accompaniment is much more intricate here. In the first motive it had contained old material, combining the broken chord figure and the accompanying octave jump from bars 1-4. Now it sets out with the varied broken-chord figure from bar 6 and continues it freely, albeit in a very virtuoso way.

The section ends with a figure of only one quarter-note length (see U: bar 16₃), complemented in the left hand by a unit which, because of its rhythm, has to be regarded as overlapping (see bar 16 beats 3/4 C-A-F-D etc.). Both figures are sequenced many times, the treble figure right through to the end, whereas the bass figure gives way, in the bar 18, to a cadential-bass pattern.

The development of tension in this second larger section is determined entirely by the direction of the sequences. Thus the first motive (which commences in something like *mf*) is followed by a diminuendo in its descending sequences, the second motive (which sets out with more vigor anyway) experiences a crescendo in its ascending development, and the third little figure compensates this when - commencing with a climax of less melodic intensity than its predecessors - it describes a continuous relaxation up to the end of the prelude.

WTC I/15 in G major - Fugue

I/15.2.1 The subject

The subject of this fugue appears confusing with regard to its length. Asked where it ends one might find three possible answers; yet each of them is, for one reason or another, not entirely convincing.

- Performers who regard the return to the keynote G (and with it, possibly, to the tonic harmony) on the sixth eighth-note of bar 4 as the end of the subject, must admit that this conclusion is metrically not too satisfactory.
- For performers who decide to include the downbeat of bar 5, the subject closes with an imperfect cadence, a harmonically unsatisfactory solution.

(ex. 24b)

In our search for the intended climax we may, as was demonstrated above, not be able to rely on harmonic features. However, both the rhythmic pattern and the pitch outline provide congruous guidelines. Concerning the rhythm, the two syncopations obviously capture special tension. As both of them coincide with high tension leaps, there can be no doubt that the quarter-note C in bar 2 represents the climax of the first and the quarter-note E in bar 3 that of the second subphrase. Between the two, the second is stronger than the first both because it is composed in an ascending sequence and (in case another reason should be needed) because it is harmonized in a dominant ninth chord, as opposed to the simpler dominant seventh chord in bar 2. After these two energetic climaxes, the third subphrase appears as little more than an after thought; this may well be one of the reasons why the doubt whether or not it "belongs" survives. The dynamic tendency follows the descending motion; thus the D at the outset of this subphrase is comparably louder than all that follows. (But calling it a climax seems, nevertheless, to misinterpret its ancillary function.)

I/15.2.2 The statements of the subject

This fugue contains 16 statements of the subject.

1.	bars 1-5d	U	9.	bars 51-54d	U*
2.	bars 5-9d	M	10.	bars 52-54d	L*-
3.	bars 11-15d	L	11.	bars 60m-63	M*
4.	bars 20-24d	Minv	12.	bars 61m-64d	U*
5.	bars 24-28d	Uinv	13.	bars 69m-73d	Linv
6.	bars 28-31d	Linv	14.	bars 77-80d	Minv/orig
7.	bars 38-42d	U	(15.	bars 78/79	Linv**)
8.	bars 43-47d	Minv	16.	bars 79-82	U -

(ex. 25)



Several of them are incomplete in one way or another. Only one is a genuine "false start"; in the table above it appears in brackets. Those among the entries which are shortened at the end have been marked here with a hyphen ("-"); those which are shortened in the middle carry an asterisk (" * ") symbol. It must be stressed that in this fugue, these abbreviations of the subject are not arbitrary but have particular reasons:

- The attenuation of the third subphrase arises from the fact that this is perceived more like an afterthought, and that it leads to a harmonically imperfect ending which, particularly after the perfect cadence included in the inversion, makes it appear somewhat superfluous.
- The compression of the first and second subphrases into one occurs only in stretto positions in order to avoid the octave parallels which would otherwise result. This abbreviation uses in the seventh leap the pitches of bar 3 but incorporates them already into bar 2.

The reductions of the subject aside, there are not many other modifications. In two instances (including the "false start"), the beginning is delayed by one sixteenth-note and the subject thus appears in slightly altered rhythm (see bars 51 and 78). On another occasion, a statement sets out as an inversion but later seems to be "convinced" (or dragged along) by the entering stretto partner to change its ending into that fitting the original shape (see bars 77-80). Finally, one inverted subject finds its closing note displaced an octave lower (see bars 72/73), and another features an ornamental variation of the third subphrase (see bar 46).

There are three stretto passages in this fugue, occurring respectively in bars 51-54, bars 60-63 and bars 77-82. Parallel statements are not used. However, a short but very effective three fold parallel (two voices in double thirds, another in the same rhythm but contrary motion) is created in the final stretto. Here the "false entry" is continued in sequences, and the middle voice statement which sets out in inversion is "persuaded" by the upper voice entry to transform its last subphrase into the turn-figures of the subject beginning.

I/15.2.3 The counter-subjects

This fugue contains only one counter-subject. Its rhythmic structure allows division into three distinct segments, yet these structural components do not function as separate subphrases but only as consecutive portions in the pursuit of a single purpose.

The scope of the counter-subject is slightly blurred at its beginning, as was that of the subject at its end. Thus the F# in U: bar 5 can be regarded as the first note of the counter-subject (if the subject is understood as ending on the last eighth-note of bar 4) or as the point of overlapping phrases, belonging at the same time to both elements. Finally it is also possible to perceive the counter-subject as beginning on the second eighth-note of the bar.

Taking a closer look at the segments one finds that, faithful to the requirements of independence between contrapuntal "partners", their confines do not coincide with those of the subject subphrases. The first segment consists only of eighth-notes and ends on the downbeat of bar 6. It shares with the beginning of the subject the pattern of half bar model and ascending sequence; therefore its independence is a limited one. In this analysis it will be referred to as (d).

The second segment within the counter-subject is two bars long. Moving exclusively in sixteenth-notes, it describes a continuation of the previous ascent, by relying on an ornamental figure which is sequenced at half bar distances. This substantial portion of the counter-subject will here be named (e). Finally, the third segment (f) is scarcely one bar long. It begins with a scalar descending which sets out as a parallel to the subject but then bends backwards and reaches the high G, thus disclosing its nature as yet another section under the overall purpose of a peak note ascent. From the beginning of the counter-subject until this target note the underlying ascent thus progresses through an entire octave. This directedness distinguishes it sharply from the subject which, in its concluding portion, returns to the level from which it was launched.

Having observed all this, the choice of an appropriate dynamic outline is as easy as could be since the tension seems so obviously to be rising throughout the entire length. The opposite, a continuous diminuendo, will then apply in the inversion of the counter-subject.

The following sketch shows phrase structure and dynamic design in the primary material of this fugue (ex. 26):



I/15.2.4 The episodes

There are eight subject-free passages within this fugue.

E1	bars 9-10	E5	bars 47-50
E2	bars 15-19	E6	bars 54-60m
E3	bars 31-37	E7	bars 64-69m
E4	bar 42	E8	bars 73 – 76

In addition, the five bars which follow the last subject statement (E9) present the cadence which re-establishes the tonic (bars 82 83d) and a coda on a tonic pedal (bars 83 86).

The episodes are almost exclusively made up of three independent motives. While the first two motives are related (for details see below) and of only moderate melodic intensity, the third motive introduces a truly lyrical quality and is thus the most conspicuous among the three.

- M1** is first presented in U: bars 9 10d. Its rhythm is characterized by uninterrupted sixteenth-notes which begin immediately after the first beat of one bar and end on the downbeat of the next. The pitch pattern is conceived in *hidden two-part structure*: one of the parts remains, as an indirect pedal, on a repeated note; the other part describes a scalar motion. (Note that this melodic part, while moving basically in regular eighth-notes, begins with a sixteenth-note note of upbeat character. This note is mistakenly too often played as part of the background.) This scale points downwards in the original appearance of bar 9 but is just as often used in ascending direction (see e.g. M: bars 10-11d); those cases will be referred to as M1 inversions. The concluding note on the following downbeat serves as a harmonic resolution. It is interesting to see that in the original version, the resolution appears on the pitch level of the indirect pedal (see bars 9/10), whereas in the inversion it sounds as a continuation of the melody (see bars 10/11).
- M2** is introduced as a companion to M1, with the original in M: bars 9-10d and the inversion in U: bars 10-11d. As a companion it is by no means polyphonically independent but composed as a parallel to the melodic part of M1. Consequently its rhythm moves in regular eighth-notes.
- M3** emerges only in the second episode (see U: bar 17 and sequences). Unlike the two preceding episode motives it is metrically built from the downbeat onwards, ending somewhat indistinctly before the next bar line or on the ensuing downbeat in that case overlapping with the beginning of the sequence. Its lyrical quality arises both from the melodic content of the sixteenth-note line and from the expressive syncopation on the second eighth-note of the bar.

As to the dynamic outline of the three motives, both M1 and M2 represent simple lines which follow the pitch direction: crescendo in all ascending and diminuendo in all descending scalar motions. The

distribution of these motives in the eight episodes of the fugue is very dense. Based on the use of this material it is possible to distinguish three episode types:

E1,E4,E6,E9 are all built on M1 and M2. The shortest episodes, E4 (one bar long) and E1 (two bars long), consist entirely of the juxtaposed first and second motives. E6 presents a less regular picture. After a first bar with the inverted M1 in parallel motion and a second bar also featuring parallels (in a figure which does not have any importance outside this episode), the remaining four bars are all dominated by the inverted M1 which enters almost unaccompanied, is then joined by M2 and later met by sixteenth-note figures in two fold contrary motion. Finally, the coda recalls M1, quoting it in only half its length and with that variation which already appeared from E5 onwards but which now grows even more elaborate.

E3,E5,E7,E8 all neglect M2 in favor of the other two motives. E5 and E7 each set out with one bar of M1 inversion in non motivic surroundings, followed by three or four bars respectively with M3/M1 and their sequences. E3 seems to go the reverse way, commencing with three bars of M3/M1 followed by four bars in which M1 or its inversion sound against whole bar scales. Finally, E8 is only left with these four bars in which the M1 inversion is contrasted with whole bar scales.

E2 is related to all of the others. It sets out with M1 in non motivic surrounding; the following bar combines an M1 inversion with an M2 parallel, and the remaining three bars present sequences of the M3/M1 pair, complemented by a neutral middle voice.

As is obvious from this table, none of the episodes exhausts its function as a cadential close. In one instance, however, a closing formula determines the material of a final segment: see the *do-si-do* figure in the upper voice as well as the typical bass pattern in the first half of bar 69.

The relationship between episodes is evident from the above table. E1 is related to E4 and also, though less closely, to E6; E5 and E7 seem to be similar, and E8 shows analogy to the second segment of E3. E2 can be divided to reveal several relationships in its first two bars to E1 and E4, in its remainder to E5 and E7.

The role which each of the episodes plays in the development of the composition also stems directly from its material. Those of the first type, based only on M1/M2, act as bridges, while those which end with descending M3/M1 sequences clearly have concluding character. The two episodes which end with the M1 + scale combinations lie in-between; they provide more contrast to the primary material than the first type but at the same time lack any features of conclusive force one could say that they insinuate a gap which they nevertheless span.

I/15.2.5 Character, tempo, articulation, ornament realization

The basic character of this fugue is best interpreted as *rather lively*. This decision is supported mainly by the pitch pattern with its jumps and ornamental figures. The rhythmic pattern contains four melodically relevant note values - three already in the subject, and additional thirty-second-notes in the variation of M1 (see from bar 47 onwards), but all these values fit smoothly into a generally simple rhythmic structure.

The tempo of the G major fugue is swift, playful if not outright virtuoso, but allowing for an energetic and non superficial touch. The articulation demands *non legato* for the eighth-notes and quarter-notes, and different kinds of *legato* for the sixteenth-notes and the few thirty-second-notes.

As to these different kinds of *legato*, truly melodic quality seems appropriate for M3, and an equally dense sound, though for different reasons, suits the *hidden two-part structure* of M1. Those sixteenth-notes which are ornamental, like the turn figures and scale portions in the subject and the longer scales in episodes 3 and 8, are best rendered in *quasi legato*.

An ideal proportion of tempo between the prelude and the fugue is found in the larger pulse units of each:

one quarter-note	corresponds with	half a bar
in the prelude		in the fugue

Approximate metronome settings: 80 for both the beats (quarter-notes) in the prelude
and the compound beats (dotted quarter-notes) in the fugue.

The fugue contains a number of ornaments, namely in bars 22, 25/26, 64, 69, 78. Before pondering on any single one of them, the general question of the tempo of ornaments in this fugue must be settled. If they are to shake "twice as fast as the shorter note values", the dispute arises as to which of the values, sixteenth-notes or thirty-second-notes, are to be regarded as "the shorter" rhythmic units. In accordance with both the virtuosity of the piece and the ornamental character already found in some of the sixteenth-notes, it seems preferable to regard these as the values to be doubled in the trills. The thirty-second-notes will then appear as additional written-out slides and turns.

The ornaments listed above can be grouped as follows:

- The mordent symbols in both bars 22 and 78 designate long trills, as the spelled-out suffixes indicate. The first is approached stepwise, therefore commences on the main note and allows for five trill notes (one sixteenth-note, four thirty-second-notes) before the two printed suffix notes. The second begins on the upper neighbor note and moves in six regular thirty-second-notes before the suffix.
- The two trills in the inverted subject statement (bars 25 and 26) pose certain problems. The notes they ornament find, in regard to both pitch and metric position, possible resolutions; however, these supposed resolution notes do not belong to the same subphrases! The conclusions drawn from this predicament by performers (analysts, to my knowledge, refrain from taking positions on this case) include three options: (a) to ignore the original phrasing and link the trills, with a proper suffix, to their subsequent notes; (b) to ignore the trill symbol and play the subject as it was introduced, i.e. unornamented; (c) to respect both ornament and phrasing by playing a short, mordent like embellishment (with five notes).
- The two trills in bars 64 and 69 share the same ending: they do not resolve on any appropriate strong beat but terminate in a tied note. Both therefore conclude without a suffix and stop before the beginning of the tie. When exactly each of them halts requires particular consideration. Convention suggests that the halt be as late as possible before the last bar line; however, it is unlikely that Bach had this in mind as in the second case it is technically altogether impossible to continue the trill motion in the second half of bar 70 where the right hand has to take care of the counter-subject notes. A feasible as well as musically convincing solution is to play both trills equally long. The one in bar 63, covering slightly less than a bar, would give the example for the one in bars 69/70 which would then come to a halt before the middle voice enters. (By the way, these interrupted trills do not, despite their beginning on the main note, prolong the first note as they are not "note filling" ornaments.)

The following examples show these two interrupted trills (ex. 27):



I/15.2.6 The design of the fugue

There are several indicators which are very helpful for the determination of the structure.

The order and shape of the subject entries allow definition of some of the boundaries between sections. It seems reasonable to assume (a) that the first three statements belong to one section, (b) that consequently the three statements of the subject inversion which follow establish the second section, and (c) that the appearance of the first stretto marks the beginning of a new section.

Two subject statements appear in reduced number of voices, namely those which begin in bars 38 and 51. These are therefore likely to constitute section openings.

The cadential closing formula in the first half of bar 69 also indicates the end of a section.

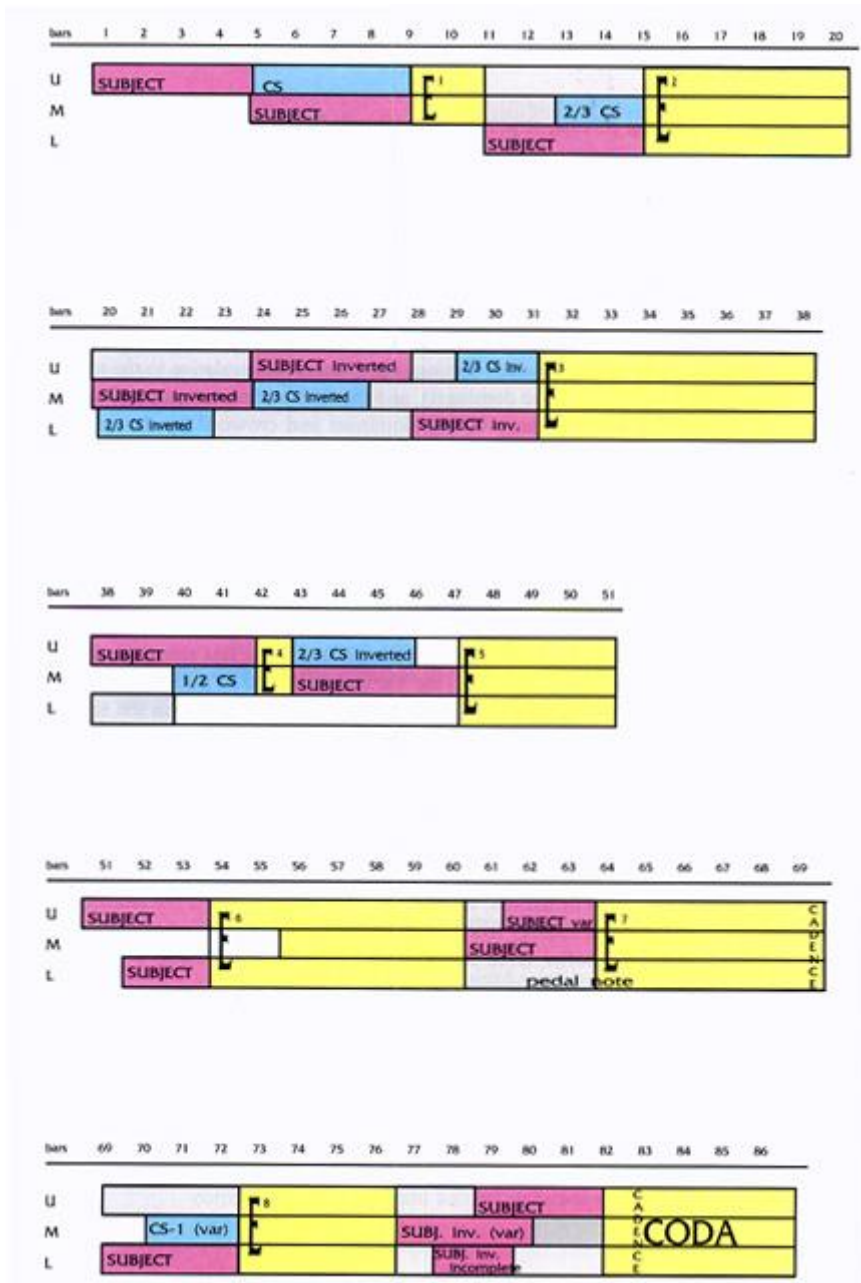
The role played by each of the episodes (as recognized above) sheds additional light on the question of structure. These facts confirm what has already been stated:

- * the bridging E1 connects the second and third statement of section I;
- * the concluding E2 rounds this first section off on bar 20d;
- * E3, "spanning a larger gap", connects the three inverted subject entries of section II with the beginning of section III, marked by the entry in reduced ensemble (bar 38). Sections II and III, while clearly distinct for several of the reasons stated above, thus build a group due to the episode which links them;
- * the bridging E4 connects the two statements - one original and one inverted - of the third section;
- * the concluding E2 rounds this third section off on bar 51d, where the fourth section begins with another entry in reduced ensemble;
- * the bridging E6 connects the two strettos of the fourth section;
- * the concluding E7 rounds this fourth section off on the middle beat of bar 69, additionally enhanced by the closing formula;
- * E8, "spanning a larger gap", connects the single entry which opens section V with the following stretto. The analogy of this episode with E3 suggests that the fifth section is to be regarded as structurally corresponding to the joint second and third sections which, as shown above, build a group.

As this detailed listing reveals, structural correspondences in this fugue are complex. The first two sections contain an obvious analogy in the number of their entries and the consistency in which these are presented. (The impression is that of a double exposition: first of the subject in its original shape and then of the inversion. Another "exposition" occurs in the fourth section which introduces the strettos.) The second large scale analogy is that between the second and third sections on the one hand and the fifth section on the other.

The harmonic outline of the composition is very clear. Both the first and second sections remain on the tonic, the third section is in E minor (the relative to the tonic), the fourth section in D major (the dominant), and the fifth section returns to G major which is approached from an entry on the dominant and crowned by the unusual statement on the third of the home key (see U: bars 79 82).

For a sketch showing the design of the fugue in G major, see ex. 28.



I/15.2.7 The development of tension

In each of the five sections, the tension rises from the first to the last entry; this is due either to the increased number of voices (see sections I, III and IV), to the enhanced presentation of the subject (section V, from single entry to stretto) or, in the second section, only to the effect of repetition and the analogy with the first section.

Overall, the second section appears dynamically increased owing to the fact that its three statements are launched in full ensemble and follow one another without interruption; the third section falls back both because of its reduced range and its minor mode, appearing almost as a softer appendix to the third section. The fourth section takes on yet a higher level of tension. Finally, the fifth section inverts the situation in the pair to which it showed analogy (see above: sections II/III correspond to section V) by

setting out from the softer level of the single entry and traversing a powerful increase towards the "stretto with parallel tail".

WTC I/16 in G minor - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier

I/16.1.1 The prelude type

This prelude is determined by three rhythmic figures. They come with varying textures and pitch curves. Jointly these three figures cover all bars of the piece, with only one short interruption (of one beat length) and two slight variations in one of the rhythmic patterns.

I/16.1.2 The overall design of the prelude

The first perfect cadence concludes on the downbeat of bar 3. This cadential close cannot, however, be regarded as a structural break since the bass has so far not taken part in the harmonic progression but remained on the tonic pedal. Also, bars 1/2 have set a pattern of material which is taken up similarly in bars 3/4 and thus generates a distinctly felt continuity. The modulation which follows this first cadential close reaches its target, i.e. a perfect cadence in the key of the dominant (D major) on the middle beat of bar 4. The moment of harmonic resolution is only one sixteenth-note long here, since the D major chord is immediately topped by its seventh and progresses to new regions. This harmonic closure again is thus not the kind of caesura one is looking for when trying to determine the structural outline of the piece. The search finally leads to the third cadential close, attained after a second modulation to the relative major key (B^b major) on the downbeat of bar 7.

There are four sections in this prelude; only the first, as has been shown above, contains within its confines several structurally less determining cadential closes.

I	bars 1-7d	i-III	
	bars 1-3d		tonic confirmed
	bars 3-4m		modulation tonic to dominant
	bars 4m-7d		modulation dominant to relative major
II	bars 7-11d	III-iv	(B ^b major to C minor)
III	bars 11-18d	iv-i	(C minor to G minor)
IV	bars 18-19	i-i	(G minor confirmed)

No segment of this prelude ever recurs later, be it varied, transposed or even in a freer understanding of structural analogies. Any seemingly recurring bars are in fact just new manifestations of one of the motivic figures.

I/16.1.3 Practical considerations for performers

The prelude contains, even if one only considers the melodically relevant segments of each voice, three different note values: eighth-notes, sixteenth-notes and thirty-second-notes; faster motion appears in the four long trills. In second order there are occasional dotted eighth-notes and dotted quarter-notes, as well as syncopations in passages with complementary rhythm. The pitch pattern, too, is complex. A predominantly stepwise motion is regularly interrupted by sudden leaps. Closer inspection reveals that these are cases of *hidden two-part structure*, often with a pedal note in the secondary voice. In addition there are those instances where two voices complement each other to form one of the motivic figures; this creates extra melodic intensity.

In view of this complexity, the basic character of this prelude should be interpreted as *rather calm*, with a tempo that is reserved enough to allow for full melodious substance in the thirty-second-notes. The corresponding articulation requires that all notes except cadential bass patterns and consecutive leaps be played *legato*. Cadential bass patterns can be found e.g. in bars 10/11, 17/18 and 18/19; consecutive leaps which need to be detached occur e.g. in the lowest voice in bars 5/6, whereas those in bar 14 form part of a *hidden two-part structure* and should be played *legato* thus achieving a result in which each of the two "voices" will sound disconnected.

A tricky question arises in the area of articulation with regard to the figure which is introduced in the upper voice of bar 2. The G's clearly do not belong to the main melodic line; at the same time they do not form a secondary line of their own either. Thus they can be interpreted, and played, in two ways. One possibility is to regard them as a pedal background in a *hidden two-part structure*; in this case they are not separated from their surroundings by articulation, but only set apart by a different tone color. Another concept is to perceive them as "charm notes" (or playful escape notes) which were to become so much more common after Bach's time, in the music of the later 18th century; in this case they are treated as integrated parts of the melodic line which sound just lighter and, because of their interval gaps at both sides, *non legato*.

There are five ornaments in the G minor prelude; all of them are marked as trills. Another feature shared by all five is that each sounds at a moment of harmonic affirmation (i.e. on the tonic chords of the respective keys reached by way of modulation in the course of the piece), and thus neither need nor pretend to aim for any kind of resolution. This is most obvious in connection with the trill on the very last note, but equally true in the case of the four other ornaments which all end in tie prolongation followed by the beginning of a new phrase.

Having observed this it is obvious that none of the trills concludes with a suffix. As to the beginning, a commencement on the main note is evident in the case of four of the five trills, either because of stepwise approach (see bars 3, 7 and 19) or because the trill appears at the very outset of the piece (see bar 1). Although the context of the trill in bar 11 would allow a different solution, this ornament should probably follow the example set in the three corresponding trills before and also begin on the main note.

The speed of the trill motion (twice as fast as the shorter note values) is in sixty-fourth-notes, or four notes to each accompanying sixteenth-note. In the four trills of one bar duration, the shake comes to a halt on the last main note before the bar line, i.e. on the final sixteenth-note which is then tied over. The duration of the shake in bar 19 is not fixed in any way; it could be anything from a eighth-note upward.

I/16.1.4 What is happening in this prelude?

Three rhythmic figures determine the piece:

R1 is introduced in bar 1. Its texture consists of three parts, two of which - the upper and the lower - are unmoving pitches (see the repeated pedal note in the lower voice). The rhythmic pattern is even here, with three different values (eighth-notes, sixteenth-notes and trill thirty-second-notes) sounding simultaneously.

This figure recurs three times. In bar 3, the key and the order of the voices are the same; only the upper voice is placed an octave lower. The eighth-note pedal note, however, has been abandoned, and a complementary pattern of the middle and lower voices provides both the eighth-note and the sixteenth-note pulses. In bars 7 and 11, we find the figure transposed and in inverted voices; the pedal note, however, has been redeemed and now appears as an off beat eighth-note pulse as part of the upper voice.

R2 is introduced in the upper voice of bar 2. Commencing on a weak beat, i.e. on the first sixteenth-note after the downbeat, it is a one track figure which in the course of the prelude appears with varying accompaniment. Although its rhythmic structure seems to allow a subdivision into four units of "long short/short long long", its melodic design with the interspersed "charm notes" counteracts such subphrasing and distinguishes the figure as extending through the entire bar. Its final note frequently overlaps with the beginning of another figure; see e.g. in bar 3.

This figure recurs five times, varied not only with regard to its pitches but also in its length and even in details of its rhythmic design. In bar 4, the rhythmic pattern is suspended after half of its length, only to recommence at the end of the same bar. From here on until the downbeat of bar 6 the pitch pattern is closely related to that in the original figure, with only the interspersed pedal note substituted by varying pitches. Bar 6 presents an inversion of the pitch pattern which leads, in the second half of the bar, to a mutation of both the pitch and the rhythmic patterns. Bar 8 takes up this inversion plus mutation and places it in the lower voice, while bar 15 recalls the shortened figure from bar 4.

R3 first appears in bar 9. This rhythmic figure is related to the previous one insofar as it also commences on the first off beat sixteenth-note. While in R2 the smaller units seem tightly knit to an indivisible phrase, here each unit has its own little close after one quarter bar. In its original setting the model appears with imitation (in a free adaptation of the pitch line) and sequences, thus filling two entire bars with its rhythmic pattern (see bars 9/10, imitation in U+M).

This figure recurs in two long stretches, varied not only in pitch but also in texture. Bars 12-15 comprise single track patterns (L: first halves bars 12 and 13, bar 15 beat 3; U: bars 13m 14d) as well as complementary textures in various splittings (see bars 12m 13d and bars 14m 15m: U/M). The final three and a half bars of the prelude which are entirely devoted to this figure take up both the imitation and the complementary texture. (With regard to its pitch pattern, R3 is the freest of the three figures, appearing in ten different melodic guises; see

bar 9 beat 1	bar 9 beat 2	bar 12 beat 4	bar 14 beat 1	bar 14 beat 2
bar 16 beat 3	bar 17 beat 1	bar 18 beat 1	bar 18 beat 4	bar 19 beat 2.)

The structure of the prelude as a whole is determined by its harmonic outline (see above under paragraph 2 of this chapter). Regarding the material displayed in each section we find that the first section encompasses the introduction of R1 and R2, followed by a first development of these two figures. The second section takes up both R1 and R2 in transposition and very close relation to the originals, and then launches into R3. The third section, which is the longest in this prelude, begins once more with R1, followed now by an extended development of R3, with R2 only once interpolated for three beats (see bars 15/16). Section IV serves as a coda; spreading a vivid three part texture over an additional fourth voice tonic pedal, it is exclusively based on R3.

The dynamic range within this rhythmically determined prelude is not large. Small scale dynamics depend exclusively on the overall pitch direction which defines each rhythmic figure. The melodically static R1 comprises only the slightest increase in tension, while R3 seems always composed in superimposed descending pitch lines and thus appears connected with dynamic relaxation. Only R2 changes melodic orientation and, with it, dynamic direction, allowing for diminuendo (as in bars 2, 5 and 15/16), crescendo (as in bars 6 and 8) or a dynamic curve (as in bar 4).

With regard to the overall development of tension, the prelude describes a soft, largely scaled dynamic curve. The second section contains more tension than the first but is surpassed by the third, while the coda returns to the level of the beginning. Two climaxes can be determined: on the downbeat of bar 9 and in the middle of bar 12. Both are motivically connected with R3 but derive their expressive power mainly from their harmonic underpinning.

WTC I/16 in G minor - Fugue

I/16.2.1 The subject

The subject of this fugue commences on the second eighth-note of the first bar and ends on the third beat of bar 2. With regard to the pitch position in the G minor scale, it sets out on the fifth degree and resolves on the third. The beginning on the second eighth-note conveys a strong impression of upbeat. The downbeat of the second bar, however, is taken up by a rest, so that the possibly strongest beat is omitted in the melodic development. As a result, the listener is most likely to perceive the middle beat as "down", and the subject as consisting of three metric units, rather than one and a half bars. The fact that the metric position of the subject statements throughout the fugue changes constantly between a beginning after the downbeat and one after the middle beat confirms that in this fugue Bach regarded the two as being equally strong. One can thus safely assume a hidden 2/4 time behind the given notation.

The G which follows on the fourth beat of bar 2 does not belong to the subject. Three reasons can be named to support this: (a) this note never recurs in subsequent statements apart from once in bar 6; (b) harmonically, the resolution onto the tonic is already completed on the B^b; (c) metrically, a subject which begins *after* a strong beat can usually be expected to conclude *on* a strong beat.

With regard to phrasing, there are two possible interpretations of the subject. The rest in its middle can be taken for an interruption after which a new little melodic unit is launched. Alternatively, the rest could equally be perceived as tension-sustaining; in this case the notes in bar 2 continue the process immediately preceding the rest.

The pitch outline in the subject consists exclusively of seconds. The only exception is the minor-sixth leap between the second and the third subject notes. This leap constitutes a *high-tension interval*. The rhythmic pattern includes three note values, namely quarter-notes, eighth-notes and sixteenth-notes. This rhythmic substance is confirmed throughout the fugue.

Harmonically, the subject is very interesting. It does not begin on the tonic but launches the cadential progression from a point of already heightened tension (ex. 34):



The climax within this subject falls on the fourth note (F[#] in the original key). All features join to support this event:

- Melodically, the F[#] is approached in steps of increasing tension. The initial fifth scale degree already represents a higher degree of intensity than would be contained in the usual first or third degrees. This is followed by an ascending semitone step reaching the secondary leading note, thus adding to the tension; from there the line plunges through the high tension interval of the minor sixth to the keynote and, continuing its direction, reaches the primary leading note in G minor, the F[#].
- Harmonically, this note represents chord VI, i.e. the step which, in the given cadence, is most remote from the tonic.
- Rhythmically, the F[#] is the first longer note value; and metrically, this note appears (as was expounded earlier) in the function of a downbeat.

After this climax, two slightly different interpretations of the dynamic process are possible, depending on the choice for sub phrasing. If one chooses to regard the subject as consisting of two subphrases, the climax is followed by an abrupt and very strong decrease; the remainder of the subject will then function as an "afterthought", with a slight increase towards a secondary climax on C and a final relaxation thereafter. However, if one recognizes the subject as an undivided entity, the tension which was so powerfully built up towards the climax on F# can be resolved gradually throughout the remainder of the subject. In this case, the C is integrated into the line and not accented in any way. (Although performers continue to emotionally prefer "interrupting" rests, the harmonically more consistent rendition is the one which resolves the tension of the main climax in a single diminuendo. As the fugue progresses, more evidence arises to support the concept of an undivided entity.)

I/16.2.2 The statements of the subject

The fugue contains sixteen complete statements and in addition one "false entry".

1. bars 1/2	A	9. bars 17/18	A
2. bars 2/3	S	10. bars 20/21	B
3. bars 5/6	B	11. bars 21/22	S
4. bars 6/7	T	12. bars 23/24	A
5. bars 12/13	A	13. bars 28/29	S
6. bars 13/14	B	14. bars 28/29	T
7. bars 15/16	S	(15. bar 29	B)
8. bars 17/18	B	16. bars 31/32	A
		17. bars 33/34	T

(ex. 35)



The subject suffers only small modifications, most of which are inconsequential. Its answer is conceived as tonal, so its first interval is changed from a semitone to a minor third (see e.g. bar 2 G-B^b). The beginning of the subject is further varied in bar 23 where the initial eighth-note is replaced by two ascending sixteenth-notes. That the final note of the subject, being the third scale degree, appears as a Picardy third in bar 34 comes as no surprise in a minor mode fugue. One more consequential modification can be observed when, in the major mode section (see from bar 12 onwards), the two initial intervals are changed: the semitone with its particular urging quality is substituted by a major second, and the leap appears as a major sixth which, unlike its minor brother, is not a high tension interval. These two changes have considerable influence on the strength of the build up of tension.

In two instances one can find the subject appearing in stretto: bars 17/18 feature a combination of bass and alto statements at a distance of four eighth-notes, and bars 28/29 present a corresponding group of two complete entries (in soprano and tenor) fortified by a third entry at the same distance in the bass which, however, deviates immediately after the climax.

I/16.2.3 The counter-subject

The fugue features only one counter-subject; this remains a faithful companion to the subject throughout the fugue and is only omitted in the final statement. The counter-subject commences in a metrical position

equivalent to that of the subject, but half a bar "late", i.e. after the subject's climax. This belated beginning is the reason why there is that additional G on the fourth beat of bars 2 and 6, a note which does not form a part of any material but whose function is to support the beginning of the subject entry when all the other voices are resting.

In pitch pattern and rhythm, the counter-subject is strikingly related to the subject, particularly to the subject answer; in fact it almost seems to read the subject answer upside down and with its two halves exchanged (see ex. 36):



In contrast to the subject, the counter-subject presents an indivisible phrase. The climax on the sixth scale degree (B^b) unites similar characteristics as did the climax of the subject: it carries melodic tension as the secondary leading note in the minor mode, harmonic tension as the representative of the subdominant function (for the harmonic details see above ex. 82), and a metrical accent since it falls alternatively on the middle beat or the downbeat. Due, however, to its preparation in a somewhat relaxed rhythm pattern and stepwise motion, this climax is considerably milder than that in the subject. The remaining four notes bring a gradual subsiding of the tension.

The example shows the phrase structure and dynamic design in the primary material of this fugue (ex. 37):



I/16.2.4 The episodes

The G minor fugue contains six subject-free passages.

E1 bars 4-5d	E4 bars 19-20d
E2 bars 8-12d	E5 bars 24m-28d
E3 bars 16m-17d	E6 bars 30-31m

As the ending of the final subject statement marks the close of the piece, there is neither a coda nor even a concluding final episode. All episodes in this fugue are related to the subject; the only distinction here is the degree of relationship, and the appearance or omission of independent (i.e. not subject-related) motives.

It is generally true in all polyphonic compositions that the closest bond between an episode and the surrounding primary material is achieved either by way of a sequence or imitation of the preceding ending, or by way of anticipation of the subsequent beginning. In this fugue, the former process is used frequently: E1, E2 and E3 are all linked to the preceding subject statements in sequences of the final figure while E4 and E6 pick up this figure in imitation. E5 alone shows a very subtle variation of this pattern insofar as the figure is transformed, by a mere displacement of its final note, into a bass line which no longer appears entirely melodic but conveys a hint of a cadential pattern (see bars 24-27).

The only other motive in this composition, and the only component in the entire fugue which is not in some way related to the subject, occurs also in E5; it will be referred to as M1 here. It consists of an ascending scale section in sixteenth-note motion complemented, after a syncopated halt, by a descent which returns to the note of departure in the same rhythmic pattern. In its original version (see M: bars 24m-25m), the ascent contains the second tetrachord of the melodic G minor scale and is answered by the corresponding portion of the natural G minor scale. The dynamic outline follows the curve described by the symmetrical design: a half bar crescendo is complemented by a diminuendo. (M1 has a forerunner which, consisting only of its ascending portion, appears in E2 (see the soprano in bars 8 and 9) and in E3 (see the tenor in bar 17).

In the course of E5, M1 is followed by two sequences (see M: bars 25/26 and 26/27). Moreover, it is imitated - in inversion and slightly varied - in the upper voice. This imitation should retain the dynamic curve of the model. (The frequently heard mistake which renders the descent in the imitation in diminuendo and the ascents in crescendo actually cuts the motive in two, and each half will automatically cry for a new partner. The result is usually that middle and upper voice sound as if in a single track, so that even the original motive in the middle voice is then destroyed. A good way to avoid this mistake is to play the leading voice (M) on a slightly higher level of intensity than the imitating upper voice.)

As can be seen from this overview, none of the episodes serves exclusively as a cadential close. Only one segment of an episode fulfills this purpose. In E2, the home key of the fugue is confirmed (motivically still in the context of the subject related figure) with a perfect cadence in G minor on the middle beat of bar 10. The remaining one and a half bars are neither needed for the closure of the episode, nor do they bring any (new or continued) episode material. Instead this extension clearly functions as nothing but a modulation to the related major key.

There is no structural relationship between the episodes of this fugue. The role played by each episode in the development of the composition is determined by the direction in which the motive derived from the subject ending it sequenced. The following details can be observed:

- In E1 and E3, the final half bar from the subject is taken up in ascending sequence; both episodes thus serves as a bridge which heightens the tension towards the ensuing subject statement.
- E2 begins similarly with an ascending sequence of this figure (see bar 8) but continues thereafter in a generally descending direction (see bars 9/10: soprano B^b-A-G, bass E-B^b-D-G). This descent and the cadential closure it encompasses represent a relaxation of the tension.
- In E4 and E6, the final half bar from the subject is not sequenced but imitated (see bars 18/19: A-S and bars 29/30: T-A-S). These imitations, though ascending in pitch direction, appear as a more indirect continuation than the sequences in the previous examples; yet while they do not convey the feeling of anticipation, they succeed in slowing down the decay of tension. In both cases, however, the episode concludes with a version of the figure inverted and with a plunging final interval which generates a strong decrease (see S and A in bars 19/20, and B in the first half of bar 31). Thus a gradual diminuendo ends in a steeper drop of tension.

I/16.2.5 Character, tempo, articulation, ornament realization

The overall step-wise motion which is interrupted only for high-tension intervals insinuates that the interpretation of the basic character of this fugue is *rather calm*. The rhythmic pattern seems neutral in this respect. On the one hand, the fact that three different note values are regularly used and, in the episodes, frequently supplemented by syncopations, supports this concept. On the other hand, the rhythmic structure does not seem complex enough to require real tranquility. The result is thus an inner placidity in flowing tempo.

The choice of articulation and tempo should convey what has just been observed. The tempo is flowing; the articulation, obeying the rules of rather calm basic character, requires an overall legato which is suspended only during cadential bass patterns (see in bars 10-12, 24 and 34) and patterns of consecutive leaps (e.g. B: bars 29/30); not, however, in the counter-subject intervals which, as was demonstrated above, derive from the subject answer and thus go back to essentially tension loaded intervals. The composition does not contain any ornaments.

The relative tempo of the prelude to the fugue had best be taken in complex proportion; this seems imperative not only in order to avoid too much uniformity within the closely related rhythmic patterns of the two pieces, but is also demanded by the particular character of each. A good solution is one in which three rhythmic units of the prelude equal one in the fugue; i.e.

three eighth-notes correspond with half a bar
in the prelude in the fugue

(Approximate metronome settings: prelude beats = 44, fugue beats = 66.)

I/16.2.6 The design of the fugue

The most obvious indicator, in this fugue, for the partitioning into sections is the number of voices surrounding the subject statements, particularly the beginning of an entry. In two instances (bars 12 and 28), a subject entry commences unaccompanied and thus announces without any room for doubt that a new section is beginning. On another occasion (bars 20-24), three consecutive subject statements all sound in reduced ensemble and are thus set apart from the four part texture of the entries preceding and succeeding them. These observations lead to a tentative structural analysis of four sections: bars 1-12d, 12-20d, 20-28d and 28-34. This hypothesis is further supported by the cadential formula in bars 11/12, the consistent use of the major mode in all statements between bars 12 and 20, and the particular status of the fifth episode (which is set apart by its material and expresses a concluding tendency in its pattern of descending sequences in all three voices).

The harmonic outline also confirms the division into four sections. The four subject statements of the first section alternate between the tonic and its (answering) minor dominant. The five statements in the second section sound in the relative major keys to tonic and dominant respectively. The beginning of the third section is marked by two statements representing the subdominant, while the third returns to the tonic. Finally, all entries in the fourth section are built on the tonic.

For a sketch showing the design of the fugue in G minor see ex. 38.

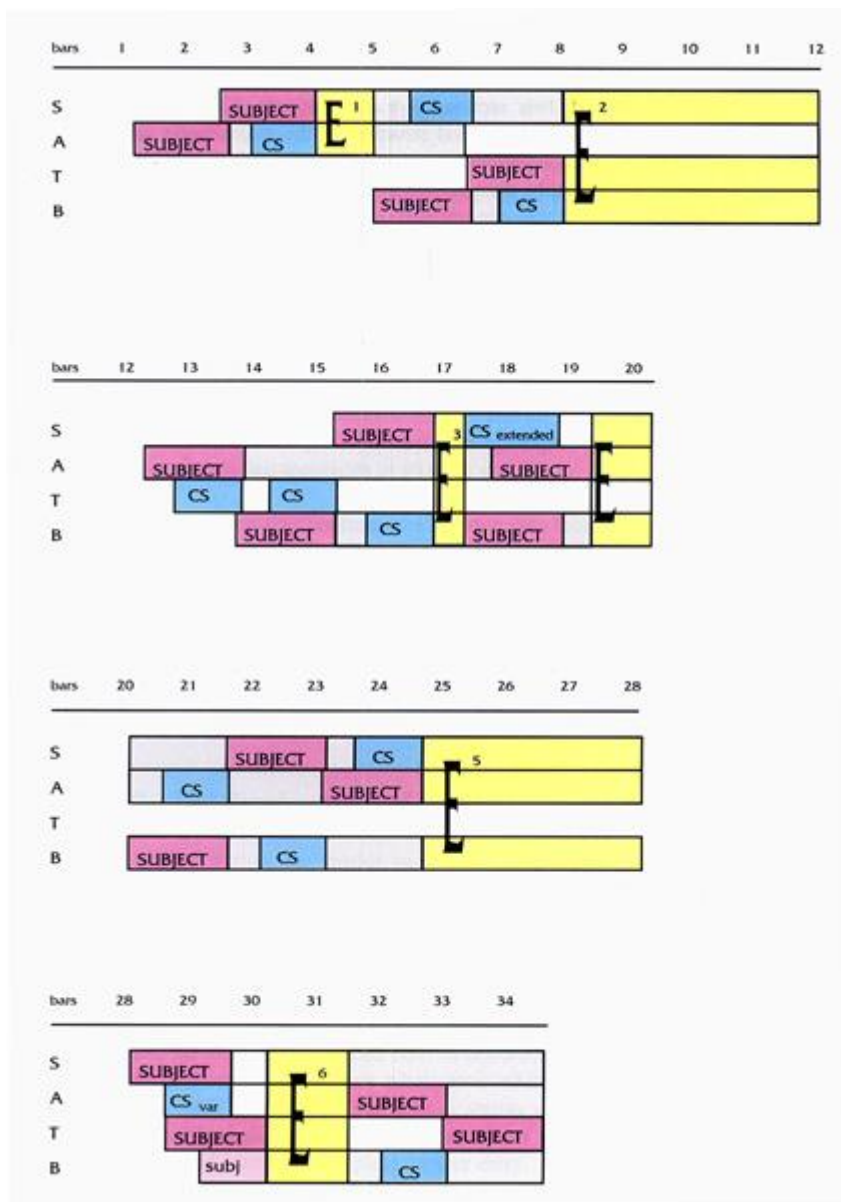
I/16.2.7 The development of tension

Within the first section, the tension increases through the first three statements; the fourth, however, brings a set-back. This is due not only to the drastic gap in the higher pitch range but also to the dropping out of the alto and the listener's consequently deceived expectation of four-part texture. The second section pursues its increase of tension more consistently as the texture develops from two part via three and four part setting to the stretto statement.

By contrast, the third section retains both its texture and mode completely unchanged and seems to contain no features whatsoever which indicate a dynamic increase. Lastly, the fourth section sets out with a stretto which combines in the shortest possible space the build up from one to four voices and the overlapping imitation of one complete and another incomplete subject entry. After this dynamic outbreak,

the remaining two statements can only fall back; one appears in three part texture and the other without its counter-subject.

The relationship between the four sections is a complex one. The second section begins, owing to the alterations of interval structure in the major-mode subject, in reduced emotional vigor; its concluding stretto may surpass the final entry of the first section in loudness but probably does not reach its passionate quality. The third section, while returning to the melodic intensity of the minor mode, is dynamically static and by this very trait falls back even behind the second section. After the additional color contrast in very soft shades brought about by the material change in E5, the beginning of section IV then presents the sudden climax.



WTC I/17 in A^b major -- Prelude

I/17.1.1 The prelude-type

The A^b major prelude is dominated by one motive (see U: bar 1). This motive appears so frequently that, instead of looking for where it occurs one may find it easier to state in which bars it is missing. Of a total of forty-four bars there are only eight (see bars 16, 17, 33, 34, 39, 40, 43, 44) which do not feature the motive. The immediate sequence in bar 2 and the imitation on the octave in bars 3/4 give hints that this prelude may be conceived as an invention.

I/17.1.2 The overall design of the prelude

The first harmonic progression closes on the downbeat of bar 9. The very noticeable interruption indicates clearly that this cadence must be understood as a structural break.

As the regular appearance of the D natural signifies, the next harmonic progression brings a modulation. The target key E^b major is attained after a cadential formula on the downbeat of bar 18. This cadence again marks the end of a structural section.

There are altogether four sections in this prelude:

I	bars 1- 9d	tonic confirmed
II	bars 9-18d	modulation to the dominant
III	bars 18-35d	modulation back to the tonic
IV	bars 35-44	renewed confirmation of the tonic

Several portions in this invention-style prelude recur very faithfully, in only slight transformation:

- bars 3-5d recur in bars 18-20d transposed
- bars 9-18d recur in bars 26-35d transposed, voices inverted
(the analogy is only slightly blurred in the closing-formula)
- bars 20-22d recur in bars 41-43d transposed

I/17.1.3 Practical considerations for performers

The A^b-major prelude exposes a simple rhythmic pattern based primarily on eighth-notes and sixteenth-notes. With regard to the pitch pattern, the principal motive consists of a broken chord preceded by a written-out inverted mordent; this combination of jumps with ornamental sixteenth-notes can also be found in other components of the motivic material.

The basic character of the piece is thus determined as *rather lively*. The tempo to express the mood must be fast enough to allow for the ornamental quality of the sixteenth-notes, but not so fast as to deprive the eighth-notes of their spirited character. The corresponding articulation is an effortless *non legato* for the eighth-notes and quarter-notes, and *quasi legato* for the sixteenth-notes.

The only exception from this pattern of articulation occurs among the longer note values in U: bars 43/44 where A^b-G-A^b, as one of the typical closing-formulas, must be *legato*. Within the *quasi legato*, various shadings of touch are required in order to bring out the different textures. Passages in *hidden two-part structure* with as background a simple repeated pedal (as in bars 15/16, 32 and 39/40 where weightier and lighter notes alternate regularly) should be distinguished from both those with an ornamented pedal as secondary line (see bars 13/14 and 30/31 where the structural notes are interspersed with feathery inverted

mordents) and from the remainder of the sixteenth-note passages in which all notes take part in the melodic line.

The prelude contains two kinds of ornaments, indicated by the same mordent symbol. The two closing-formulas in bars 17/18 and 34/35 each feature the typical interrupted trill (*point d'arrêt* trill) with anticipation of the resolution note. Both begin on the upper neighbor note and shake in thirty-second-notes (as shown in ex. 45 below). The other four mordent signs, appearing on the quarter-notes in bars 36 and 38 and on the sixteenth-notes in bars 41 and 42 respectively, can be played as just that: three-note mordents which commence on the main note either because they are approached stepwise, as in bars 36 and 38, or because they decorate the initial note of a phrase, as in bars 41 and 42.

(ex. 45)



I/17.1.4 What is happening in this prelude?

The material in this invention-type prelude is dominated by the principal motive. M is one bar long, beginning on the second eighth-note of the first bar and ending with a rest on the downbeat of bar 2. (This rest is later often replaced by a note; however it is vital to state that the original version of the motive omits the downbeat.)

Within this particular metrical structure, the two sixteenth-notes serve as an upbeat to the four eighth-notes; the dynamic presentation should outline this with a little *crescendo* to the climax on beat 2 and a successive *diminuendo* to the end, regardless of whether the downbeat is taken up by a rest (as in bars 2, 4, 5 etc.) or by a final note (as e.g. in bar 3 and bars 6-16).

In the course of the composition M appears twice with strictly polyphonic counterparts and twice with accompaniment patterns. Initially it is counteracted by full chords, double notes or octave leaps. All these components, as representatives of homophony in an essentially polyphonic composition, should be kept very much in the background; this is achieved by playing them in neutral tone color, considerably softer than the motive and, wherever they appear extended (as e.g. in bars 3/4 right hand), with beat 2 particularly light. The same applies in the variation of the chordal companion which appears in bars 36 and 38.)

Another basically homophonic accompaniment figure occurs in bars 13/14 and 30/31. This too should be kept in low profile, while the scale descent within the *hidden two-part structure* in bars 15 and 32 may create a *diminuendo* which contrasts with the dynamic curve in M.

The other two settings show the principal motive accompanied by what is conceived as a "counter-motive", i.e. a polyphonically independent figure.

CM1 appears in bars 9-12 and 26-29. Its model contains a seven-sixteenth-note upbeat followed by a long downbeat note (see bars 9/10 (U) and 26/27 (L)); in the sequences, the long note is replaced by an ornamental figure (see bars 11/12 (U) and 28/29 (L)). In all cases, the upbeat leads in *crescendo* to the downbeat which is followed by a decrease through to the fifth sixteenth-note.

CM2 also commences with an up-beat in sixteenth-notes (see L: bars 20-22 and 41-43); this is followed, after the climax on the downbeat, by a descending octave jump which provides the relaxation.

Yet another companion appears transitorily. In L: bars 22-24 and U: bars 24-26, M + sequence are contrasted with descending zig-zag figures in continuous *diminuendo*.

The design of this prelude contains two basically analogous sections, a short middle section and a coda which recalls material from the middle section. The analogous sections appear in the harmonic progressions typical for baroque pieces with recapitulation: the modulation from the tonic to the dominant is answered by one from the subdominant back to the tonic. Details can be seen in the following table.

I	A	bars 1-9 <u>M</u> with chordal accompaniment (tonic)	III	A'	bars 18-20 <u>M</u> with chordal accompaniment (dominant)
	B	bars 9-18 <u>M</u> against <u>CM1</u> , followed by <u>M</u> with accompaniment figure, concluded with cadential formula (tonic to dominant)		B'	bars 26-35 <u>M</u> against <u>CM1</u> , followed by <u>M</u> with accompaniment figure, concluded with cadential formula (subdominant to tonic)
II	C	bars 18 - 26 material from A, (short statement) followed by <u>M</u> against <u>CM2</u> and <u>M</u> against transitory figure		Coda	bars 35 - 44 material from A (varied/extended) followed by accompaniment figure in parallels, <u>M</u> against <u>CM2</u> , and final cadence.

The tension in each section is determined by three features: the extent of polyphonic contrast, the direction of the sequences, and the harmony.

WTC I/17 in A^b major -- Fugue

I/17.2.1 The subject

Beginning on the second beat of the first bar, the subject of the A^b-major fugue strongly conveys the impression of up-beat. The conclusion after only a single bar therefore comes as a surprise; one is still expecting the main content and is now asked to believe that this was already it. The principal idea of this fugue contains seven regular eighth-notes in all! (Only the final note comes, in the course of the fugue, in a great variety of values, from the sixteenth-note in bar 29 to the dotted half-note in bar 6.) The sensation of incompleteness in this subject is enhanced by the pitch line which features the rather unusual closure on the fifth scale degree, and by the abruptness of the harmonic progression (for details see below).

This short subject is definitely conceived as one indivisible phrase. Its pitch pattern consists almost exclusively of leaps in broken chord setting; only the final note is approached by the interval of a second. The rhythmic structure inside the subject is of the greatest imaginable regularity. The same does not, however, hold true in the remainder of the fugue where the eighth-notes appear mixed with sixteenth-notes, quarter-notes and several syncopated values.

The harmonic background to this subject is certainly somewhat peculiar (ex. 46):



The subdominant is reached on the (metrically weak) fourth beat of bar 1, followed on the downbeat of bar 2 by the dominant-seventh which resolves - melodically inert - on the tied sixteenth-note of beat 2 (see e.g. the harmonization of the statement in bars 5/6). This implies that whenever the final note of a statement is shortened, the resolution may be cut off from the main body of the subject. This is already the case in the answer (see bars 2/3) where the bass is way into the partial sequences which follow this entry when the E^b major resolution of the B^{b7} chord appears.

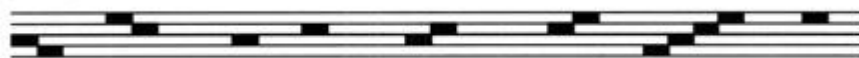
The dynamic outline poses a problem, despite - or perhaps because of - the short range and straightforward character of the subject. On the one hand, the significant features which are (harmonically) the subdominant and (melodically) the highest pitch F coincide; but they fall on a weak beat. On the other hand, the final note, which in the original version holds rhythmic importance through its sudden length, appears so frequently shortened that it may not be entirely convincing as a climax either.

I/17.2.2 The statements of the subject

The fugue contains fifteen subject statements.

1.	bars 1/2	T	9.	bars 23/24	A
2.	bars 2/3	B	10.	bars 24/25	S
3.	bars 5/6	S	11.	bars 27/28	B
4.	bars 6/7	A	12.	bars 28/29	T
5.	bars 10/11	T	13.	bars 29/30	A
6.	bars 13/14	A	14.	bars 30/31	S
7.	bars 17/18	T	15.	bars 33/34	S
8.	bars 18/19	A			

(ex. 47)



The subject does not appear in inversion, stretto or parallel. (Only once, in an episode where the combination of interval and rhythm pattern suggests false entries, does a parallel occur; see bars 21/22 alto/soprano.) The rhythmic variations in the final note and the adjustment in the answer (see the lowering of the second subject note in bars 2 and 6) aside, two interval modifications occur in the statements. Both have considerable harmonic impact.

- In bars 18, 28, 29 and 30, an initial fourth interval is followed by the broken triad of bar 1, thus mixing features from original and answer and resulting in harmonic ambiguity. More strikingly, the first three of these entries, which are all in the minor mode, borrow several notes from their major-mode relatives (see bar 18: C + A for C^b + A^b; bar 28: D + B for D^b + B^b; bar 29: G for G^b).
- Two statements feature a seventh jump instead of the original sixth between the fourth and fifth eighth-note. The result is a seventh chord which now resolves on the ensuing downbeat and thus re-harmonizes the subject as a modulation (see bars 23/24, modulating from E^b to A^b, and bars 24/25, modulating from A^b to D^b).

I/17.2.3 The counter-subjects

The A^b-major fugue does not contain a single consistent counter-subject. The eighth-note figure which accompanies the subject entry in bars 2/3, while recurring frequently and in much variation throughout the fugue, does not serve as a companion to the subject but provides motivic material which, as in the E-major fugue from the WTC I pervades the entire fugue. (These motives will be portrayed under 5. below).

I/17.2.4 The episodes

The composition encompasses eight subject-free passages.

E1	bars 3 - 5	E5	bars 19 - 23
E2	bars 7 - 10	E6	bars 25 - 27
E3	bars 11 - 13	E7	bars 31 - 33
E4	bars 14 - 16	E8	bars 34 - 35

The material which characterizes these episodes also occurs outside of them, overlapping considerably with the subject but never serving as its dedicated companion. It is most interesting to observe that all this material seems, in one way or another, derived from bars 2/3, i.e. from the first episode and, before it, from the figure which countered the subject's answer. To give more detail, there are three figures which serve as sources for the secondary material. These figures are: the eight sixteenth-notes which follow the original subject statement, the four eighth-notes which extend the answer in the pattern of a partial sequence, and the syncopated half-notes which, with an ornamental variation, sound against this partial sequence. Here are the motives with their variations and a list of their occurrence (ex. 48).



Introduced in bar 2 (T), this motive recurs, with the opening note displaced to form an ascending scale, in bar 4 (B). In rhythmic variation with intersected syncopation is also found in bar 27 (A, imitated in S).



The inversion of M1 appears in bars 2/3 (T), 4/5 (B), 15/16 (A), 22/23 (A) and 25 (T, with two sequences).



This extended version, combining the ascending scale with the M1 inversion, is found in bars 5/6 (B), 7/8 (A), 8/9 (B), 9/10 (B), 23/24 (T) and 24/25 (T).

An extended version materializes in bars 29/30 (T).



The (free) inversion of the previous motive occurs twice, in bars 16/17 (S) and 18 (B).



This figure is conceived as a further development from the same root; the scalar ascent is now complemented, after a syncopation, by a new tail in eighth-notes. It occurs in bars 7/8 (B), 8/9 (S), 9/10 (A; here it gives way to a melodic closing-formula) and in bars 16/17 (B).



A final, now very remote relative combines the scalar ascent with a subsequent descent. This figure appears several times, with a varying number of free sequences; see bars 11-13 (S), 14/15 (B), 19/20 (A) and 31/32 (B).

Introduced as a two-fold partial sequence of the subject, this motive is introduced in B: bars 3/4 - unfolding here above an E^b pedal (see E^b-B^b-G-A^b, E^b-A^b-F-G). It recurs as a separate motive, with occasional ornamental variation, in bars 11-13 (B), bars 14/15 (A) and bars 19-21 (S). Also, remote relatives can be heard in bars 25/26 and 31/32.

First presented in the context of M2, this motive could, in fact, be read as a parallel to the M2 peak notes. The consecutive syncopations recur in bars 11-13 (T), 14-16 (S) and 19-21 (T).

The episodes which are most closely related to the subject are those which contain M2, i.e. E1, E3, E4 and E5. More remote variations of this motive in E6 and E7 also convey an impression of relatedness.

The only subject-free passage which serves exclusively as a cadential close is the final one, E8. In addition there is one instance within another episode where the motivic display is suspended and gives way to an extended cadential formula (see bars 20-22, at the end of E5). Two further cadential closes appear more integrated into the motivic material; both contain the typical *do-si-do* (keynote / leading-note / keynote) figure (see bars 9/10 at the end of E2 and bars 15/16 at the end of E4).

The relationship between the episodes is already evident from the exposure of their motivic content. The first half of E4 and the entire E5 are both direct variations of E3; similarly, E7 is a (more distant) variation of E6.

Only two of the episodes maintain the tension and thus serve as a bridge between subject statements: in E1, a short descent is followed by rising motions, and in E7, the ascending motion in all voices of bars 31/32 is complemented by a relaxation of roughly equal length. All remaining subject-free passages display a pattern of gradually decreasing tension, either because of apparent descending sequences (as in E3, E4, E5 and E6), or in hidden descents (as in E2 where the soprano contains the falling A^b-major scale).

I/17.2.5 Character, tempo, articulation, ornament realization

With the exception of the syncopated half-notes in M3, the rhythmic pattern in this fugue is simple. Moreover, the pitch pattern is most obviously made up of broken chords alternating with ornamental figures. It is thus easy to determine the basic character of this fugue as *rather lively* (even with, in terms of the spirit expressed in this basic character, the specification "very" lively).

The tempo of this fugue is confined by the character of its primary material. The broken-chord leaps in the subject should sound vigorous (and thus not too slow); the various sixteenth-notes figures should, in view of the manifold motives Bach invented and developed, by no means appear as mere virtuoso patterns (i.e. not too fast).

The corresponding articulation consists of bouncy *non legato* in the subject and M2, a fairly intense *quasi legato* in all motives deriving from M1, and a melodious *non legato* in M3. The only longer note values which must be played in strict *legato* are the cadential formulas in the soprano parts of bars 15/16, 22/23, 34/35 and in the alto part of bars 9/10. The fugue does not contain any ornaments.

The relative tempo of the swifter and lighter prelude in triple time to the more vigorous fugue in quadruple time is best established by equaling metric, and not rhythmic, values:

one bar	equals	half a bar
in the prelude		in the fugue

(Approximate metronome settings: prelude beats = 120, fugue beats = 80.)

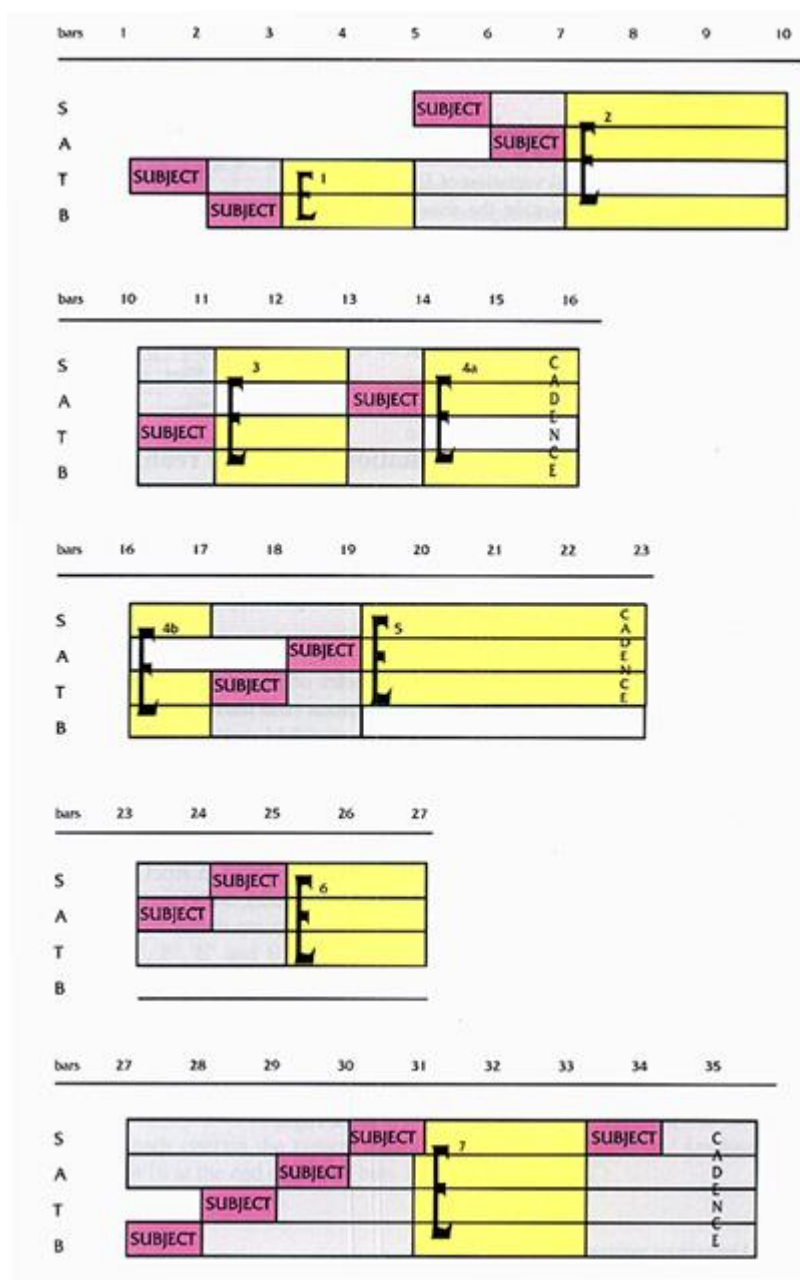
I/17.2.6 The design of the fugue

The most obvious indicators which help determine the design of this fugue are the cadential formulas in bars 9/10, 15/16 and 22/23. As the subject entries preceding the first of these closures constitute a perfect round of all four parts (T B S A), the first section seems thus ascertained. Between the cadential closes in bars 9/10 and 22/23, the striking correspondence of E3 with the first segment of E4 and E5 creates a larger unit from bar 11 to bar 23. The reduction of the ensemble from four to merely two in bars 23/24 further enhances the structural importance of this harmonic closure. Inside this superimposed frame of twelve bars, the closing-formula in the middle of E4 generates a smaller caesura, confirmed in its structural value by the fact that the ensuing subject statement sounds in reduced ensemble (three voices, see bars 17/18).

As no explicit cadential close occurs between bar 23 and the end of the fugue, one has to look for other indicators of structural layout. One hint can be found in the entering order of the voices. The five final statements (B T A S S) seem to form a group: they follow one another not only very closely and in a logical arrangement of gradual ascent, but also lead, after the tension-increasing E7, to the conclusion of the fugue in a redundant soprano statement. The return to the tonic key with the bass entry in bars 27/28 further ascertains the confines of the final section.

The harmonic outline as established in the subject statements and cadential closes confirms the structural layout deduced above. The entire first section remains in the tonic key of A^b major which is substantiated by the cadence in bars 9/10. The second section contains entries in the tonic and its relative minor, and concludes correspondingly with a cadential close in F minor (bars 15/16). The third section sets out in B^b minor and, after the harmonically ambiguous second statement (B^b minor/E^b minor) reaches the dominant key (E^b-major cadence, bars 22/23). The fourth section is characterized by the two modulating subject entries; progressing from E^b via A^b to D^b this section approaches the home key from the subdominant region. The beginning of the fifth section, as has already been mentioned, marks the return to A^b major which, though weakened in the harmonically hybrid tenor and alto statements, is not abandoned again.

For a sketch showing the design of the fugue in A^b major see the sketch in ex. 49.



I/17.2.7 The development of tension

The five sections of this fugue present very individual faces.

- The first section of the fugue contains the usual build-up of tension created by the gradual increase of the ensemble. While the bridging episode E1 describes a concave curve, with a slight relaxation followed by a new rise preparing the second pair of statements, the section-closing episode E2 with its descending lines brings gradual relaxation.
- The second section begins in the tonic key and in four-part texture, but its second entry already represents the minor mode. Thus there is a decrease in tension between the two statements of this section. The two episodes enclosed in the section enhance this tendency of decay. After the cadential close in the middle of E4 the two remaining voices trail along somewhat indecisively.
- The two subject statements of the third section with their harmonic ambiguity are not made to bring forth powerful impulses either; the episode E5 which recalls once more the descending sequences already heard in E3 and E4 blends well into this picture of "no news, no emotional features". The explicit cadential formula thus appears as the closure of a protracted decline, summing up the

sections I, II and III as one large portion.

- The fourth section commences with the lowest number of voices found in a statement outside the initial one and represents a correspondingly reduced level of intensity. However, the particular harmonic design of the two subject entries as modulating statements, together with the fact that they bring forth the return to the home key of the piece, endows this section with considerable urge.
- Although mollified transitorily during the episode, this urge continues even more powerfully in the four consecutive statements which mark the beginning of the fifth section. The ensuing episode E7 is characteristically the only tension-sustaining one apart from the very first episode. After its deceptive cadence (see bar 33 beats 2/3), the final statement sounds in an almost homophonic setting, giving the fugue a triumphant closure.

WTC I/18 in G[#] minor - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/18.1.1 The prelude-type

The G[#]-minor prelude is composed as a strictly polyphonic piece. With the exception of the familiar voice splitting in the final chord and some irregularities of voice leading in the three initial bars, it is devised in consistent three-part texture. The predominance of a single motive (see U: bars 1-2d) and the initial imitation on the octave characterize this prelude as a three-part invention.

I/18.1.2 The overall design of the prelude

After the home key G[#] minor has been established in two very minimal progressions (see bars 1-2d, 2-3d), the first modulation occurs with, in bars 4/5, the cadential steps IV-V-I of B major, the relative to the tonic. As both the imitation of the motive and the first episode have been introduced by now, one must regard this cadence as the conclusion of the first structural unit. This impression is enhanced by the fact that, reminiscent of section beginnings in a fugue, the subsequent motive statement appears in reduced ensemble, i.e. with the lower voice resting. The fact, however, that the listener expects the third entry of the principal motive in the middle voice, and that this expectation is met at the beginning of the next harmonic progression, threads the two passages together to one larger unit.

The question where the second harmonic progression ends is more tricky. One could recognize a return to the tonic, with a perfect cadence concluding on bar 10d. This interpretation is supported by the fact that the ensuing M statement is the first in this piece to appear in inversion. However, one can equally base one's reading on the perfect cadence closing in bar 9d, and thus understand the progression as leading to the subdominant key area. This interpretation is supported by an observation on the structural level: The next section would now begin, as did the first one, with two statements followed by two bars which are clearly a variation of bars 3/4. As this is the only instance in this prelude where a passage is taken up with recognizable resemblance in all three voices, it seems important enough. The correspondence sheds light on the analogy between the beginnings of the first and second sections and, if one decides to take this as significant for the interpretation of the prelude's structural design, even invites a similar conclusion for the beginning of the third section.

Depending on the alternative explained above, the layout of this three-part invention can thus be read in two quite different ways, as the following tables show:

I	bars 1 - 10d (1-5d, 5-10d)	tonic - relative major - tonic
II	bars 10 - 18d (10-13d, 13-18d)	tonic - minor dominant - subdominant
III	bars 18 - 27d (18-22d, 22-27d)	subdominant - tonic, tonic confirmed
IV	bars 27 - 29	tonic
	or:	
I	bars 1 - 9d (1-5d, 5-9d)	tonic - relative major - subdominant
II	bars 9 - 17d (9-13d, 13-17d)	subdominant - minor dominant - tonic
III	bars 17 - 29	tonic confirmed

I/18.1.3 Practical considerations for performers

The rhythmic pattern of this prelude is basically simple and would thus suggest a *rather lively* character. At the same time, the slightly subdued spirit inherent in many minor-key compositions is reinforced here by the specific melodic structure of the principal motive which peaks on the minor sixth and falls back to the minor third. To accommodate both traits, the tempo of the prelude should be fairly swift, without conveying the impression of energetic activity in the eighth-notes; rather, a desirable effect is that of a gentle swing in half-bar pulses.

The articulation which matches the basic character demands *legato* for the sixteenth-notes and *non legato* for the longer note values. In order to express the nuances hinted at above, the *non legato* in the principal motive and all figures immediately deriving from it should be very delicate; that in the larger jumps (see e.g. the middle voice in bars 3/4) can be slightly more pronounced, and a distinctly detached style is required in the cadential-bass patterns. As exceptions to this general rule, there are three *do-si-do* (keynote / leading-note / keynote) formulas among the longer note values which demand *legato* (see L: bars 1/2, M: bars 13/14, U: bars 2/3).

The score contains only one ornament which is represented by a mordent symbol (see U: bar 13). As the note to be ornamented resolves duly on the following downbeat, this ornament must be interpreted as a note-filling trill. It commences accordingly on the upper neighbor note, shakes in thirty-second-notes and concludes with a suffix (D[#]-E[#]).

I/18.1.4 What is happening in this prelude?

a) The material

The prelude builds entirely on its principal motive (M). This motive, as has already been shortly described above, commences with sixteenth-notes which ascend to the sixth scale degree, followed by a descent in eighth-notes to the third. What appears as a kind of counter-motive (see M: bars 1-2d) recurs only in bar 2 but never again thereafter.

As M is thus solely responsible for the character and development in this prelude, it is worth showing its statements in a diagram.

bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19-26	27	28	29	
U	<u>M</u>		<i>epi-</i>					<u>M</u>		<u>M_{inv}</u>	<i>epi-</i>		<u>M</u>	<u>M_{inv}</u>		<u>M</u>	<i>epi-</i>						
M			<i>sode</i>		<u>M</u>				<u>M</u>	<i>sode</i>				<u>M_{inv}</u>			<i>sode</i>						<u>M_{inv}</u>
L		<u>M</u>	<i>l</i>			<u>M</u>	<u>M</u>				<i>I_{var}</i>		<u>M</u>				<u>M_{inv}</u>	<i>2</i>				<u>M</u>	

The episodes (or M-free passages) also derive their material from the same source:

- A first episode-type makes use of the sixteenth-note group from the head of M, transposing its second three-note group down a fourth and sequencing this newly-assembled figure twice in descending direction (see U: bars 3/4, and L: bars 11/12).
- A second episode-type presents the same figure (see L: bars 22/23); further can be found the inversion of the original sixteenth-note group (see M: bar 25, U: bar 26), and a version of the group in its first shape but with a broken triad at the end (see L: bars 19-21). In addition to all these transformations of the motive-head, this episode also recalls the tail of M (see bars 19-21, in imitation between U and M).

b) The development of tension

In order to determine the dynamic processes in this prelude, one may wish to distinguish a varying intensity among the statements of the motive. Intensity is created here not only, as is generally true for all

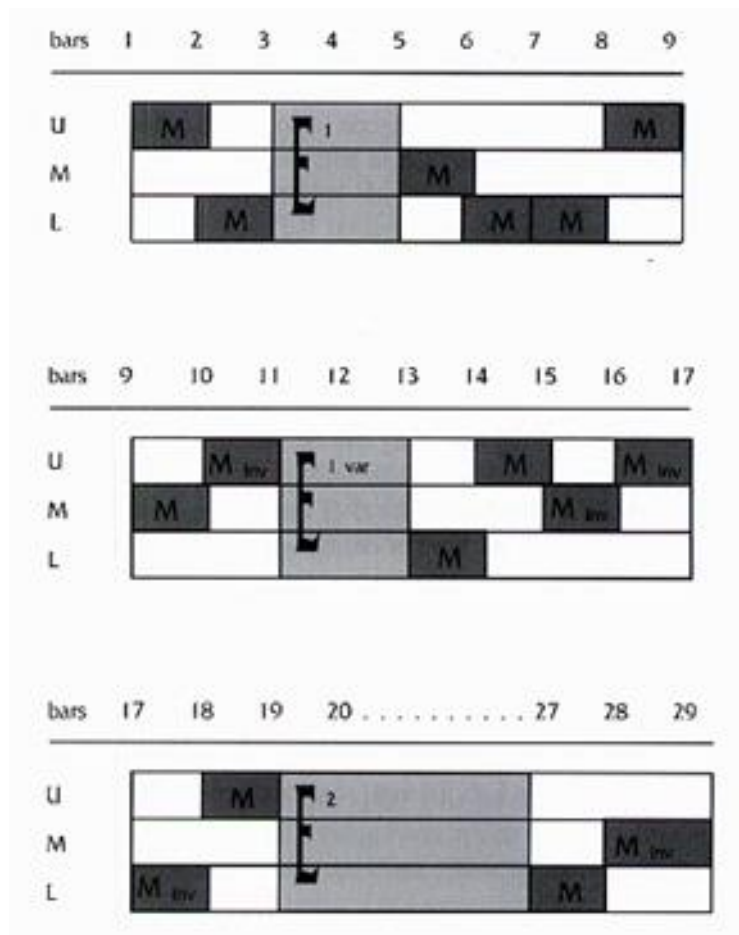
polyphonic compositions, by the number of voices surrounding the statement or the mode in which it is set, but also by the nature of the accompanying material. In this prelude, Bach seems to use parallels as a characteristic means. The following hierarchy can be deduced from this observation:

- Probably the lowest level of intensity is expressed in statements which present M without any kind of doubling (see in bars 9 and 10, 15 and 17, 27 and 28).
- Slightly more emphasis is created by the parallel of the motive's tail (see in bars 1, 2 and 7); less, however, where the doubling is set in contrary motion (as in bars 8 and 16).
- The fortification of the sixteenth-notes alone generates even greater density (see in bars 5, 6, 14 and, somewhat more indirectly, in bar 13).
- This last level of intensity is exceeded only once where both halves of M are doubled. In bar 18, the sixteenth-notes appear in parallel and the eighth-notes are matched in contrary motion.

Relating these observations to the structural features of the prelude one detects that

- the endings of all sections appear in lessened intensity;
- in the first and second sections, the climax appears immediately after the *diminuendo* of the episode with its descending sequences and the mid-section cadence;
- the first section begins in moderate intensity, with two statements, while the second section which introduces the motive inversion sets out with only one statement of low intensity;
- the third section contains only one complete statement of M which, appearing at the very beginning of the section, exhibits the highest level of intensity in the entire piece;
- the coda returns to a very relaxed state.

Here is a graphic representation of the "invention", in the second reading with structurally analogous sections (ex. 55)



WTC I/18 in G# minor - Fugue

I/18.2.1 The subject

This subject encompasses two bars. Beginning on the second beat of bar 1, its up-beat character is attenuated by the length of the first subject note which seems to stand still rather than lead anywhere. After a modulation to the dominant key, the subject ends with a figure very unusual for a melodic line: a cadential-bass pattern (see G[#]-G[#]-A[#]-A[#]-D[#]).

There are two subphrases. The first one, ending on D[#] (bar 2 beat 2), is characterized by rhythmic variety (a quarter-note, several eighth-notes, two sixteenth-notes) and an emotional pitch line (two leading-notes: F^x-G[#] and C^x-D[#], and one high-tension interval: G[#]-C^x). The second subphrase contains only regular eighth-notes in a line which is melodically very low-keyed. Phrasing is thus not determined by structural features (like sequences) or pitch level here, but by a drastic contrast in melodic intensity.

The pitch outline in the first bar of the subject displays only stepwise motion, circling around the key note. The return to G[#] on the downbeat of bar 2 is followed immediately by a high-tension interval, represented here by a tritone jump to the artificial leading-note of the fifth step. The resolution of this leading-note marks the end of the first subphrase, and the ensuing major-sixth leap is thus not a melodic interval but rather a rash split between the two subphrases. The second subphrase contains whole tone steps and a perfect fifth. Conspicuous note repetitions on the fourth and fifth scale degrees of D[#] minor enhance the impression of a cadential-bass patterns. Having observed this one understands why these notes seem to convey so little melodic message. They are in fact harmonic notes with not so much horizontal as vertical significance (as representatives of the chords they imply).

The harmonic background to the subject is most intriguing in a segment where it might be least expected: the eighth-note-descent B-A[#]-G[#]. The melodic return to the keynote on the downbeat of bar 2 is not matched by a similar return in the harmonic progression. On the contrary, after an initial alternation between tonic and dominant (G[#] minor and D[#] major, with or without its seventh) in bar 1, this downbeat represents the harmonically most active step in this phrase, i.e. that to the secondary dominant which triggers the modulation. The melodic resolution of the artificial leading-note C^x thus coincides with the harmonic resolution of the diminished chord into the new tonic. The freshly established key is then confirmed in a simple cadential progression.

(ex. 56)



The main climax of the subject must without doubt be expected in the first subphrase. Both the melodic and the harmonic development support the two eighth-notes in the first beat of the second bar; G[#]-C^x constitutes an interval of particularly high tension and, at the same time, represents the pivot chord of the modulation. The end of the first subphrase on the third eighth-note of the bar provides the resolution to both the harmonic tension and the melodic leading-note, thus generating a steep decrease after the gradual increase during the first bar. By comparison, the dynamic outline of the second subphrase is very gentle. The first note (F[#]) serves as an upbeat to the G[#], representative of the subdominant; this is then followed by an even relaxation.

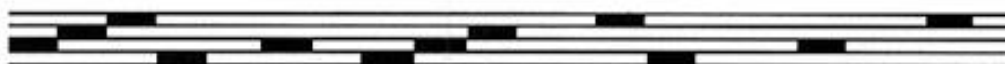
Considering the entire subject it is fascinating to see that the two subphrases which, as expounded above, could hardly be more contrasting, nevertheless complement one another so symmetrically with regard to the tension. The gradual rise through most of the first subphrase is answered by a gradual decay through most of the second one; the sudden release after the expressive first climax finds its counterpart in the curt upbeat to the second climax.

I/18.2.2 The statements of the subject

The subject appears altogether twelve times.

1.	bars 1-3	T	7.	bars 17 - 19	T
2.	bars 3 - 5	A	8.	bars 19 - 21	A
3.	bars 5 - 7	S	9.	bars 24 - 26	S
4.	bars 7 - 9	B	10.	bars 26 - 28	B
5.	bars 11 - 13	T	11.	bars 32 - 34	T
6.	bars 15 - 17	B	12.	bars 37 - 39	S

(ex. 57)



Apart from the alteration of the first interval in the answer, no modifications of shape or length occur in the subject throughout the fugue; inversions, parallel statements or strettos do not appear either.

I/18.2.3 The counter-subjects

There are two companions to the subject which appear repeatedly. However, just as the subject itself displays a somewhat unusual melodic line in its second subphrase, the counter-subjects also do not quite conform to ordinary expectations of polyphonic counter-parts.

CS1 is introduced against the second subject statement in bars 3-5. It commences with an upbeat (which is later occasionally dropped or varied). The following long note and particularly the ascending groups on the sixth and seventh eighth-notes of the bar sound so much like a parallel to the beginning of the subject that they may hardly pass as contrapuntal. Only the middle segment with sequences of the ascending figure leads a polyphonically independent life (see T: bar 3 F^x until bar 4 B), while what follows thereafter exposes a typical and very traditional closing-formula (G[#]-A[#]-F^x-G[#]). CS1 accompanies almost all statements of the subject; exceptions occur in the entries in bars 24-26 and 26-28 where CS1 is omitted, as well as in the final entry where its beginning and end are considerably varied.

CS2 is also first presented in its expected place, i.e. against the third subject statement (see T: bars 5-7). Its characteristic features are the syncopated fourth leap and the descent in quarter-notes which concludes in a tied-over note. The beginning, as stated in bar 5 with upbeat-eighth-note and quarter-note (this value again in rhythmic parallel to the initial note of the subject), is later dropped or varied, just like that of the first counter-subject. The suspension created by the tie at the end of CS2 redefines the harmonic surroundings of the subject's final note as still awaiting resolution; statements accompanied by this counter-subject are thus unlikely at section endings. CS2 recurs four times, in bars 11-13 (A), 15-17 (S), 19-21 (B) and 32-34 (S).

The phrase structure in the two counter-subjects is worth a closer inspection. While the way in which the material is connected in CS1 is obviously parallel to that of the subject - a melodious segment followed by a traditional formula - these segments are strung together in such a manner that they build a single curve without any need for partitioning. One step further, CS2 consists of an indivisible unit in both structure and material.

In terms of dynamics, neither of the counter-subjects engenders a tension process which is clearly independent of that found in the subject; CS1 meets the subject's second (weaker) climax, while the peak of CS2 coincides with the main climax in the subject.

The following sketch shows the phrase structure and the dynamic design:

(ex. 58)

The musical sketch consists of three staves labeled S, CS1, and CS2. The top staff (S) shows a melodic line with a series of eighth notes followed by a quarter note, with dynamic markings like > and <. The middle staff (CS1) shows a similar melodic line with a syncopated fourth leap and a tied-over note at the end. The bottom staff (CS2) shows a bass line with a syncopated fourth leap and a tied-over note at the end. The sketch illustrates the phrase structure and dynamic design of these musical elements.

I/18.2.4 The episodes

There are six subject-free passages in this fugue.

E1	bars 9 - 11	E4	bars 28 - 32
E2	bars 13 - 15	E5	bars 34 - 37
E3	bars 21 - 24	E6	bars 39 - 41

The material of these episodes allows for two features to be distinguished. The first, very unusual for a Bach fugue, is a homophonic formula (see bars 9-10d), made up of the cadential-bass pattern from the subject's second subphrase in the bass, a slightly extended version of CS1's second segment of in the soprano, and chordal filling notes in alto and tenor which are later (from bar 13 onwards) substituted by CS2's last two notes. The other conspicuous feature (see bars 21-23) is polyphonic in design; it is a motive which comes in an imitative setting.

The distribution of these two components of secondary material in the episodes is very straightforward:

E1	formula + sequence (ascending)
E2	formula + sequence (descending)
E3	motive in B/A + sequences (ascending)
E4	motive in A/S + sequence (ascending) = E4a formula + sequence (descending) = E4b
E5	formula (varied) + sequences/imitation
E6	formula (varied) + cadential closing-formula

As can be seen from the above table, there are several relationships among the episodes of this fugues. E1 serves as the model for E2 and E4b as well as for E5 and the first half of E6, while E3 is taken up in E4a.

The role played by each episode in the development of the composition also stems immediately from the material employed. The episodes that are based on the formula give a concluding impression due to the obvious cadential pattern, while those which display the imitated motive are either accompanied by a similar cadential-bass line (see bars 28-30), or are followed by an explicit cadential close (see in bar 24 the perfect cadence in A# major).

I/18.2.5 Character, tempo, articulation, ornament realization

Triggered by the two-faced subject, the character of the entire fugue is ambivalent; it changes constantly between calm, melodious lines of high expressivity and cadential patterns of almost neutral tone quality. The definition of the basic character therefore has to be attempted separately for the two segments of the subject and the material resulting from them. In the first subphrase of the subject, the pitch pattern with its poignant leading-notes and tritone interval as well as the corresponding rhythmic variety pledge a *rather calm* basic character; in the second subphrase, however, all melodic expressivity seems aborted in favor of a non-committal formula.

The tempo in this fugue is moderate to calm, in order to accommodate the leading-notes (F^x-G[#]) and high-tension intervals (G[#]-C^x) which appear in eighth-note (bar 2) or even sixteenth-note rhythm (bar 21-23, 28/29). The articulation should reflect the ambiguous character depicted above. In the first subphrase of the subject, the appropriate articulation demands *legato* throughout. In the second subphrase, however, *non legato* articulation is needed to convey the cadential character; both the pitch pattern with its note repetitions and perfect-fifth interval and the regular rhythmic pattern support this interpretation.

Correspondingly, the remaining material also divides into two fields. All formulas maintain the detached cadential style, while the motive and the counter-subjects tend towards the melodious character. CS2 is basically *legato*; only the fourth jump may be detached; the episode motive with its complex rhythm and semitone as well as high-tension intervals is entirely *legato*. Only CS1 shares the ambiguity of the

subject: its first segment is *legato* while in the second the *non legato* intention is enhanced by the written rests.

The most straightforward tempo proportion between the prelude and the fugue is probably also the best. It is achieved by equating

half a bar with one quarter-note
in the prelude in the fugue

(Approximate metronome settings: 60 for the compound beats in the prelude and the quarter-notes in the fugue.)

No ornaments need to be considered in this fugue.

I/18.2.6 The design of the fugue

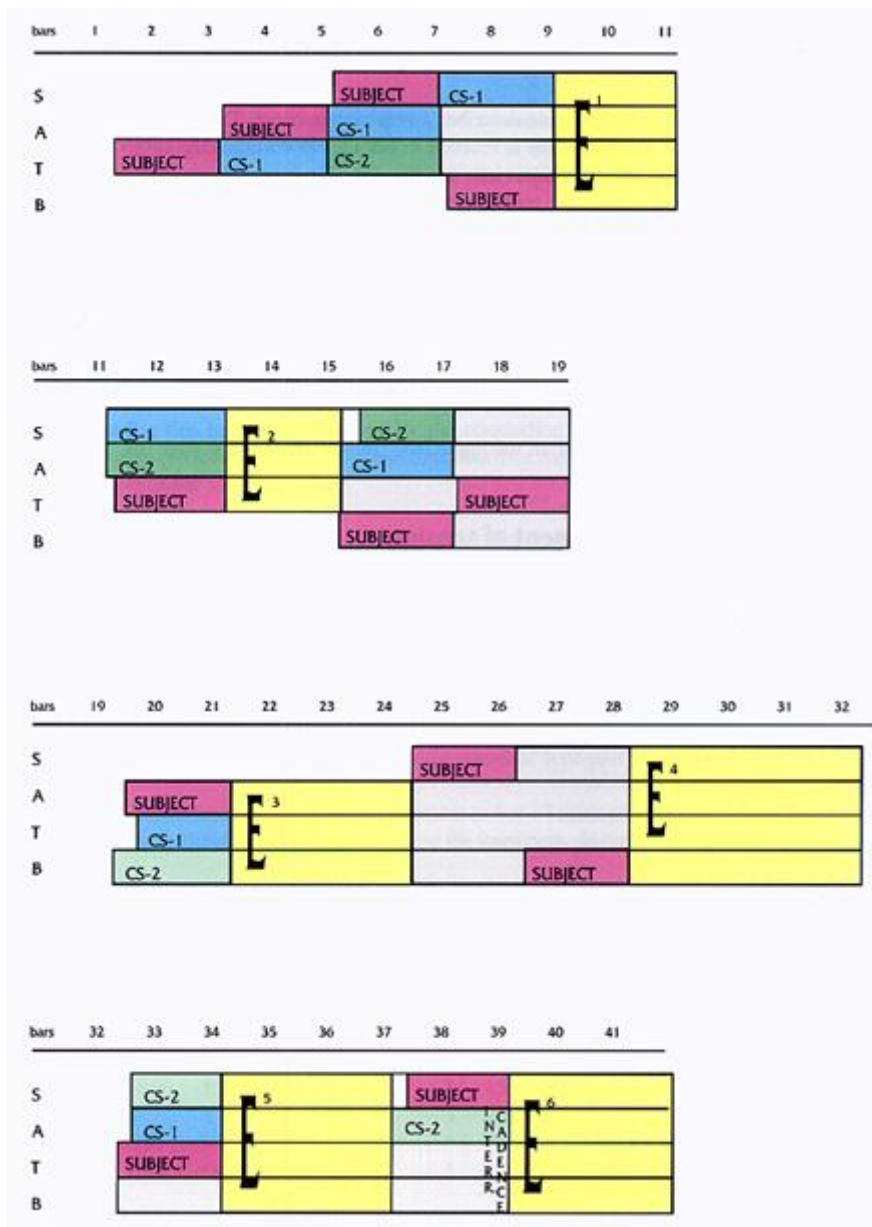
When trying to determine the structure of the G[#]-minor fugue, only the first section poses no problem. It is distinguished quite clearly by the entering order of the voices. Four subject statements, presented in uninterrupted succession by the four parts involved in this fugue, are followed by the concluding first episode. The next statement appears in reduced ensemble and thus confirms the end of the first section on the downbeat of bar 11.

In the absence of assistance from explicit cadential formulas and structural analogies in the further course of the fugue, the reduced number of voices in a subject statement as an indicator for the beginning of a section must be complemented by observations concerning the material.

- Reductions of the ensemble appear two more times. In bars 19-21, the soprano is resting during the entry of the alto; in bars 24-26, the bass is temporarily suspended during much of the soprano statement, although the first two beats of the entry sound in complete four-part texture.
- The recurrence of the tenor statement in bar 17 distinguishes this subject entry as a redundant one, thus signifying the imminent closure of a section.
- As the final statement of the first section (see bars 7-9) and the final statement of the fugue (see bars 37-39) both appear polyphonically less intense than the statements preceding them, it may make sense to look into the appearance of counter-subjects throughout the fugue. If one assumes, as a hypothesis, that Bach may have composed lessening density of contrapuntal material towards the end of each section, the following groups can be established:

bars	1	3	5	7	11	15	17	19	24	26	32	37
S	T	A	S	B	T	B	T	A	S	B	T	S
CS1	-	*	*	*	*	*	-	*	-	-	*	(*)
CS2	-	-	*	-	*	*	-	*	-	-	*	-

The harmonic outline of this fugue describes a very simple curve. The minor dominant which serves as the secondary key is reached in bar 11. However, as the subject itself in its original version also modulates into this key, the D[#]-minor cadence here does not seem to establish a truly new tonal center. What is more, the statements which immediately follow still remain very closely linked to the original tonic: already the tenor entry in bars 11-13 modulates back to G[#] minor, the bass entry follows with a subdominant-tonic version, and the redundant tenor statement closes once again on the minor dominant. Only the third section brings new harmonic fields. Its first episode modulates from G[#] minor to A[#] major, the bass statement commences in F[#] major - the relative of the dominant - and concludes in B major - the tonic relative - and the second episode (E4) modulates back to the tonic G[#] minor. For a sketch showing the design of the fugue in G[#] minor see ex. 59.



I/18.2.7 The development of tension

This fugue seems singularly static with regard to tension. With the exception of the three initial subject statements, all increases in texture in the course of a section are annihilated by a simultaneous decrease in polyphonic intensity. The dynamics of this fugue thus live entirely from the contrast - particularly in the third section - between subject-dominated passages and episodes.

WTC I/19 in A major - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/19.1.1 The prelude-type

This piece presents itself in polyphonic style with consistent three-part texture. Its most prominent idea is two-and-a-half bars long and of complex structure - thus a subject rather than a motive. It appears imitated on the dominant and recurs frequently throughout the composition, in consistently alternating voices. In other words, this prelude is a fugue!

I/19.1.2 The overall design of the prelude

The initial harmonic progression concludes on the middle beat of bar 3. As it coincides with the end of the first subject statement, this cadential close cannot be interpreted as a structural caesura. The first cadential close of structural importance, i.e. that occurs outside the confines of a subject statement, emerges in bars 11/12. It comes as a typical closing-formula, complete with cadential-bass pattern in L and *do-si-do* (keynote / leading-note / keynote) figure in U. This cadence concludes the first section on the downbeat of bar 12 in F# minor.

There are only two sections in this piece

I	bars 1-12	tonic to relative minor key
II	bars 12-24	relative minor back to tonic

These two sections correspond with one another in great detail. Apart from a small re-arrangement in the order of its components, occasional slight variation and an extended cadential close at the end of the piece, the second section seems like the answer to the first.

Compare with

bars 1 - 3		bars 12-14	(U/M/L corresponds with U/M/L)
bars 4 - 6	---		
bars 7 / 8		bars 15-17	
bars 8m-11d		bars 17m-20d	(U/M/L corresponds with M/L/U)
		bars 20-22m	(U/M/L corresponds with L/M/U)
	'--->		
bar 11		bars 22m-24	(both are cadential closes)

I/19.1.3 Practical considerations for performers

Looking at pitch pattern and rhythm for guidance with regard to the character of the prelude, one finds that the pitch pattern contains large jumps both in the longer note values and in the sixteenth-notes, and that the rhythm pattern gives the impression of simplicity and regularity. (This is achieved despite the frequent syncopations which, in the context of this polyphonic texture, combine with the quarter-note motion to form a complementary rhythm and are thus not truly perceived as metric displacements.) The basic character of this "three-part fugue" should therefore be interpreted as *rather lively*. This character, however, includes a strong lyrical element.

The ideal tempo is moderate with gently paced quarter-notes and rather swift sixteenth-notes. The articulation is *legato* for the sixteenth-notes and *non legato* for the eighth-notes and quarter-notes. Among the quarter-notes, those with distinct melodic quality (like the four chromatic steps in bars 1/2, lower voice) are only very softly detached, while notes of cadential character (see e.g. the lower-voice notes which, in bars 2-3, proceed in sequenced descending fifths) sound more clearly separated. Among the eighth-notes there are several distinctive *appoggiaturas* (see U: bars 7/8 and 15-17); these must obviously be played *legato*. The only other longer note values which definitely require linking appear in the upper-voice closing-formulas in bars 11/12 (F[#]-E[#]-F[#]) and 24 (A-G[#]-A). The above-mentioned syncopations can be linked to their successors if one wishes to underscore the melodic step and its rhythmic quality. However, if one prefers to stress the complementary pattern of which the syncopations are a part, *non legato* execution is more appropriate. (In this case, the cut must be well after the tied strong beat.)

The A major prelude contains only one indication for ornamentation, the cadential mordent in bar 3. This mordent, since it is approached stepwise, commences on the main note and can do with only three notes. In bar 14, the upper voice features a similar figure. It also appears in the context of a cadential close, and equally consists of a dotted-note group on the dominant before its resolution into the tonic. Although Bach did not indicate ornamentation here, it may safely be assumed that such a typical closing-formula would have been decorated with the same cadential mordent (in this case beginning on the upper neighbor note and including four notes).

I/19.1.4 What is happening in this prelude?

The subject of this "fugue" is two and a half bars long. Beginning on the downbeat of bar 1, its first subphrase ends with a sixteenth-note rest on the fourth beat of the same bar; the second subphrase, consisting exclusively of regular sixteenth-notes which descend in half-bar sequences, concludes with the C[#] on the middle beat of bar 3.

The fact that the rest in the middle of the subject is of structural importance (and not tension-sustaining) follows from the relationship among the preceding notes. The F[#] on the middle beat of bar 1 is composed as an *appoggiatura* which resolves indirectly, i.e. through an artificial leading-note) onto the eighth-note E. This resolution concludes a dynamic curve and thus marks the end of the first subphrase. The scalar ascent after the rest picks up the tension and prepares a second climax on the downbeat of bar 2. The sixteenth-note figures in the second subphrase contain an interesting feature. Stripped of what may be recognized as ornamental splitting, the underlying quarter-note pattern contains the same descent in consecutive fifth which the middle and lower voices present in simple intervals. (Ex. 2 shows this simplified melodic line.)

The subject recurs five times (see diagram below). The only modification it suffers occurs at the beginning of the second section where the four initial sixteenth-notes sound an octave higher than the remainder of the phrase. (This is certainly due to the confines of the keyboard in Bach's time: continuing in the high register for even the first subphrase alone would not have been possible).

Faithfully throughout the entire "fugue" - including the initial, normally unaccompanied entry - the subject is supported by two companions:

CS1 is introduced in the lower voice. As is revealed by all its later statements, it commences on the second beat of bar 1; the A on the first beat is a harmony-supporting note of no melodic relevance. CS1 also consists of two segments. The first, a chromatic descent through four quarter-notes, recurs regularly; the second, introduced here as cadential intervals, appears in constant variation, while always preserving its cadential character.

CS2 is first presented in the middle voice. It begins belatedly, after the end of the subject's first subphrase. As was already mentioned, its predominant feature are the syncopations. The first two of them

together with their falling fifth remain essential material of this counter-subject throughout the piece, whereas the closing-formula experiences constant variation.

Both counter-subjects represent a decreasing tension as their overall dynamic design. Their variations modify only the details but not the principal outline (see ex. 2).

In addition to this primary material, two of the subject-free passages feature in their upper-voice lines a three-note episode motive, M1, presenting Bach's famous *upbeat + appoggiatura-resolution* figure; this motive can be regarded as remotely related to the subject's first subphrase (see the simplified version in ex. 2). In bars 6m-8m, M1 is underscored by a parallel and accompanied by sixteenth-note figures in descending sequences; in bars 14m-17m, the middle and lower voices create a complementary pattern of descending scales, also in sequences. The reason why this episode is longer than the first one lies in the difference between the harmonic processes: while the first episode only links the dominant (reached at the end of the subject answer in bar 6m) with the tonic (on which the third subject statement begins in bar 8m), the episode in the second section modulates from the relative minor (in which this section commences) back to A major (which reigns from bar 17m onwards for the remainder of the fugue).

(ex. 2)



The structure of this "fugue" is very straight-forward. Each of its two sections comprises three statements - one in each of the three voices, connected with half-bar links - as well as a bridging episode and a cadential close.

bar	1	2	3	4	5	6	7	8	9	10	11	12	
U	SUBJ ECT			CS2			<	<i>epi-</i>	>	CS1		<	caden-
M	CS2			CS1			<	<i>sode</i>	>	SUBJ ECT		<	tial
L	CS1			SUBJ ECT			<	with <u>M1</u>	>	CS2		<	close

bar	12	13	14	15	16	17	18	19	20	21	22	23	24
U	SUBJ ECT		<	<i>epi-</i>		>	CS2		SUBJ ECT		<	caden-	
M	CS2		<	<i>sode</i>		>	CS1		CS1		<	tial	
L	CS1		<	with <u>M1</u>		>	SUBJ ECT		CS2		<	close	

WTC I/19 in A major - Fugue

I/19.2.1 The subject

The subject of this fugue is most unusual, in several regards. It commences with a single eighth-note on the downbeat of the first bar, followed by three eighth-note rests. Such a brusque beginning appears

almost as a conscious attempt to avoid any resemblance with a *melodic* character. This impression is reinforced by the continuation of the subject after the rests. A sequence of five perfect fourths jumping upwards in regular eighth-notes mock the listener's hope for a line, while also blurring the 9/8 time signature with their groupings of two eighth-notes each.

It is only after one and a half bars that this pattern is interrupted and, interestingly, the change happens on three levels simultaneously. On the rhythmic level, the D on the sixth eighth-note of bar 2 suspends the regularity, if not monotony, of the eighth-note pulse with a syncopation. On the melodic level, the descending semitone D-C[#] on the seventh and eighth eighth-notes of bar 2 represents the first interval to express some emotional tension. Finally, on the harmonic level, the suspension generated with the syncopation creates an *appoggiatura*, i.e. a non-harmonic note which requires resolution.

The concurrence of these three features allows a satisfactory conclusion of the subject only with this resolution on the eighth eighth-note of bar 2. (The harmonic design supports this concept; see below). The recognition of this range reveals yet another unusual feature of this subject: initial statement and answer appear in stretto, a device normally strictly reserved for entries outside the exposition.

With regard to the question of subphrasing this subject is probably interpreted best as consisting of two segments: the initial note with an implied subsiding of the tension during the rests, and a curve from the fifth eighth-note to the end. (Another concept, in which the rests would serve to heighten the tension from the initial downbeat to the continuation of the line, is theoretically possible but in practice somewhat artificial.)

Bach's harmonizations of the subject in the course of the fugue contain a variety of small changes. They all have in common that the first representative of the subdominant appears at the end of the first bar, followed on the downbeat of the second bar by the dominant (see e.g. bars 5 and 24). This leads then into an interrupted cadence (mostly on the second eighth-note of the subject's second bar), and the return to the tonic only occurs with another S-D-T progression (ex. 3):



As is obvious from what has been explained above, the tension within this subject climaxes on the syncopation. The dynamic outline thus consists of a moderately attacked initial note followed by an implied release during the rests, and a gradual *crescendo* which sets out from a fairly soft level, leads to a peak on the syncopation and is complemented by a short relaxation.

I/19.2.2 The statements of the subject

The A major fugue contains fourteen subject statements.

- | | | | | | |
|----|------------|---|-----|------------|----|
| 1. | bars 1/2 | U | 8. | bars 23/24 | L |
| 2. | bars 2/3 | M | 9. | bars 25-27 | U* |
| 3. | bars 4/5 | L | 10. | bars 27-29 | M |
| 4. | bars 6/7 | L | 11. | bars 31/32 | M |
| 5. | bars 9/10 | U | 12. | bars 33-35 | L |
| 6. | bars 13-15 | L | 13. | bars 42/43 | M |
| 7. | bars 16-18 | L | 14. | bars 44-46 | L |

(Note the voice crossing in bars 23-27: M sounds temporarily above U.)

(ex. 4)



The subject experiences a great number of changes throughout the fugue. In fact the only feature which is reliably found is the interval structure of the sequenced fourth in its center.

- (a) The beginning of the subject appears modified in various ways.
- * In two instances, the initial note appears in a different octave from the remainder of the phrase. (See in bar 13 where it is one octave lower, and in bar 27 where it is one octave higher.)
 - * In two other instances, the initial note belongs to a key which is subsequently given up. This modulation causes the second subphrase to sound as if displaced. (See bar 16: initial B in B minor, continued as if in F[#] minor, later modulating to E; bar 42: initial F[#] in F[#] minor, continued as if in A major but resolution returning to F[#] minor).
 - * In a fifth case, the curious one-note subphrase is completely altered. In bar 31, the downbeat-note has become a rest and the three ensuing rests are replaced by notes. As these notes appear in the form of an additional ascending fourth (enhanced by a syncopation), they give the impression to extend the second subphrase, and thus change the subject in this statement into one indivisible unit.
- (b) The center of the subject with its consecutive fourths is also modified in detail and in length.
- * Some modifications are tonal. In the answer statements (see e.g. in bar 2 and 6), the first fourth interval of the second subphrase is placed one tone lower. Similarly in bar 13, the first leap appears as a diminished fourth. This is due to the minor mode of this statement and must thus be regarded as another tonal adjustment.
 - * In bars 16/17, the third of the consecutive fourths is augmented. This interval modification is an artificial one; it marks the pending modulation to E major. Similarly in bars 33/34, the augmented fourth E-A[#] and the diminished fourth A[#]-D are witnesses of the modulation in this statement from D major to B minor.
 - * Three statements feature alterations in the length of the sequenced-fourth pattern. In two instances there is an inner extension: bars 25/26 contain two and bars 33-35 three additional eighth-notes in the fourth pattern. By contrast, in bars 16/17 the consecutive fourths are shortened by two eighth-notes.
- (c) The syncopation, seemingly so characteristic in this subject, is not exempt from changes; it is displaced in various ways or even entirely dropped.
- * In bar 34, it is delayed by three eighth-notes but basically retains its position (with tie-suspension and weak-beat resolution).
 - * In bar 26, owing to the subject's extension by two eighth-notes, the syncopation appears later and in a different metrical position (with a strong-beat resolution).
 - * In bar 17, after the shortening in the consecutive-fourth pattern, the longer note falls on the fourth eighth-note in the bar - which in the compound time of 9/8 is not a weak beat - and thus, despite its tie prolongation, forfeits the character of a syncopation.
 - * Finally in bars 44/45, the second subphrase progresses in uninterrupted eighth-note motion without any longer note value.
- (d) Finally, the end of the subject also contains various modifications.

- * In three instances, the resolution expected after the syncopation is delayed. In bar 28, this occurs without any further changes in the harmonic pattern; in bar 17, the modulation from B minor to E major has already taken place earlier in the subject statement, and the delayed resolution arrives on the expected pitch. In bar 14, however, the deviation leads from G[#] to an A[#] which then resolves onto B - instead of the expected A. This alteration is not merely one of melodic detail but entails a modulation from F[#] minor to B minor in this final extension of the subject.
- * The final subject statement in the fugue features a freely varied ending (see bars 44-46).

Interestingly, the only true stretto in this fugue is the one between the initial statement and its answer, in bars 1-3. Further in the course of the composition, subject entries appear neatly separated from one another. There is one instance, however, where the rhythmic pattern of the voices accompanying a subject entry contains a hint of stretto. In bars 25/26 the middle and lower voices, accompanying the upper-voice entry, feature a single eighth-note on the second of the compound beats, followed by three eighth-note rests and a sequence of eighth-note notes in leaps of fourths. Although neither the intervallic connection between the two subphrases nor the end follow the original shape of the subject, the entry of this rhythmic group gives the impression of a stretto. Due to the many sequences typical in this subject, this impression soon turns into one of parallel or parallel in contrary motion respectively (see bar 26).

I/19.2.3 The counter-subject

In the main body of the fugue, the voices accompanying the subject statements display hardly any characteristic or even recurring features, and true contrapuntal lines are non-existent. The small figures which do appear repeatedly are all derived, in a more or less direct way, from the subject.

Only with the introduction of regular sixteenth-note motion from bar 23 onwards can one distinguish voices to such an extent as to follow more than one longer melodic idea at a time. These sixteenth-notes create a companion to the subject which recurs once. In its original appearance CS commences on the downbeat of bar 23 (middle voice) and ends on the third sixteenth-note of the third group (see M bar 24 beat 8: A). When taken up in bars 27-29, the counter-subject can be regarded as extended along with the subject; its end now falls on the downbeat of bar 29.

This counter-subject does not seem to contain any features which would distinguish its dynamic outline. The absence of any rhythmic hallmarks within the constantly flowing sixteenth-notes and of particular intervals or otherwise highlighted melodic features classify it as a passively jingling accompaniment rather than a competing partner. In order to distinguish CS from the many other sixteenth-note figures yet to come, it is possible to stress the hidden line inside the runs.

The example displays what the intensity shading in this interpretation entails (ex. 5):



In the passages of the fugue which are devoid of sixteenth-note motion one can discern three little motives which appear repeatedly (see examples 6a, 6b, 6c below).



M1 first emerges in U: bars 3/4. With its fourth jump, tied note and weak-beat resolution it sounds like a free sequence of the five final notes of the subject. This motive recurs at the beginning of bars 5, 6 and 7, each time in the middle voice. (Furthermore, variations of this figure can be found in U: bar 43 and M: bar 44.)



M2 is introduced in U: bars 5/6. Here an initial tied note and weak-beat resolution are complemented by two eighth-notes in zig-zag motion (third or fourth up + fifth down). This figure imitates the end of the subject's answer plus the two notes which follow it until the next downbeat (see M: bars 3m-4d).

M2 recurs in bars 7/8 (U+M in parallel), 8/9 (M), 10/11 (M, imitated in U), bars 11/12 (L, imitated in U), 17 (M, imitated 17/18 in U, then sequenced in M), 18/19 (U), 22 (M), 43/44 (U), 46 (M), 47/48 (U), 51 (U), 52/53 (M). (If one allowed for interval modification, many more recurrences could be observed.)

M3 appears as an emotionally even more intense combination, consisting of two tied-note+resolution pairs in ascending sequence. This figure occurs three times: in bars 12/13 (M), 13/14 (U), 16 (U).

I/19.2.4 The episodes

There are seven subject-free passages in this fugue.

E1	bar 8	E5	bars 29/30
E2	bars 11/12	E6	bars 35-41
E3	bar 15	E7	bars 46-54
E4	bars 18-22		

Several of the subject-free bars use no recognizable melodic material, they fulfill no function other than that of a cadential close. This is true for E3 and E6a (bars 35-36d) which are both extended cadential formulas in B minor, and the last bar of E6 which presents a closing-formula in F[#] minor.

More frequent are episodes - or segments thereof - which play with one of the motives before they give in to the conclusion:

- E1 commences with an M2 parallel followed by a closing-formula in A major;
- E2 contains two M2 imitation patterns before ending in F[#] minor with M3 accompanied by a cadential bass pattern;
- E4a, E7a (the first segments of E4 and E7) both feature M2 with free imitations in the lower voice before leading into a cadential close in E major and A major respectively;
- E7c (see from bar 51) also presents M2 with free imitation, now accompanied by sixteenth-note motion in the lower voice which also concludes in a cadential-bass pattern

Three episode segments reveal a particularly close relation to the primary material, by using larger fragments of the subject and the counter-subject:

- E4b (see bars 20-22) exposes in its upper voice a little six-eighth-note figure which is imitated in stretto (see U/M: bars 20/21); next follows a rhythmic variation of the subject, also with imitation (see bars 21/22; due to the pattern of consecutive eighth-notes, both imitations soon appear as parallels).
- E5 features the first half of CS (see U: bar 29, imitated in L) as well as freely jumping eighth-notes (L, imitated in U);
- E7b takes up this combination in transposition (see bars 49/50), while
- E6c recalls it in free variation (see bars 39-41d).

The only episode portion to feature a larger motive is the second segment of E6 (see E6b in bars 36-39₄). This is particularly noticeable since all three voices establish patterns of twelve-eighth-note length, and thus momentarily weaken the metric order of the nine-eight time.

- The upper-voice motive spans from the D on the second eighth-note of bar 36 to the long B on bar 37d; it is imitated in the middle voice (from E to C#).
- The middle-voice motive, from bar 36 F# to bar 37 E, is similarly imitated in the upper voice (from G# to F#).
- Both motives then appear once more in their original position, but break up after the first half (see bars 38-39).
- The lower-voice figure in running sixteenth-notes has the same length; it reaches from bar 36 F# (the second sixteenth-note) to bar 37 C# (on the second compound beat) and is sequenced (from the following G# to D in bar 38) and then followed by a partial sequence of its center portion.

As the above-listed material reveals, several of the episodes are related:

E6a	corresponds with	E3
E7a	corresponds with	E4a
E7b	corresponds with	E5

In a wider sense, E6 and E4 are conceived in structural analogy: both commence with a segment providing a cadential close, after which they proceed to present some genuine episode material which is imitated; both then continue with a variation of primary material (a variation of the subject in E4, a variation of the "counter-subject episode" in E6), and both conclude in another cadential formula.

The role these episodes play in the development of tension within this fugue is determined, on the one hand, by the frequent use of extended cadential formulas and, on the other hand, by the relative independence of the material presented. There are episodes or segments thereof which complement the preceding subject statement with a straight-forward relaxation; this is the case in E1, E2 and E3, as well as in E4a and E6a. Other episodes serve as bridges; this is especially true of E5, less of the passages corresponding with it. On the other side there are those episode segments which, after a cadential close but before the beginning of the next subject entry, attract attention for their own sake; they are the ones which require the most radical change of color in order to be fully appreciated. E4b and E6b are most obvious examples. The only subject-free passage not to fall into one of these patterns is the final episode (E7). Its three segments, which all allude to different models heard before, seem primarily to express a reluctance to end the fugue.

I/19.2.5 Character, tempo, articulation, ornament realization

The pitch pattern with its predominance of fourth jumps, and the rhythmic pattern with its regular eighth-notes accompanied in the center sections of the fugue by equally regular sixteenth-notes, both clearly suggest a *rather lively* basic character. The tempo of this fugue may be fairly swift. The nine-eight time given by Bach should be interpreted as a choice of notation rather than of pulse, and be rendered with the idea of a compound triple time with triplets in mind.

Articulation in this piece needs careful planning if it is not to destroy essential musical details. The basic attitude corresponding with the character encompasses:

- for the eighth-notes distinct *non legato* (in a crispness which comes close to the *staccato* touch of later musical eras)
- for the quarter-notes *non legato* of more extended duration
- for the sixteenth-notes a *quasi legato* of almost Classical *leggiero* quality.

These basic categories, however, include important exceptions:

- Within the *non legato*, all *appoggiaturas* must be linked to their resolutions. This applies to the *appoggiaturas* in the subject as well as to those in M1, M2 and, twice, in M3. In addition, several notes in the cadential formulas demand *legato* (see bars 15/16 M: D-C[#]-D; bars 19/20 M: E-D[#]-E, bars 22/23 U: A-G[#]-A; bars 48/49 M: A-G[#]-A; bars 53/54 U: A-G[#]-A).
- Within the *quasi legato* of the sixteenth-notes, a distinction is desirable between the "hidden" melodic notes in the counter-subject and the remaining notes of more directly virtuoso quality.

The relative tempo of the prelude to the fugue in A major can be rendered in two slightly different ways, depending mainly on whether one wishes to emphasize the contrast of characters, with a more lyrical prelude preceding a more virtuosic fugue (a) or, on the contrary, diminish it, so that a prelude of *Allegretto* motion is followed by a fugue in *Allegro ma non troppo* (b).

(a)	one sixteenth-note in the prelude	corresponds with	one eighth-note in the fugue
(b)	one quarter-note in the prelude	corresponds with	one dotted quarter-note in the fugue

The fugue contains two ornaments. One of them, that in bar 8, is a typical attribute of cadential formulas; as such it should be transferred also to the corresponding formula in bar 41 (on the dotted G[#]). The second ornament is designated in bar 26. All of these ornaments commence on the upper neighbor note and move in thirty-second-notes. The one in bar 8 comes with a written-out suffix, while its structural counterpart in bar 41 is followed by a weak-beat resolution. The latter thus represents an interrupted trill which stops short on the fourth note within the shake which is then tied over and sounds as a syncopation to the last eighth-note in the bar. The trill in bar 26, like that in bar 8, is a note-filling trill which comprises eight thirty-second-notes, including the suffix notes.

(ex. 7)



I/19.2.6 The design of the fugue

The fugue in A major contains several features which provide clear indications of the structure. These are found, in the first instance, in the change of rhythmic pattern and the choice of the episode material and the texture, and in the second instance, in the order of subject entries and the harmonic design.

The emergence and disappearance of the sixteenth-note accompaniment allows for three large portions to be distinguished. The first ends on bar 23d, the second on that of bar 42. These two structural caesuras are preceded by those episodes which, as was shown above, are conceived in structural analogy: E6 and E4 both consist of a segment with a cadential close followed by genuine episode material and a variation of primary material. The fact that the subject statement in bars 23/24 appears in reduced ensemble further supports the first caesura.

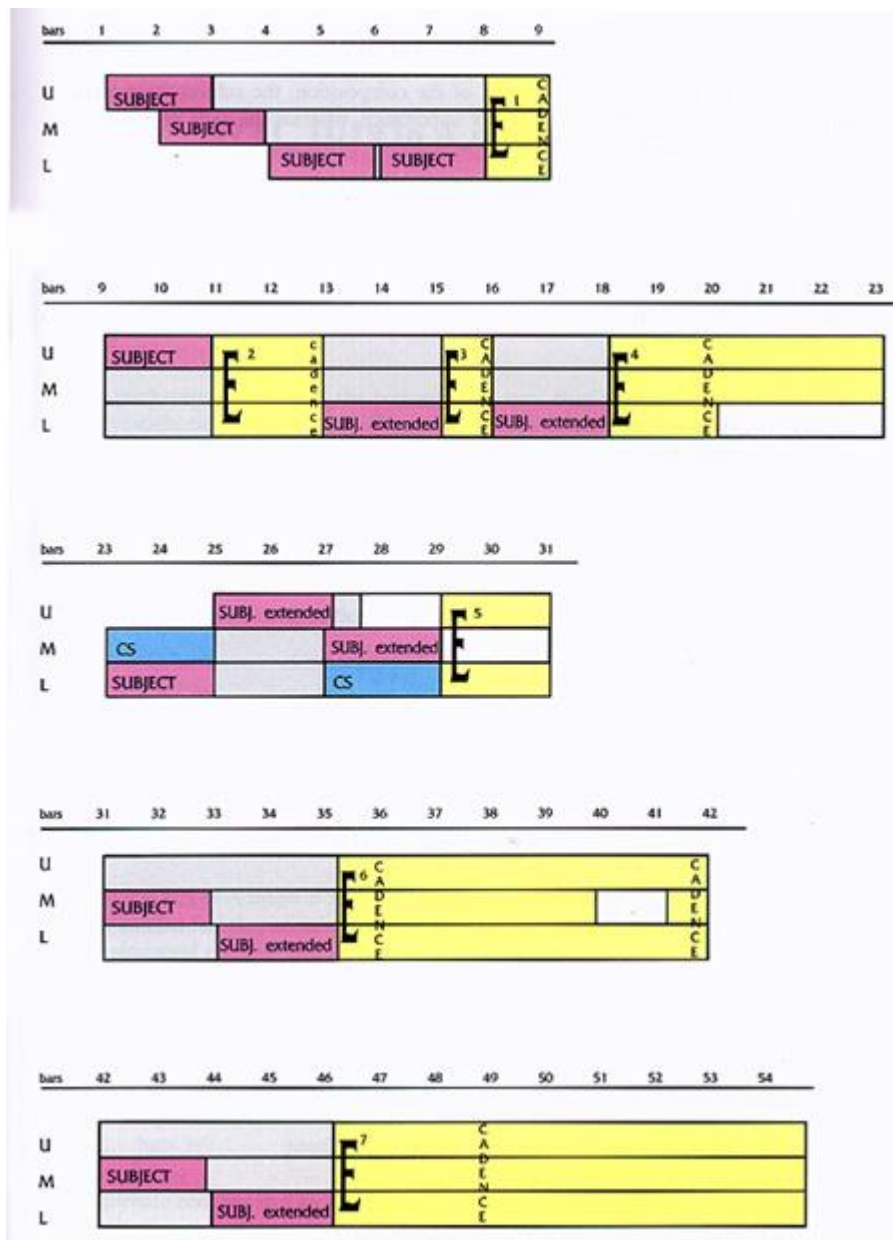
Within the first of these larger portions, the redundant lower-voice entry in bars 6/7 announces the imminent end of the first section which is confirmed by E1 with its cadential formula. The second section of the fugue thus begins in bar 9; it also contains a redundant lower-voice statement which appears as a repetition of the one preceding it (compare U bars 4/5, 6/7 with U bars 13/14, 16/17).

Within the second larger portion, the only inner episode (E5) concludes the third section after a complete set of three statements, one in each of the voices. The fourth section then begins in bar 31 and contains two subject entries as well as the closing episode. The relationship between the statements of each of these sections is also confirmed by the harmony: while the three statements of the third section appear in the keys of tonic and dominant, the two entries of the fourth section are placed on the subdominant (D major and its relative B minor).

The third portion contains only two subject statements followed by a long episode. No further subdivision into sections is possible here. There are three facts, however, which demand a slight modification of this concept: the final episode consists of several structurally distinct segments; the first of these segments concludes with a cadence in the tonic (in bars 48/49); and, above all, the sixteenth-note motion characteristic for the center portion of the fugue but abandoned in the fifth section is taken up again from bar 49 onwards. These features indicate that one should regard the fifth section as completed on the downbeat of bar 49, and interpret the final six bars as a coda.

The harmonic outline of the fugue confirms the structure described above. The four initial subject statements are in A major, the key in which the first episode concludes the first section. After another entry on the tonic, E2 modulates to the relative minor key. The following two statements each modulate (F[#] minor/B minor and B minor/E major), but E4 closes the section again in the tonic. The third section resembles the first one in that its statements all relate to the tonic. The fourth section, just like the second one, leaves the home key area, this time for the subdominant and its relative minor. The episode which closes this section re-establishes not the tonic but its relative F[#] minor, leaving the final return to the home key to the second, modulating statement in the fifth section.

For a sketch showing the design of the fugue in A major see ex. 8.



I/19.2.7 The development of tension

The four initial entries of the fugue create, by way of their descending order, the deceptive impression of a four-part fugue. The tension grows throughout and is only released in the short episode which follows. The second section features a reverse of this process. Its first entry is the only harmonically stable one in the original major mode, while its second statement commences in minor and ends in a modulating extension. The third entry, conceived again as a redundant statement, is varied to such an extent that it appears much weaker than the preceding one. This section comes to a transitory close in very soft shading on the downbeat of bar 20, after which the remaining segments of E4 create an independent little tension curve.

As the third section commences in reduced number of voices, and, furthermore, as its three entries in L, U and M are arranged in such a way that their actual pitch position (particularly that of the initial notes) sounds in ascending order, a gradual increase of tension similar to that in the first section is created. The fourth section recalls the second one insofar as it also proceeds from the major to the minor mode in decreasing tension, and also comes to a transitory close in soft color after the first segment of its

concluding episode, after which the remaining segments of E6 attract fresh attention for their motivic material.

The fifth section begins in the minor mode. Its second subject statement, although returning to major and even, in its extension, to the tonic, remains comparably inconspicuous. In the coda, however, the prolonged ascent of the jumping eighth-notes in bars 49-51 engenders a final climax which is now virtuoso rather than thematic.

The relationship between the sections is an important feature of this fugue and should by all means be conveyed in performance. The increase of tension in the first section and the complementing decrease in the second section, followed by the small tension curve in E4, all find a faithful correspondence in the increase of tension in the third section, the complementing decrease in the fourth section and the following small tension curve in E6. In the final portion of the composition, the subject statements appear merely as an afterthought of lesser importance, whereas the coda provides an unexpected additional climax.

As can be seen from all that has been said above, the A major fugue contains all the structural ingredients of a "real" fugue; however, due to its unusually non-melodic subject, orientation for the listener may be extremely difficult. Only the most exquisite color shading and careful articulation (see particularly the *appoggiaturas*) can guide one through this apparent jungle of jumping intervals and make this composition a fascinating experience.

WTC I/20 in A minor - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/20.1.1 The prelude-type

This prelude displays a contrapuntal texture, with principally two voices embarking on melodic processes. The two-part structure is, however, not strictly observed but thickens occasionally as supporting block chords are added (see bars 5, 6, 7; 9, 10, 11) or a *legatissimo* is spelled out, especially in the sense of an overlapping of one sound over a number of consecutive pitches (see bars 13-15, 16+18, 17+19, 26-28). With regard to material organization, the composition builds entirely on one motive, the slightly ornamented broken-chord figure introduced in U: bar 1. The prelude can therefore be regarded as conceived along the lines of a two-part invention.

I/20.1.2 The design of the prelude

The principal motive of the "invention" establishes, in conjunction with its two sequences and a complementary figure in the fourth bar, a four-bar phrase which constitutes a complete harmonic progression. The coincidence of the cadential close in bar 4 with the end of the larger melodic idea does not, however, allow this to be regarded as a caesura of larger structural bearing.

The second harmonic progression concludes in analogy to the first after the statement - now in the lower voice and in E minor - of the four-bar melodic idea (see bar 8). Yet listeners have to wait until the end of the subsequent development, again four bars long, for the relaxation and cadential close which indicate a break in the overall structural layout of the prelude. The harmonic conclusion comes after a modulation to C major and falls on the downbeat of bar 13.

Three structural sections can be distinguished in this prelude:

- I bars 1 - 13 tonic - minor dominant - tonic relative
- II bars 13 - 22 tonic relative - tonic*
- III bars 22 - 28 confirmation of tonic

(* The harmonic conclusion of section II is very strange. One is expecting a return to the tonic, and the consecutive iv - vii⁷ (see bars 20/21: D minor and G[#] diminished-seventh) seem to confirm this. At the very last moment, however, the lower voice sidetracks with a jump to C (see bars 21/22). The A minor chord at the expected end of the cadence thus appears in inversion and fails to satisfy the listener's demand for a resolution.. Even more strangely, the process is repeated similarly three bars later: the left-hand progression G[#]-A-B (A) diverts to C, and an unusual major-seventh jump adds to the harmonic irregularity. It is only after yet another cadential bar that the downbeat of bar 26 finally presents the true tonic bass.)

No larger portion of the prelude recurs anywhere later in the piece. As was already mentioned, the initial four-bar phrase is taken up correspondingly and in inverted voices in the subsequent four bars; but as this constitutes the imitation process anticipated at the beginning of any invention, it has no further structural relevance.

I/20.1.3 Practical considerations for performers

The pitch pattern of this prelude displays primarily a combination of broken chords in eighth-notes and ornamental sixteenth-notes (see e.g. the spelled-out trills in L: bars 1-3). As in addition, the rhythmic pattern is simple, consisting predominantly of eighth-notes and sixteenth-notes, the basic character of this prelude is no doubt *rather lively*.

The tempo should be taken fairly swift, with the nine-eight time signature read as a convenience for three-four time with triplets. The appropriate articulation includes *non legato* for the eighth-notes and *quasi legato* for the sixteenth-notes. The score does not contain any ornament symbols.

I/20.1.4 What is happening in this prelude?

The principal motive M (see U: bar 1) consists of an A minor chord broken in zig-zag, changing direction with each of the three compound beats: up, down, up; only the very first interval leap is filled with a passing note. This one-bar motive is sequenced twice (see bar 2: one step up, bar 3: three steps up), after which the gradual ascent is complemented with the upper keynote on the downbeat of bar 4. The following passive descent consists of a run and a falling A minor chord in a complementary pattern between both hands. This descent appears more like a link than an integral part of the four-bar phrase, and later modification can easily be anticipated.

Only the very last eighth-note in bar 4 announces the shift from the tonic to the minor dominant with a D[#], representative of the chord B-D[#]-F[#]-A, the dominant-seventh of E minor. It is in this key that the four-bar phrase is then imitated by the lower voice.

The link following the imitation in bar 8, features the run and broken chord in ascending direction. The final eighth-note of the bar (A[#]) seems again set to initiating a harmonic shift, this time to the key of B. However, the ensuing M entry (see L: bar 9) renounces the modulation and commences once more on E. The shape of the four-bar phrase is modified here. The two sequences of M are descending in steps and the linking bar, instead of displaying a complementary pattern splits the original ingredients. Simultaneously featuring runs in the upper voice and broken chords in the lower, it ends the first section of the piece.

Throughout the entire initial section, the contrapuntal figure is characterized by a long note on the first compound beat in each bar followed by a trill figure on the second one. Within the initial phrase, both the long note and the trill represent a tonic pedal, while in the imitation and the developing phrase, block chords and moving trills accommodate the steps of the harmonic progression. The final three-eighth-note group in each bar seems to serve as a small-scale link, consisting of broken chords in the initial phrase but of varying runs in the second and third phrases.

The second section sets out in bar 13 with M and its original four-bar phrase back in the upper voice and the sequences once more moving upwards. There are, however, two new modifications: the contrapuntal motive here omits the trill figure and instead complements the long notes at the outset of each bar with runs throughout the remainder of the bars; and the link at the end of the phrase combines the idea of a run with that of the broken chord by retaining the chord notes from within the run in a split-voice texture (see bar 16).

This phrase ends in C major, without any sign of a modulation even in the final eighth-note of bar 16. One is thus surprised by the next bar which is unexpected both in pattern and in harmony. Over a repeated pedal note, whose pitch is that which a very mindful listener might have anticipated for the pivotal eighth-note (F[#], of D-F[#]-A-C), the upper voice fills in the remaining chord notes in a new complementary pattern. The resolution of this modulating chord follows immediately with the pattern newly established shortly before, in the final bar of the C major phrase (compare bar 18 with bar 16); a sequence of the "pivot-chord bar" then leads to D minor (bar 20). The last two bars of the second section come full circle with the principal motive, now in the lower voice, accompanied by a free variation of the modified contrapuntal figure (compare U: bars 20/21 with L: bars 13-15). The unusual harmonic ending of the section has already been commented on (refer back to footnote 1 of this chapter).

The beginning of the third section gives the impression of a recapitulation: the upper-voice motive commences identically with the original in bar 1, and the contrapuntal motive also takes up the trill-figure

familiar from the first section (compare bar 22 with bar 1). The third beat of the same bar, however, already features a variation in the motive; the second bar of the section is harmonically diverted (compare bar 23 with bar 2), and the expected third segment of the sequential pattern is substituted by a closing link which (similar to that which concluded the initial section in bar 12) leads to the reiteration of the cadential-bass deviation (see bars 24-25d). The remainder of bar 25 continues the scalar descent and, more importantly, corrects the cadential close by reiterating it with the "proper" bass steps and melodic leading note.

Finally, bars 26-28 are built upon a tonic pedal. The lower part with its splitting voice is reminiscent of the beginning of the second section (bars 13-15), while the upper voice displays a free variation of the principal motive. The trill figure, added at the very last moment in a split-half of the upper voice, recalls once more the characteristic feature of the original contrapuntal figure, and thus ends this invention with a five-part A major chord.

The dynamic presentation of the composition should be designed to reflect the structural outline as well as the varying thematic density.

- The climax of the first section falls on bar 9 where, after two four-bar phrases in protracted *crescendo*, the developing phrase sets in with a sudden major mode, and with both voices rather highly pitched.
- The second section reaches its dynamic peak already at the end of its initial phrase (see bar 16); from there onward, the tension recedes in gradual waves. (Careful: The G# on the downbeat of bar 21 often blurts out because of the preceding large leap but should actually be very soft, in keeping with the pending cadential close.)
- In the third section, the dynamic curves are very gentle as long as tonal stability is still awaited. Then, however, in the final three bars with their multiplying parts, a powerful *crescendo* leads to a rich completion.

WTC I/20 in A minor -- Fugue

I/20.2.1 The subject

This subject is exactly three bars long. It begins on the second eighth-note of bar 1 with the keynote A and concludes with the same note on the downbeat of bar 4. The eighth-note rest in the middle of the phrase appears between, on the one side, a strong-to-weak descending third which causes a momentary relaxation of tension and, on the other side, a new upbeat; it must therefore be interpreted as an indicator of phrasing within the subject. The two subphrases divided by this rest are almost equal in length.

The pitch pattern in this subject presents two long stretches of smooth, stepwise motion, both of which end in consecutive jumps (bar 2: F-G#-E, bar 3/4: B-E-A.) The rhythm consists exclusively of eighth-notes and sixteenth-notes which appear in a simple pattern, without syncopation, tied notes or other outstanding features.

While this description of the obvious attributes is certainly correct, it does not yet convey the entire truth. Two additional observations shed light on the particularities of the melodic line. One regards the groups of sixteenth-notes. It seems interesting to notice that all of them are ornamental figures which embellish an underlying simpler line. (The first two groups, e.g., display the well-known inverted-mordent form.) The other observation regards this assumed simpler line. An investigation into the pitches documents that two of the subject's eighth-notes are of secondary relevance with respect to the melodic structure. In bar 2, the low E on the second half of beat 3 provides a harmonic foundation to the unusual diminished-seventh leap; melodically, however, it is an escape between the high tension in the G# and the resolution

brought about with the A after the rest. Similarly, the E at the end of bar 3 serves to keep the eighth-note pace going: melodically it is but an escape within the descending tetrachord D-C-B-A. The result of this short melodic analysis is a skeleton which, far from being "dead and horrid", enhances the comprehension of the subject (see ex. 14):



In the course of the fugue, Bach harmonizes this subject with slight variations. In bars 8/9 e.g., the dominant already appears on the downbeat of the second subject-bar, while in bars 4/5 the tonic is retained much longer and the dominant is only reached on the middle beat. Another discrepancy in the details of the harmonic design of the same two statements occurs in the second half of the subject. Bar 3d displays a dominant, re-established after a resolution onto the tonic of only one eighth-note duration, while the analogous bar 10d is already harmonized as a subdominant representative.

The basic harmonic outline, however, affirms a progression in which the two relevant steps are (1) the short-lived resolution of the dominant onto the tonic on the last eighth-note of the second bar, and (2) the complete perfect cadence underlying beats 3 and 4 of the third subject-bar and resolving on the final downbeat (ex. 15):



I/20.2.2 The statements of the subject

This fugue contains the proud number of thirty-nine subject entries. Particularly in the final portion of the fugue, many of them appear considerably shortened. In the list below, those statements which completely lack the second subphrase are marked with an asterisk. (Note that this fugue, while basically in four parts, introduces a fifth voice from the general pause in bar 80 onwards; this new voice establishes a tonic pedal in bars 83-87. It seemed practical, however, to retain the counting of the original four voices as soprano, alto, tenor and bass during these bars of five-part texture and use "bass 2" for the additional voice.)

- | | | | |
|------------------|------|------------------|--------|
| 1. bars 1 - 4 | A | 21. bars 57 - 60 | Sinv |
| 2. bars 4 - 7 | S | 22. bars 58 - 61 | Ainv |
| 3. bars 8 - 11 | B | 23. bars 62/63 | Binv * |
| 4. bars 11 - 14 | T | 24. bars 62/63 | Tinv* |
| 5. bars 14 - 17 | Sinv | 25. bars 64 - 67 | B |
| 6. bars 18 - 21 | Tinv | 26. bars 65 - 68 | T |
| 7. bars 21 - 24 | Binv | 27. bars 67 - 70 | Sinv |
| 8. bars 24 - 27 | Ainv | 28. bars 68 - 71 | Ainv |
| 9. bars 27 - 30 | S | 29. bars 73 - 76 | Binv |
| 10. bars 28 - 31 | T | 30. bars 73 - 76 | Ainv |
| 11. bars 31 - 34 | A | 31. bars 76/77 | Tinv* |
| 12. bars 32 - 35 | B | 32. bars 77/78 | A |
| 13. bars 36 - 39 | T | 33. bars 77/78 | S * |
| 14. bars 37 - 40 | A | 34. bars 80 - 82 | A |
| 15. bars 43 - 46 | S | 35. bars 81/82 | S |

16. bars 43 - 46	B	36. bars 83-85	B _{inv} *
17. bars 48 - 51	A _{inv}	37. bars 84/85	T _{inv} *
18. bars 49 - 52	T _{inv}	38. bars 84 - 86	S
19. bars 53 - 56	B _{inv}	39. bars 85/86	A *
20. bars 53 - 56	S _{inv}		

(ex.16)



In the course of the fugue, the subject experiences a number of variations, harmonic modifications and abbreviations. The most frequently occurring change of shape is the inversion; nineteen of the thirty-nine statements, i.e. almost exactly half of the total number, appear in reverse direction of intervals. Other variations can be grouped as follows:

- The second-last note of the subject, earlier described as "of secondary relevance for the melodic structure", is omitted in bar 70 (A) and substituted by an ornamental figure in bars 17 (S) and 26 (A); the ornamental substitution followed by a displaced final note occurs in bars 20/21 (T), 23/24 (B) and, with a slightly different ornamental figure, in bar 60 (A). As all these variations happen in inversions, one might get the impression that they are due to the reverse interval direction. However, the four inverted entries in bars 48-56 appear without any such adjustments.
- The four final eighth-notes of the subject are substituted by longer note values and harmonic deviations in bars 60 (S) and 75 (B), whereas in bar 76 (A) they are simply cut off.
- Even shorter versions of the subject appear towards the end of the fugue where the second subphrase is only represented by two notes (see A: bars 80-82) or even one (see A: bars 77/78, S: bars 81/82 and bars 84-86). In two other instances, the subject statement breaks off after the eighth-note rest (see T: bars 76/77, A: bars 85/86). Still shorter, in two further statements the last two eighth-notes of the first subphrase are replaced by a quarter-note, thus supporting the interpretation that this final eighth-note is another structurally non-essential note (see S: bar 82 and A: bar 86).
- Even less substance is left where not only the second subphrase is completely dropped but the end of the first subphrase is already varied. In bars 83/84 (B), only the initial eleven eighth-note beats of the subject appear intact; in bars 77/78 (S), this is reduced to ten eighth-note beats and in bars 84/85 (T) to only eight eighth-note beats. All these subject entries appear, however, as structurally important components of strettos.
- The shortest of the abridged subject statements are of equal length as the episode motive which often quotes the subject's initial bar; this creates confusion - a confusion, however, which was obviously intended by the composer. Thus in bars 62/63 the stretto between bass and tenor, featuring incomplete first subphrases in both voices, does not immediately reveal whether its loyalty lies forward or backward. Only in-depth analysis will show whether these are "false entries" or structurally relevant ones.

Harmonic alterations of considerable impact occur frequently (see e.g. bars 10 (B), 19-21 (T), 44 (B), 58/59 (A), 69/70 (S), 74/75 (A)).

Strettos are a characteristic feature in this fugue; in fact, from bar 27 onwards, not a single subject statement appears without overlapping with another entry. Towards the very end of the fugue, strettos even involve three voices, as in bars 76-78 (T/A/S) or four, as in bars 83-85 (B/T/S/A). As the distance of imitation in the strettos is usually four eighth-notes - the same length as the sequence at the beginning of the subject -, a short parallel results. However, parallels of any larger segments of the subject do not occur.

I/20.2.3 The counter-subjects

In a fugue which is so essentially based on stretto work, it is certainly not surprising that a characteristic and independent counter-subject will be looked for in vain. However, there are two short accompanying figures which, since they recur, deserve to be mentioned. Their common feature is that both establish a short parallel to one fragment of the subject (and are thus not truly polyphonically independent).

- In bars 4/5 the alto, having just introduced the subject, builds a counter-motive to the beginning of the subject answer. It consists of two descending tetrachords (see the eighth-notes A-G-F[#]-E and C-B-A-G), followed by a parallel of the first half of the second subject-bar, and ending, at the latest, with the B on the middle beat of bar 5. This counter-motive is taken up in bars 8/9 where it is shared between soprano and alto, and in bars 11/12 in the alto (where the tetrachords are reinforced by a parallel in the soprano). Later in the piece, the sequencing tetrachords alone, i.e. without the ensuing parallel turn-figure, recur frequently as a counterpart to a subject entry; see particularly bars 14-16 (B, T, A), bars 28/29 (B), bars 53/54 (T), bars 57/58 (T+B), bars 73/74 (T).
- In bars 18/19, the soprano creates a short parallel to the second segment of the subject's first subphrase; similar brief parallels occur in bars 21/22 (A), 24/25 (T). As these parallels can also be read as rudimentary imitations of the subject beginning, an interesting interpretation is that they are embryonic forerunners of the stretto entries to come.

I/20.2.4 The episodes

This fairly long fugue encloses altogether sixteen subject-free passages; most of them, however, are only very short.

E1 bars 7/8	E9 bars 52/53
E2 bar 14	E10 bars 56/57
E3 bars 17/18	E11 bars 61-62
E4 bar 27	E12 bars 63-64
E5 bar 31	E13 bars 71-73
E6 bars 35/36	E14 bars 79/80
E7 bars 40-43	E15 bars 82/83
E8 bars 46-48	E16 bars 86/87

In investigating the material used in these subject-free passages, two facts are outstanding: (1) many episodes are simple cadential formulas of one-bar length (or even only half-bar length), (2) several others feature the head motive from the subject. Here are the details regarding these two types.

(1) There are five episodes which consist of nothing but a cadential close:

- * E2 features the cadential-bass steps A-G-E as well as a *do-si-do* (keynote / leading-note / keynote) figure in the alto (see E-D[#]-E). It concludes on the middle beat of bar 14 in E major.
- * E3 combines the cadential-bass steps A-D-D-G with one of the typical closing-formulas - dotted note and anticipated resolution - in the soprano. It closes on the downbeat of bar 17 in G major.

- * In E4, the dotted-note closing-formula in the alto and the *do-si-do* figure in the soprano join the B-E-E-A in the bass in a cadence which regains the tonic A minor in the middle of bar 27.
- * The bass notes of E15 also represent the cadential steps in the home key; a typical melodic formula does not appear here.
- * The final one and a half bars display a complete harmonic progression over (and between) three tonic pedal notes. The subdominant of this A major cadence is strongly perceived only on the downbeat of bar 87 although it was already fully present on the preceding eighth-note; the dominant, substituted by a *vii*⁷, alternates with the major tonic before the progression concludes on the middle beat of this bar.

Three more episodes feature a harmonic close as their final segment:

- * The second half of E8, with the bass progression D-E-F-G-G-C and the melodic formula C-B-C in the soprano, presents a cadential close, this time in C major.
- * Similarly, E12 combines the cadential roots G-A-D with the dotted-note formula in the soprano.
- * A special case occurs at the end of E13 where the cadential close in F major, represented by the I-IV-V roots in the tenor (bars 72/73) and the dotted-note formula in the soprano (bar 73) overlap with the beginning of the subject statement in the bass.

- (2) The head motive of the subject (below referred to as M_s) occurs in seven of the episodes. It is often accompanied by a scale passage in sixteenth-notes.
- * E1 features only the inverted-mordent beginning of M_s (A), accompanied by an ascending scale (S) and followed by a descending one.
 - * In E3, the M_s is extended to the entire first bar of the subject and thus gives the impression of a false entry.
 - * E6 displays three consecutive combinations of M_s with the descending scale (see bars 35/36: B/A, S/A, B/A).
 - * The very last segment of E8 which succeeds the cadential close in the first half of bar 48 also combines M_s with the descending scale (S/A), and an imitation of the scale figure in the bass accompanies the ensuing subject beginning.
 - * The second half of E10 combines an inverted M_s (T) with a scale which bends back (A).
 - * In E7, the inverted-mordent beginning of M_s (bar 40: T) is unaccompanied but followed by scale figures (T/A/B).
 - * E12 is preceded by two very much shortened entries at the characteristic stretto distance (see bars 62/63: B/T), and followed by a descending scale (S); here the scale can be interpreted as a subtle means to lead the listener, after only a bar and a half of subject material, into the next episode.
 - * The final episode also separates the two components; an ascending scale (S) precedes a four-fold M_s (see bar 87: the double-note split of the tenor and, with M_s inversion, the double-note split in A).
 - * In E5, E8 (bar 46) and E9 the scale figure appears without M_s.

Besides the two components mentioned above, only three episodes present figures which are sequenced and thus of minimum melodic importance (see E7 bars 40/41: B and A; E9 bars 51/52: the trill motive in A and T, recurring once in the soprano of E10; E13 bars 71/72: the imitations between S and T as well as the sequences in A). E8 is the only episode to incorporate an imitation of the subject's tail (see T: bars 45-47).

As a final observation concerning the episode material, it is significant that in all the components mentioned above, sixteenth-notes appear either in ornamental patterns or in broken-chord figures.

Despite the great number of subject-free passages in this fugue and the relative simplicity of the material used in them, not many are found to be immediately related. True correspondences can only be observed between the cadential episodes E2 and E4, as well as between the two short non-cadential episodes E1 and E5. Furthermore, E9 and E10 are related through their prominent motive and its continuation in a descending scale.

The role each of the episodes plays in the dynamic development of the piece is, of course, strongly determined by the presence or absence of the cadential close. The following table describes the episodes in the order of their emergence.

- E1 bridges between two consecutive subject statements. It does not provide a color contrast because the Ms figure appears as a sequence of the previous bar, but might encompass a soft rise and fall with the scales.
- E2 gives the impression of a close, with a definite relaxation.
- E3 seems torn between the concluding power of the bass pattern and the false entry in the alto which links it closely to the ensuing subject statement.
- E4 follows with an unequivocal closure and a definite release of tension.
- E5 like E1, connects two entries without noticeably interrupting the tension.
- E6 with its ascending sequences clearly serves as a preparation for the following subject stretto and thus represents a gradual increase in tension. (Note that in bars 36/37, the soprano sequence of Ms even overlaps with the beginning of the next statement.)
- E7 as the third episode in a row without concluding components, introduces the first change of color due to its novel material. In addition, it features descending sequences and a final descending scale, thus ending softly - as if a closure was originally intended here. This closure materializes in
- E8 with its extended cadential formula. Surprisingly, it is succeeded by what must be interpreted as a preparation for the ensuing subject statement.
- E9/E10 are both conceived as dynamic bridges. As the former emerges from a figure accompanying the end of a subject entry, no definite color contrast can be intended. Also, the latter episode ends with Ms which leads directly into the next statement.
- E11 similarly to E7, presents genuine episode material which, in addition, unfolds above an octave pedal. As in E7 the listener cannot anticipate whether a close is coming up or another entry might still follow. In this respect, the stretto between two drastically shortened entries in bars 62/63 appears structurally analogous to the stretto following E7 in bars 43-46.
- E12 with its cadential close should then be interpreted as corresponding with the cadence in E8.
- E13 also allows for a color contrast because of its genuine little motive. Its ending with the overlap of cadential close and beginning subject statement recalls E2 and distinguishes this as another bridging episode.
- E14 differs from all its antecedents by its abrupt halt in a six-part chord. This unexpected halt anticipates the chord on the middle beat of bar 82 with which it corresponds in its six-part texture, its harmonic distinction as an inverted dominant-seventh chord and its rhythmic feature with ensuing general pause. E14 thus includes a genuinely dramatic element which expresses itself in a sudden rise of tension.
- E15 provides a dynamic relaxation only after the second abrupt halt in which the subject stretto breaks off.
- E16 set in seven-part (!) texture, has no choice but to conclude the fugue in a triumphant climax.

I/20.2.5 Character, tempo, articulation, ornament realization



I/20.2.6 The design of the fugue

In this A minor fugue, Bach seems to play with transformations of the subject in a way which reminds one of the D[#]-minor fugue, also in Book I. Conclusive evidence for the structural design can therefore be derived already from an observation of the order in which the subject statements enter, from the change of shape found in a number of consecutive entries, and from the presence or absence of strettos. The data which can be collected in this respect are particularly indisputable in the first three quarters of the fugue.

- The first four entries - one in each of the four voices - appear without any overlapping (see bars 1-14).
- They are followed by four inverted statements - also one in each of the four voices - which equally appear neatly after one another (see bars 14-27).
- The next eight entries retrieve the original shape of the subject but are grouped in pairs: every other statement enters already half a bar after its predecessor and thus overlaps for two and a half bars (see bars 27-46).
- This group is followed by eight entries in inversion which feature the same kind of stretto at the same half-bar distance (see bars 48-63). (The correspondence between the two groups of four-fold stretto gives the two abridged statements in bars 63/64 more importance than their radically shortened shape would suggest. Analysis reveals that they constitute indeed the fourth, though incomplete, group of this section.)

It is reassuring to notice that each of these four groups ends with one of the episodes which were earlier recognized as cadential formulas (see E2 in bar 14, E4 in bar 27, the second segment of E8 in bars 47/48, and E12 in bar 64). The confines of sections I through IV can thus be regarded as confirmed.

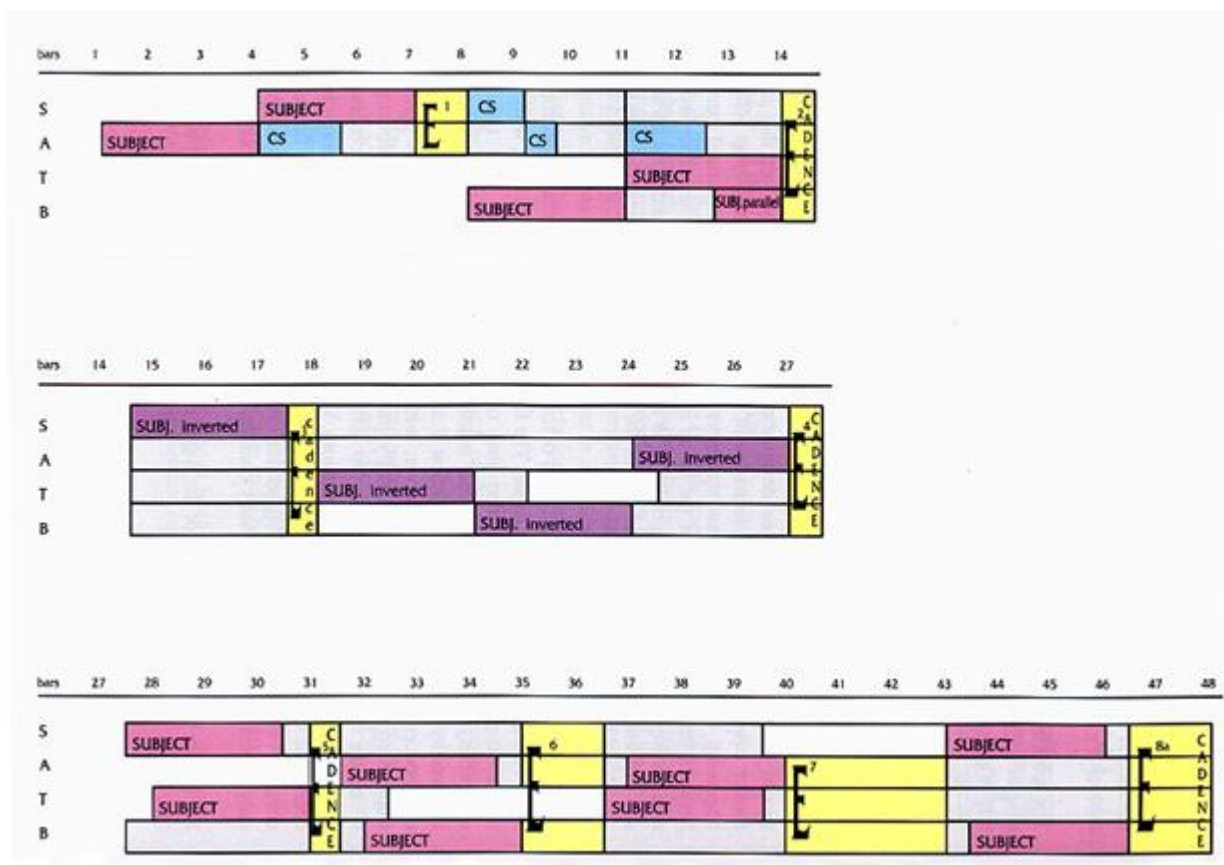
The remaining subject statements, from bar 64 onwards, comprise a stretto in original shape followed by two strettos in inversion - all using the complete phrase. Immediately afterwards appear three strettos comprising, respectively, three entries (see bars 76-78), two entries (see bars 80-82) and four entries (see bars 83-86).

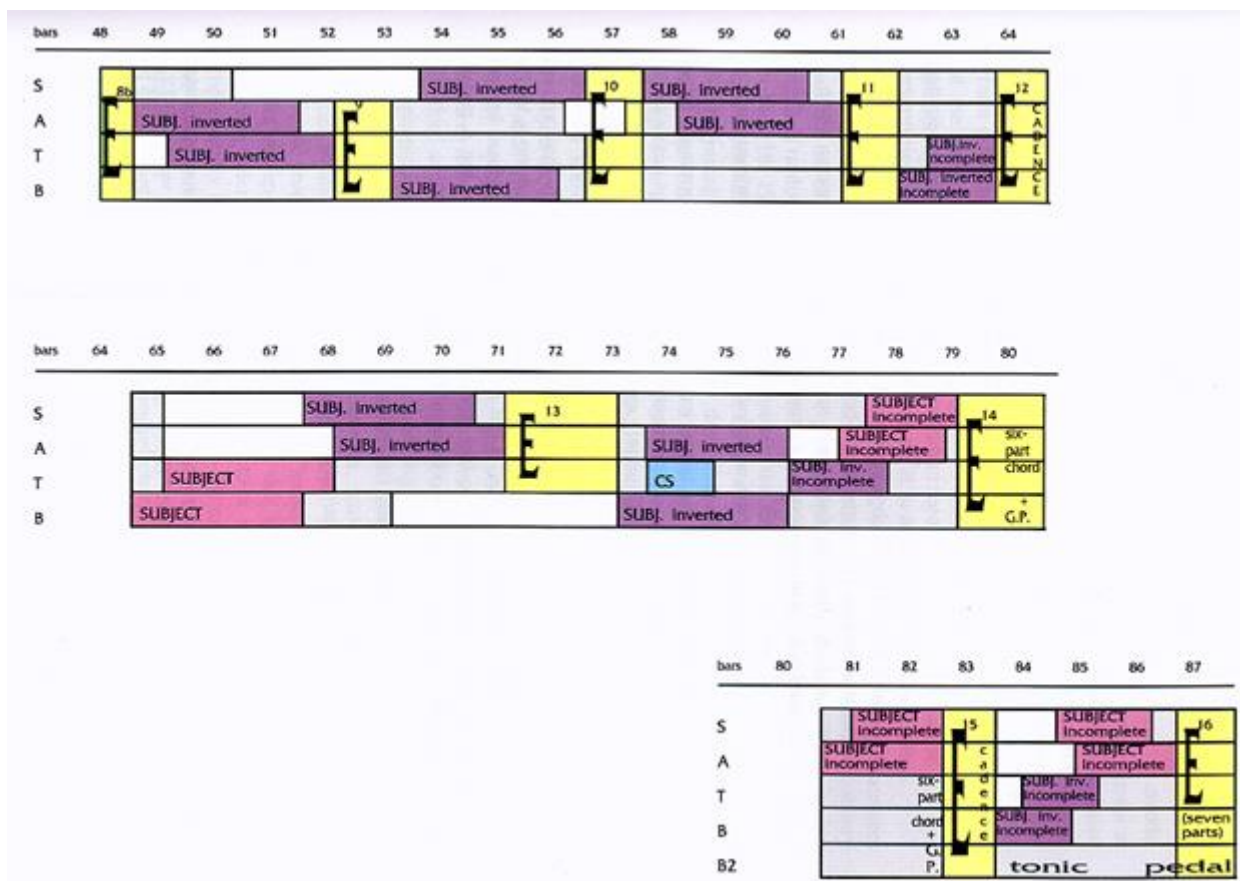
All these statements are drastically shortened; in fact, in each of the strettos, only one of the statements progresses at all into the second subphrase. In order to determine the intended grouping of these six strettos one had best again look for guidance in the episodes. There are two subject-free passages which end with a perfect cadence (see E13: cadential close belatedly in bar 73, and E15: cadential formula in bar 83); these should therefore be interpreted as designating section closes. The fact that in the former case, the typical closing-formulas in the soprano and alto overlap with the beginning of the subsequent bass statement indicates that the structural partition between the two final sections of the fugue is not as clear-cut as the earlier section-endings were. The cadential close of E15 in A major, on the other hand, appears strong and definite; it determines the final bars of the composition with their pedal note in the additional second bass as a coda.

The use of texture in the various sections of the fugue might give further clues for how Bach conceived the design of the fugue. The first stretto of section III (and, with some irregularities at the beginning, also that of section IV) begins with only one accompanying voice, i.e. in reduced number of voices. It is then

particularly noteworthy that the first stretto of section V appears completely unaccompanied. The commencement of section VI, however, with only three moving voices gives the impression of reduced texture but actually encompasses four parts; the indirect pedal C in the soprano suddenly comes to life again in bar 75. This observation substantiates the interpretation that sections V and VI in this fugue are more closely connected than any other consecutive sections. The overall design of the fugue thus contains two pairs of corresponding sections (sections I/II and III/IV), followed by the only minimally structured larger body containing sections V/VI and a short coda.

For a sketch showing the design of the fugue in A minor, see ex. 18.





The harmonic outline of the fugue supports the structural correspondences established above.

- The first section contains entries on the tonic and dominant of A minor and ends with an E major cadence. Section II begins with a dominant statement and returns to the tonic with an A minor cadence.

I/II = tonic - dominant - tonic

- Section III is still firmly rooted in the home key during its three initial strettos; after the longer interruption of E7, however, the redundant entry-pair presents the relative major key which is confirmed, at the end of E8, with a cadence in C major. Section IV returns to the home key but ends, both in its second stretto and the final abridged pair, in the subdominant region, which is confirmed in E12 with a cadence in D minor.

III/IV = tonic - its relative major - tonic; end on subdominant

- The two final sections of the fugue, earlier ascertained as forming a larger unit, further underscore the subdominant field. Section V begins with a stretto of entries in A minor and D minor, and were its final cadence not placed across the beginning of the sixth section, it would conclude in F major, the relative major to the subdominant. Section VI, after several harmonic adventures* ends with a perfect cadence in A major, the Picardy-third version of the tonic (bar 83). In the coda, however, the final four-part stretto is led by a soprano statement in D minor, a last reminder of the subdominant key set against on overwhelming tonic (see three A-minor entries and the A pedal). The final cadence, as expected, confirms the A major conclusion.

V/VI = subdominant - (its relative major) - major tonic
 coda = subdominant/(minor) tonic - major tonic

(* Section VI contains a number of features of particular interest. Striking, among other things, is the number of pedal notes which mark this section as a concluding one; see bars 73-75: C [soprano], bars 76/77: G [bass; actually beginning already on the middle beat of bar 75 but escaping momentarily to its leading note], bars 79/80: D [bass, interrupted], and bars 83-87: A [additional second bass voice]. Another arresting highlight is presented in the two inverted dominant-seventh chords which, enhanced by the voice-splitting into six parts, precede the reiterated *general pause* in bars 80 and 82.)

I/20.2.7 The development of tension

The development of tension in the first section of this fugue is both normal, insofar as it describes a steady dynamic rise, and unusual, insofar as this rise seems least caused by contrapuntal complexity. The growth of tension could be described as extroverted. While volume is added by way of a gradual increase in the number of voices, the additional parts serve much more to reinforce the already introduced material than to create polyphonic intensity. The number of bars which contain parallels to segments of the subject (bars 5, 9, 11, 12) or to portions of the counter-subject (11/12) is astounding for a Bach fugue.

Similar observations can be made in the second section. As its first subject statement is accompanied by the tetrachords from the counter-subject with parallels in contrary motion, the effect is that of only two-part polyphony with a doubling voice. Further parallels or doublings in contrary motion, of the subject or a contrapuntal voice, occur in bars 18, 19, 21, 24, 25-27. Moreover, the first three of the four entries in this section remain largely in three-part texture (with only short four-part overlappings at the beginning of the second and third statements). The dynamic increase thus resembles that of the first section: it represents an extroverted growth in volume through four statements, the climax of which captures the listener directly, with the immediate force of its prolonged parallels, without claims to the intricacy of texture expected in a fugue.

The third section commences with half a bar in two-part setting; the third voice which joins soon with a complete imitation of the subject engenders the impression that now - finally - polyphonic independence of the voices is established. The second stretto involves three voices (after, again, a short four-part overlapping at the beginning) and the third stretto, four. This gradual increase in texture is supported by an increase in polyphonic complexity, and as the connecting episode E⁶ with its fake stretto entries keeps the tension from dropping, an almost continuous *crescendo* results through these three paired statements. E⁷, however, introduces the first pronounced color contrast in this piece. The ensuing fourth stretto of this section is not only redundant due to the entering order of the voices (its "leader", the soprano statement, is a repeat of the soprano-led stretto which opened this section); it also fails to regain the intensity interrupted by E⁷, owing both to a rather passive fourth voice which consequently drops out (see tenor, bars 43-45) and to the less dramatic character of the major-mode variant of the subject. The extension of this entry, created by the imitation of the second subphrase (tenor bars 45-47) prepares the upcoming section-ending in a prolonged *diminuendo*.

As the second section was, in many regards, similar to the first, so the fourth section reveals itself as corresponding very much to the third. While four voices are in fact involved in its first entry, there are at no point more than three actively moving. In addition, the unusual three-part parallel in bar 49, created by the two subject entries and a doubling passage in the soprano, leaves the impression of reduced polyphonic intensity. (The composition, at any rate, creates this impression - the performances rarely do. However, a thorough analysis might convince pianists that, in this fugue, parallels stand for weakened contrapuntal intensity, and the doubling voice (here the soprano) should be played as a dependent part, i.e. extra soft.) The second stretto of this section is the most powerful from a contrapuntal aspect, while the third features again extended parallels in the two accompanying voice and an ending which overlaps with the next episode. E¹¹, just like E⁷, brings forth a color contrast, underscored here by the octave pedal (two voices which, although present, are markedly passive). The redundant entry pair expected in correspondence with that at the end of the third section is even less assertive here than there: it breaks off after not even half of the subject. This half-hearted entry, together with the ensuing E¹², conclude this section again with a definite *diminuendo*.

The unaccompanied stretto which launches the fifth section constitutes the beginning of an entirely new dynamic development. The tension rises towards the second stretto, is interrupted by the color-contrast in E¹³, but picks up almost where it was left at the beginning of the sixth section. Thereafter, the tension grows again; gently at first while voices are still resting or passive (up to bar 77), then more steeply.

Dramatic moments arise particularly in the two six-part chords preceding the general pauses. While the subsequent E15 generates harmonic relaxation in an A major close, this cadence, coming entirely in five-part texture and terminating in the final pedal, allows no dynamic subsiding.

A powerful coda, appropriately interpreted in *crescendo allargando*, concludes this extraordinary fugue.

WTC I/21 in B^b major - Prelude

from Siglind Bruhn

*J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation*

I/21.1.1 The prelude-type

The B^b major prelude is essentially non-polyphonic in texture. The performer's two hands act either in alternating patterns or join forces for multiple-voiced chords. Never does one of them establish a pattern without the other.

There are three conspicuous figures. Two of them are characterized by an aspect of keyboard technique rather than by particular melodic or rhythmic shapes. The first figure appears as a pattern of open-position broken chords, to be executed in a complementary play between the two hands. This figure prevails in bars 1-7 and 9, after which it recurs only in bar 21. The second figure appears as a single-voiced wavy run, to be played also in virtuoso style, i.e. in the performer's own choice of complementary use of the two hands. This figure is introduced in bars 3/4 and taken up in bar 8; in bars 10-20 it occurs interspersed with the third figure. The last component, in contrast to the two one-track figures described before, employs both hands simultaneously, creating a dotted-note chordal pattern (see bars 11, 13, 15 and, in modified rhythm, bars 17/18).

The composition thus recalls several Baroque genres: the toccata, the fantasy and the French overture. As there are no real melodic features and, except for the short dotted-note figures, no prominent rhythms, the aspects which solely characterize the piece are, on the one hand, the virtuoso layout, on the other hand, the harmonic progressions and the sequential patterns within it.

I/21.1.2 The overall design of the prelude

The first harmonic progression concludes in the first half of bar 3, with the perfect cadence in the home key B^b major. However, while this B^b major chord certainly brings the harmonic resolution to the preceding F⁷ chord, the pitch position of the bass with its leap of one and a half octaves (see bar 3d) counteracts any true relaxation and designates the downbeat of bar 3 as the beginning of a new structural unit.

The second harmonic progression is more extended. It modulates to the dominant F major which first appears by way of a plagal cadence, in bars 5m-6m. The seventh E^b, however, added at the last moment, converts the F major chord into a V⁷ and thus once more refers back to B^b major.

The dominant key is only firmly established with the authentic cadence which concludes, complete with a traditional cadential-bass pattern, on the downbeat of bar 10 (with a possible extension throughout the broken F major, see the first half of bar 10). This cadential close should by all means be regarded as a structural caesura. Understanding this is particularly important since the virtuoso thirty-second-note pattern continues uninterrupted. It therefore happens easily that the structural partition is either overlooked or misplaced - e.g. after the D on the downbeat of bar 11 which, however, already represents the first step into the subsequent harmonic and structural unit.

The prelude thus contains only two structural sections:

I	bars 1 - 10	tonic - dominant
II	bars 10 - 21	dominant - tonic

I/21.1.3 Practical considerations for performers

Both the very regular rhythmic structure with almost continuous thirty-second-note motion and the broken-chord patterns indicate a *rather lively* basic character. As for the tempo, this virtuoso piece should give a very brilliant impression and may be played almost as fast as is technically possible. (What is swift and brilliant, however, is the surface pattern, while the actual pulse of the piece - the eighth-notes - are not really all that fast.)

Whether this tempo and character are valid throughout the entire prelude is a question which is frequently being discussed. In one of the manuscripts, the introduction of the dotted-note rhythm pattern in bar 11 is marked *Adagio*. What are we to think of the fact that this indication did obviously not form part of the original layout but was added later? One possible interpretation is that Bach could have decided to add this heading on the spur of the moment because a performer (student?) played in a character which he deemed too light to be appropriate; in this case the indication may refer to a contrast in touch and expressivity rather than to any considerable change of tempo. Or, basically along the same lines, even if Bach originally estimated that an intended change of character was expressed clearly enough by the rhythmic hint at the style of the French overture and did not need any explicit verbal invitation, he may have added *Adagio* to suggest a freer treatment of tempo - *rubato*. (The two extreme interpretations, either to play through the entire piece without any change of attitude, or to play the second half twice as slowly as the first, are certainly the least likely solutions.)

The appropriate articulation includes *non legato* for the eighth-notes and *quasi legato* for the thirty-second-notes. Touch should vary with the character of the components: lightly bouncing *non legato* combined with a very crisp *quasi legato* in bars 1-10 and 19/20, heavier detached style (possibly combined with a denser *legato*) in bars 11-18.

The only ornament occurring in this piece poses a problem. The downbeat in bar 19 carries a compound ornament which, in correct execution, encompasses eight notes and ends in a tie-prolongation, a feature not at all easy to realize in the speed of this prelude. (In fact it is close to impossible if the tempo is as brilliant as would be desirable for the first half, and not modified drastically in the French-overture section.)

(ex. 26)



I/21.1.4 What is happening in this prelude

Three aspects account for the chief processes in this prelude: the use of the three figures (see above under I/21.1.1), the harmonic progressions (see above under I/21.1.2), and several sequential patterns in simple descending and ascending lines.

The first phrase is determined entirely by figure 1. It appears in a pattern of descending half-bar sequences (bars 1/2), rounded off by a free continuation which leads to a half cadence. The descending sequences are counter-balanced in the following phrase where the combinations of figures 1 and 2 (bar 3) trigger two ascending sequences, one complete and one varied and extended (see bars 4 and 5-6m). This ending, just like that of the first phrase, represents again an F⁷ chord whose resolution (on the middle beat of bar 6), instead of passively concluding the preceding process, embarks on a new one.

The third phrase picks up the ascending motion, from B^b through an entire octave to A, commencing in straightforward chromatic steps and continuing in a diatonic passage with octave displacements (see bars 6m-8). While the ascent presents itself in figure 1 pattern, figure 2 in bar 8 returns in a double curve to the low E, the leading-note of the long prepared dominant. A one-bar cadential pattern with figure 1 confirms this key and with it the first half of the prelude.

In bar 10 Bach very subtly creates the impression of both rounding off and, at the same time, announcing something new. While the first half of the prelude had been made up entirely of the two figures with open-position broken chords and scalar runs, the tail of its final cadence introduces a combination of the two figures: a pattern which, like figure 2, uses clear one-track texture but, like figure 1, moves in broken chords. This combination (here referred to as figure 1+2), turns out to frame the second half of the piece.

Bar 11 presents the first statement of the dotted-note figure 3. This is linked to its two descending sequences by extensive statements of figure 2 whose dive and soar respectively span almost three octaves. (Despite the inverted direction of the run in the second statement of figure, the listener can still perceive the continuing sequential pattern as shown in ex. 104 below.) After the second sequence, the recurrence of figure 1+2 seems to announce the pending close of this section. The cadence in the home key (see bars 17/18) is, however, diverted by the seventh added to the tonic chord (see bar 18d - the same process as earlier in bars 5/6), and another statement of figure 1+2 is needed. After the compound ornament - which can thus be taken to represent the structural completion of the second section (though not its harmonic close) - one bar each of figure 2 and figure 1 complete the larger frame of the prelude and thus bring the piece to an end which appears well-balanced with regard to the material of the entire prelude.

The dynamic processes in the prelude are very straightforward as they follow almost literally the sequential ascents and descents. The following simplified version of the B^b major prelude attempts to facilitate the understanding of the structure by exposing the basic lines only, together with the dynamic processes they trigger (ex. 27)

WTC I/21 in B^b major -- Fugue

I/21.2.1 The subject

The subject begins after one eighth-note rest, extends through four entire bars and ends on the downbeat of bar 5, where the D represents the return to the tonic after the F⁷ chord in bar 4 beats 2 and 3. (More on this later.)

A closer look at the phrase structure of the subject reveals three subphrases. These are easily distinguishable once the sequential pattern is recognized - behind its veil of ornamentation:

compare the initial subphrase	F-G-F-B ^b -D-C
with its sequence one tone higher	G-A-G-C-E ^b -D (from A-G-B ^b -A-G-F)
and with the next, a fourth higher	B ^b -C-B ^b -E ^b -D
	or B ^b -A-B ^b -E ^b -D (from B ^b -C-A-B ^b -C-D-E ^b)

Phrasing within the subject therefore occurs after the downbeats of bars 2 and 3 respectively, with exactly one bar length for each of the two subphrase), while the subsequent two bars had best not be further structured.

The interval organization in this subject includes sixths, fourths and seconds in the eighth-notes and predominantly small intervals in the sixteenth-notes; that these sixteenth-notes are essentially ornamental in character was already demonstrated above. As the sixths occur in weak metrical positions (i.e. after the beat, not towards it), these large leaps are not perceived as communicating emotional tension, but rather as the expression of an energetically bouncing temperament. Corresponding with this lively interval pattern, the rhythmic pattern throughout the fugue is very simple, consisting almost exclusively of eighth-notes and sixteenth-notes - even the regular syncopations in the main contrapuntal voice (see U: bars 5-7 etc.) cannot diminish this effect.

The harmonic background of the subject is characterized by two active steps within the first two subphrases: both times a simpler chord, which underlies the five-eighth-note upbeat, is followed by an incomplete minor-seventh chord. The third bar concludes the cadence with a straightforward V⁷-I. Thus, as far as the harmonic progression is concerned, the subject already closes on the downbeat of bar 4. In this fugue, however, Bach seems determined to create a dance-like character and thus prefers phrases with even numbers of bars. The fourth bar, consisting of an exact repetition of the third, thus appears as a metric complement with neither melodic nor harmonic "information" of its own.

(ex. 28)



The dynamic design of the subject should convey the phrase structure, the metric organization as well as the harmonic features. A distinctly virtuoso aspect enters with the ascending sequences and their growing amount of embellishment.

Within the first two subphrases, the climax falls on the respective downbeats - both because this is the point of harmonic emphasis and because any other accent would blur the metric structure. (If the peak notes B^b and C are accented, a rendition easily resulting for simple lack of attention, this will necessarily give the listeners the mistaken impression that the subject begins with three upbeat eighth-notes followed by the first downbeat on B^b.)

By the time the third subphrase is approached, the meter is firmly established. Therefore, the fact that this incomplete sequence comes without what was previously the climax and instead just relaxes from the E^b (V⁷, bar 33) to the final D (I, bar 5d), insinuates that in this subphrase, highest pitch and dynamic peak coincide.

With regard to the relation between the three subphrase climaxes C, D and E^b, the virtuoso character of the piece supports the high E^b. (In case, however, a performer prefers an interpretation which seeks for more serious nuances in this fugue and its subject, it is also possible to regard the downbeat of bar 3 as the strongest climax and the two final bars as a less intense tail to the more substantial main body.)

I/21.2.2 The statements of the subject

This fugue contains only eight complete subject entries as well as an incomplete one.

1.	bars 1 - 5	U	5.	bars 22 - 26	M
2.	bars 5 - 9	M	6.	bars 26 - 30	L
3.	bars 9 - 13	L	(7.	bars 35 - 37	M)
4.	bars 13 - 17	U	8.	bars 37 - 41	U
			9.	bars 41 - 45	M

(ex. 29)

Except for the interval adjustment in the tonal answer, the subject remains untouched in detail as well as in shape throughout the fugue. No stretto or parallel statement ever materializes.

I/21.2.3 The counter-subjects

Ever after its first appearance, the subject comes escorted by companions which remain faithful throughout the work. They are, however, not quite as independent from their leader as true contrapuntal technique might desire, particularly in the case of the second companion which runs largely in parallels to the subject. Although the term "counter-subject" might thus not seem appropriate in its strictest sense, the usual abbreviations are employed here for easier reference.

CS1 is introduced in U: bars 5-9. Its three subphrases coincide exactly with those of the subject. As in the subject, the first and second subphrases are remotely related by ascending sequence (although it is the first subphrase which appears more elaborate than the second here). Also as in the subject, the third subphrase consists of a one-bar model followed by its repetition. (This subphrase even contains a four-note parallel to the subject; see e.g. bar 8 beat 1.)

As for the dynamic outline within this companion, the three climaxes fall slightly earlier than those in the subject. The prominent features within the first two subphrases are the final syncopations which certainly appear as the peak of tension. In the third subphrase, the short upbeat-like ascent which precedes the protracted note repetition seems to indicate a soft *crescendo*, followed by a long *diminuendo*.

CS2 seems more like a filler than a polyphonic partner (see e.g. U: bars 9-13). It consists of four short gestures interrupted by rests. The first two, again conceived as ascending sequences, complement the two sixteenth-notes missing in the rhythmic pattern established by the subject and CS1; their second note falls in perfect unison with the other companion, and their final eighth-note, rather than fulfilling any melodic purpose, complements the downbeat harmonies. The (identical) third and fourth figures blatantly double segments of the subject in parallel sixths. To look for a meaningful development of musical tension within this highly dependent element would mean to overrate its importance.

The following sketch shows the phrase structure and dynamic design (ex. 30):



I/21.2.4 The episodes

The B^b major fugue contains only three subject-free passages.

E1 bars 17 - 22 E2 bars 30 - 35 E3 bars 45 - 48

All of them are directly related to the primary material and can be divided into only two patterns, both of which are established in E1.

pattern a In bars 17-19, the third subphrase of the subject is sequenced one tone higher, while those of the two companions are imitated, i.e. sequenced in inverted voices, up one second or one ninth respectively. A very similar process can be observed in bars 45-47. Here the middle voice repeats the second half of the previous subject entry an octave lower, while the second half of CS1 moves from upper to lower voice (and thus two octaves down) and that of CS2 from lower to upper voice (one octave up).

pattern b In bars 19-22, E¹ is reduced to two-part texture, and the material employed derives entirely from the subject. The upper voice continues in sequences of the bar-3 pattern (now descending by steps), while the lower voice takes up the first subphrase in inversion (compare L: bar 19 with U: bar 1) which is then also sequenced in descending steps. This combination recurs twice very similarly in E². Bars 30-33 feature the inverted subject head in the upper voice (the descending sequences are underpinned only at their very ends by doubling in the middle voice), and the lower voice recalls the descending sequences of the bar-3 pattern. Bars 33-35 continue this process in inverted voices, the only difference being that the filling voice is now more complete (see L: bars 33-35).

The only episode bars which remain are the two cadential bars at the end of the composition. These feature a cadential-bass pattern and a traditional closing-formula in the upper voice.

As all these passages are designed in sequential patterns, the ascending or descending direction of each sequence determines the dynamic trend and, with it, the role each episode plays in the course of the fugue. Thus E1 momentarily surpasses the tension expressed in the fourth subject entry of bars 13-17 but consequently recedes with each bar; E2 is conceived, despite its two-fold structure, as a single decreasing line, and the first segment of E3 resembles an echo from which the cadential close resurfaces.

To sum up all that has been observed with regard to the subject's companions and the episode material, one can state that this fugue is only rudimentarily contrapuntal in texture and entirely determined by its subject. At the same time, it was noticed that the subject remains virtually unmodified throughout the composition. One might conclude that, in this fugue, it is not the material which matters, and that the chief task fulfilled here by the subject is to establish the vigor and mood upon which the entire piece will depend.

bars	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
U	SUBJECT				CS-1				CS-2				SUBJECT				[^{1a}		[^{1b}			
M					SUBJECT				CS-1				CS-2]]			
L									SUBJECT				CS-1]]			

bars	22	23	24	25	26	27	28	29	30	31	32	33	34	35
U	CS-1				CS-2				[²		(E ¹⁰ var)			
M	SUBJECT				CS-1]					
L	CS-2				SUBJECT]					

bars	35	36	37	38	39	40	41	42	43	44	45	46	47	48
U	CS-1 incomplete		SUBJECT		CS-1				[³		(E ¹⁴ var)		C	
M	SUBJ.incomplete		CS-1]				A	
L	CS-2 incomplete		CS-2		CS-2]				B	
													C	
													D	
													E	

I/21.2.7 The development of tension

A big dramatic development is clearly not the purpose of this virtuoso fugue. Once the subject with its two companions have been established, there is little distinction between successive entries. Interpretation of tension will thus have to concentrate on two features: the differentiation of color between the two major (outer) and the minor (middle) sections, and the gesture expressed in the episodes.

The course of the fugue will then show roughly the following picture.

- Within the first four subject statements, the tension grows due to the growth in the number of voices, but without particular increase of emotional involvement. The first episode sets out with an ascending sequence which transitorily overshoots the fourth statement. Pattern b, by contrast, follows with descending sequences and the confirmation of the minor key, thus causing a slight dynamic decay which closes the first section.
- The second section begins in softer tone color (differing not only in volume but also in terms of the intensity expressed in the *non legato* articulation). The episode which closes this section contains five bars of descending sequences, thus bringing the tension down to the lowest level in the fugue.
- The incomplete statement which prompts the third section quickly reverts this process, both by returning to the major-key realm and by extending, as it were, the tension-increasing first half of the subject to altogether four bars. One thus finds the two major-key entries in the third section on a dynamic level comparable to that attained in the middle of the first section. The final episode, while resuming pattern a, uses it in much a different way: the upper and middle voices appear considerably lowered in pitch, thus producing an effect almost like that of octave displacement; and the connection between statement-tail and episode is not that of a sequence but that of a repeat in inverted voices (one could say that the pitch development seems as if paralyzed), thus adding to the effect of energy depletion.

- The final cadence manages, chiefly by means of its prominent large leap in the upper voice, to regain some of the tension and conclude the fugue in an confident mood.

WTC I/21 in B^b major - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/21.1.1 The prelude-type

The B^b major prelude is essentially non-polyphonic in texture. The performer's two hands act either in alternating patterns or join forces for multiple-voiced chords. Never does one of them establish a pattern without the other.

There are three conspicuous figures. Two of them are characterized by an aspect of keyboard technique rather than by particular melodic or rhythmic shapes. The first figure appears as a pattern of open-position broken chords, to be executed in a complementary play between the two hands. This figure prevails in bars 1-7 and 9, after which it recurs only in bar 21. The second figure appears as a single-voiced wavy run, to be played also in virtuoso style, i.e. in the performer's own choice of complementary use of the two hands. This figure is introduced in bars 3/4 and taken up in bar 8; in bars 10-20 it occurs interspersed with the third figure. The last component, in contrast to the two one-track figures described before, employs both hands simultaneously, creating a dotted-note chordal pattern (see bars 11, 13, 15 and, in modified rhythm, bars 17/18).

The composition thus recalls several Baroque genres: the toccata, the fantasy and the French overture. As there are no real melodic features and, except for the short dotted-note figures, no prominent rhythms, the aspects which solely characterize the piece are, on the one hand, the virtuoso layout, on the other hand, the harmonic progressions and the sequential patterns within it.

I/21.1.2 The overall design of the prelude

The first harmonic progression concludes in the first half of bar 3, with the perfect cadence in the home key B^b major. However, while this B^b major chord certainly brings the harmonic resolution to the preceding F⁷ chord, the pitch position of the bass with its leap of one and a half octaves (see bar 3d) counteracts any true relaxation and designates the downbeat of bar 3 as the beginning of a new structural unit.

The second harmonic progression is more extended. It modulates to the dominant F major which first appears by way of a plagal cadence, in bars 5m-6m. The seventh E^b, however, added at the last moment, converts the F major chord into a V⁷ and thus once more refers back to B^b major.

The dominant key is only firmly established with the authentic cadence which concludes, complete with a traditional cadential-bass pattern, on the downbeat of bar 10 (with a possible extension throughout the broken F major, see the first half of bar 10). This cadential close should by all means be regarded as a structural caesura. Understanding this is particularly important since the virtuoso thirty-second-note pattern continues uninterrupted. It therefore happens easily that the structural partition is either overlooked or misplaced - e.g. after the D on the downbeat of bar 11 which, however, already represents the first step into the subsequent harmonic and structural unit.

The prelude thus contains only two structural sections:

I	bars 1 - 10	tonic - dominant
II	bars 10 - 21	dominant - tonic

I/21.1.3 Practical considerations for performers

Both the very regular rhythmic structure with almost continuous thirty-second-note motion and the broken-chord patterns indicate a *rather lively* basic character. As for the tempo, this virtuoso piece should give a very brilliant impression and may be played almost as fast as is technically possible. (What is swift and brilliant, however, is the surface pattern, while the actual pulse of the piece - the eighth-notes - are not really all that fast.)

Whether this tempo and character are valid throughout the entire prelude is a question which is frequently being discussed. In one of the manuscripts, the introduction of the dotted-note rhythm pattern in bar 11 is marked *Adagio*. What are we to think of the fact that this indication did obviously not form part of the original layout but was added later? One possible interpretation is that Bach could have decided to add this heading on the spur of the moment because a performer (student?) played in a character which he deemed too light to be appropriate; in this case the indication may refer to a contrast in touch and expressivity rather than to any considerable change of tempo. Or, basically along the same lines, even if Bach originally estimated that an intended change of character was expressed clearly enough by the rhythmic hint at the style of the French overture and did not need any explicit verbal invitation, he may have added *Adagio* to suggest a freer treatment of tempo - *rubato*. (The two extreme interpretations, either to play through the entire piece without any change of attitude, or to play the second half twice as slowly as the first, are certainly the least likely solutions.)

The appropriate articulation includes *non legato* for the eighth-notes and *quasi legato* for the thirty-second-notes. Touch should vary with the character of the components: lightly bouncing *non legato* combined with a very crisp *quasi legato* in bars 1-10 and 19/20, heavier detached style (possibly combined with a denser *legato*) in bars 11-18.

The only ornament occurring in this piece poses a problem. The downbeat in bar 19 carries a compound ornament which, in correct execution, encompasses eight notes and ends in a tie-prolongation, a feature not at all easy to realize in the speed of this prelude. (In fact it is close to impossible if the tempo is as brilliant as would be desirable for the first half, and not modified drastically in the French-overture section.)

(ex. 26)



I/21.1.4 What is happening in this prelude

Three aspects account for the chief processes in this prelude: the use of the three figures (see above under I/21.1.1), the harmonic progressions (see above under I/21.1.2), and several sequential patterns in simple descending and ascending lines.

The first phrase is determined entirely by figure 1. It appears in a pattern of descending half-bar sequences (bars 1/2), rounded off by a free continuation which leads to a half cadence. The descending sequences are counter-balanced in the following phrase where the combinations of figures 1 and 2 (bar 3) trigger two ascending sequences, one complete and one varied and extended (see bars 4 and 5-6m). This ending, just like that of the first phrase, represents again an F⁷ chord whose resolution (on the middle beat of bar 6), instead of passively concluding the preceding process, embarks on a new one.

The third phrase picks up the ascending motion, from B^b through an entire octave to A, commencing in straightforward chromatic steps and continuing in a diatonic passage with octave displacements (see bars 6m-8). While the ascent presents itself in figure 1 pattern, figure 2 in bar 8 returns in a double curve to the low E, the leading-note of the long prepared dominant. A one-bar cadential pattern with figure 1 confirms this key and with it the first half of the prelude.

In bar 10 Bach very subtly creates the impression of both rounding off and, at the same time, announcing something new. While the first half of the prelude had been made up entirely of the two figures with open-position broken chords and scalar runs, the tail of its final cadence introduces a combination of the two figures: a pattern which, like figure 2, uses clear one-track texture but, like figure 1, moves in broken chords. This combination (here referred to as figure 1+2), turns out to frame the second half of the piece.

Bar 11 presents the first statement of the dotted-note figure 3. This is linked to its two descending sequences by extensive statements of figure 2 whose dive and soar respectively span almost three octaves. (Despite the inverted direction of the run in the second statement of figure, the listener can still perceive the continuing sequential pattern as shown in ex. 104 below.) After the second sequence, the recurrence of figure 1+2 seems to announce the pending close of this section. The cadence in the home key (see bars 17/18) is, however, diverted by the seventh added to the tonic chord (see bar 18d - the same process as earlier in bars 5/6), and another statement of figure 1+2 is needed. After the compound ornament - which can thus be taken to represent the structural completion of the second section (though not its harmonic close) - one bar each of figure 2 and figure 1 complete the larger frame of the prelude and thus bring the piece to an end which appears well-balanced with regard to the material of the entire prelude.

The dynamic processes in the prelude are very straightforward as they follow almost literally the sequential ascents and descents. The following simplified version of the B^b major prelude attempts to facilitate the understanding of the structure by exposing the basic lines only, together with the dynamic processes they trigger (ex. 27)



WTC I/21 in B^b major -- Fugue

I/21.2.1 The subject

The subject begins after one eighth-note rest, extends through four entire bars and ends on the downbeat of bar 5, where the D represents the return to the tonic after the F⁷ chord in bar 4 beats 2 and 3. (More on this later.)

A closer look at the phrase structure of the subject reveals three subphrases. These are easily distinguishable once the sequential pattern is recognized - behind its veil of ornamentation:

compare the initial subphrase	F-G-F-B ^b -D-C
with its sequence one tone higher	G-A-G-C-E ^b -D (from A-G-B ^b -A-G-F)
and with the next, a fourth higher	B ^b -C-B ^b -E ^b -D
	or B ^b -A-B ^b -E ^b -D (from B ^b -C-A-B ^b -C-D-E ^b)

Phrasing within the subject therefore occurs after the downbeats of bars 2 and 3 respectively, with exactly one bar length for each of the two subphrase), while the subsequent two bars had best not be further structured.

The interval organization in this subject includes sixths, fourths and seconds in the eighth-notes and predominantly small intervals in the sixteenth-notes; that these sixteenth-notes are essentially ornamental in character was already demonstrated above. As the sixths occur in weak metrical positions (i.e. after the beat, not towards it), these large leaps are not perceived as communicating emotional tension, but rather as the expression of an energetically bouncing temperament. Corresponding with this lively interval pattern, the rhythmic pattern throughout the fugue is very simple, consisting almost exclusively of eighth-notes and sixteenth-notes - even the regular syncopations in the main contrapuntal voice (see U: bars 5-7 etc.) cannot diminish this effect.

The harmonic background of the subject is characterized by two active steps within the first two subphrases: both times a simpler chord, which underlies the five-eighth-note upbeat, is followed by an incomplete minor-seventh chord. The third bar concludes the cadence with a straightforward V⁷-I. Thus, as far as the harmonic progression is concerned, the subject already closes on the downbeat of bar 4. In this fugue, however, Bach seems determined to create a dance-like character and thus prefers phrases with even numbers of bars. The fourth bar, consisting of an exact repetition of the third, thus appears as a metric complement with neither melodic nor harmonic "information" of its own.

(ex. 28)



The dynamic design of the subject should convey the phrase structure, the metric organization as well as the harmonic features. A distinctly virtuoso aspect enters with the ascending sequences and their growing amount of embellishment.

Within the first two subphrases, the climax falls on the respective downbeats - both because this is the point of harmonic emphasis and because any other accent would blur the metric structure. (If the peak notes B^b and C are accented, a rendition easily resulting for simple lack of attention, this will necessarily give the listeners the mistaken impression that the subject begins with three upbeat eighth-notes followed by the first downbeat on B^b.)

By the time the third subphrase is approached, the meter is firmly established. Therefore, the fact that this incomplete sequence comes without what was previously the climax and instead just relaxes from the E^b (V⁷, bar 33) to the final D (I, bar 5d), insinuates that in this subphrase, highest pitch and dynamic peak coincide.

With regard to the relation between the three subphrase climaxes C, D and E^b, the virtuoso character of the piece supports the high E^b. (In case, however, a performer prefers an interpretation which seeks for more serious nuances in this fugue and its subject, it is also possible to regard the downbeat of bar 3 as the strongest climax and the two final bars as a less intense tail to the more substantial main body.)

I/21.2.2 The statements of the subject

This fugue contains only eight complete subject entries as well as an incomplete one.

1.	bars 1 - 5	U	5.	bars 22 - 26	M
2.	bars 5 - 9	M	6.	bars 26 - 30	L
3.	bars 9 - 13	L	(7.	bars 35 - 37	M)
4.	bars 13 - 17	U	8.	bars 37 - 41	U
			9.	bars 41 - 45	M

(ex. 29)

Except for the interval adjustment in the tonal answer, the subject remains untouched in detail as well as in shape throughout the fugue. No stretto or parallel statement ever materializes.

I/21.2.3 The counter-subjects

Ever after its first appearance, the subject comes escorted by companions which remain faithful throughout the work. They are, however, not quite as independent from their leader as true contrapuntal technique might desire, particularly in the case of the second companion which runs largely in parallels to the subject. Although the term "counter-subject" might thus not seem appropriate in its strictest sense, the usual abbreviations are employed here for easier reference.

CS1 is introduced in U: bars 5-9. Its three subphrases coincide exactly with those of the subject. As in the subject, the first and second subphrases are remotely related by ascending sequence (although it is the first subphrase which appears more elaborate than the second here). Also as in the subject, the third subphrase consists of a one-bar model followed by its repetition. (This subphrase even contains a four-note parallel to the subject; see e.g. bar 8 beat 1.)

As for the dynamic outline within this companion, the three climaxes fall slightly earlier than those in the subject. The prominent features within the first two subphrases are the final syncopations which certainly appear as the peak of tension. In the third subphrase, the short upbeat-like ascent which precedes the protracted note repetition seems to indicate a soft *crescendo*, followed by a long *diminuendo*.

CS2 seems more like a filler than a polyphonic partner (see e.g. U: bars 9-13). It consists of four short gestures interrupted by rests. The first two, again conceived as ascending sequences, complement the two sixteenth-notes missing in the rhythmic pattern established by the subject and CS1; their second note falls in perfect unison with the other companion, and their final eighth-note, rather than fulfilling any melodic purpose, complements the downbeat harmonies. The (identical) third and fourth figures blatantly double segments of the subject in parallel sixths. To look for a meaningful development of musical tension within this highly dependent element would mean to overrate its importance.

The following sketch shows the phrase structure and dynamic design (ex. 30):



I/21.2.4 The episodes

The B^b major fugue contains only three subject-free passages.

E1 bars 17 - 22 E2 bars 30 - 35 E3 bars 45 - 48

All of them are directly related to the primary material and can be divided into only two patterns, both of which are established in E1.

pattern a In bars 17-19, the third subphrase of the subject is sequenced one tone higher, while those of the two companions are imitated, i.e. sequenced in inverted voices, up one second or one ninth respectively. A very similar process can be observed in bars 45-47. Here the middle voice repeats the second half of the previous subject entry an octave lower, while the second half of CS1 moves from upper to lower voice (and thus two octaves down) and that of CS2 from lower to upper voice (one octave up).

pattern b In bars 19-22, E¹ is reduced to two-part texture, and the material employed derives entirely from the subject. The upper voice continues in sequences of the bar-3 pattern (now descending by steps), while the lower voice takes up the first subphrase in inversion (compare L: bar 19 with U: bar 1) which is then also sequenced in descending steps. This combination recurs twice very similarly in E². Bars 30-33 feature the inverted subject head in the upper voice (the descending sequences are underpinned only at their very ends by doubling in the middle voice), and the lower voice recalls the descending sequences of the bar-3 pattern. Bars 33-35 continue this process in inverted voices, the only difference being that the filling voice is now more complete (see L: bars 33-35).

The only episode bars which remain are the two cadential bars at the end of the composition. These feature a cadential-bass pattern and a traditional closing-formula in the upper voice.

As all these passages are designed in sequential patterns, the ascending or descending direction of each sequence determines the dynamic trend and, with it, the role each episode plays in the course of the fugue. Thus E1 momentarily surpasses the tension expressed in the fourth subject entry of bars 13-17 but consequently recedes with each bar; E2 is conceived, despite its two-fold structure, as a single decreasing line, and the first segment of E3 resembles an echo from which the cadential close resurfaces.

To sum up all that has been observed with regard to the subject's companions and the episode material, one can state that this fugue is only rudimentarily contrapuntal in texture and entirely determined by its subject. At the same time, it was noticed that the subject remains virtually unmodified throughout the composition. One might conclude that, in this fugue, it is not the material which matters, and that the chief task fulfilled here by the subject is to establish the vigor and mood upon which the entire piece will depend.

bars	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
U	SUBJECT				CS-1				CS-2				SUBJECT				[1a		[1b			
M					SUBJECT				CS-1				CS-2									
L									SUBJECT				CS-1									

bars	22	23	24	25	26	27	28	29	30	31	32	33	34	35
U	CS-1				CS-2				[2		(E ¹⁰ var)			
M	SUBJECT				CS-1									
L	CS-2				SUBJECT									

bars	35	36	37	38	39	40	41	42	43	44	45	46	47	48
U	CS-1 incomplete		SUBJECT		CS-1				[3		(E ¹⁴ var)		C	
M	SUBJ incomplete		CS-1										A	
L	CS-2 incomplete		CS-2		CS-2								B	
													C	
													D	
													E	

I/21.2.7 The development of tension

A big dramatic development is clearly not the purpose of this virtuoso fugue. Once the subject with its two companions have been established, there is little distinction between successive entries. Interpretation of tension will thus have to concentrate on two features: the differentiation of color between the two major (outer) and the minor (middle) sections, and the gesture expressed in the episodes.

The course of the fugue will then show roughly the following picture.

- Within the first four subject statements, the tension grows due to the growth in the number of voices, but without particular increase of emotional involvement. The first episode sets out with an ascending sequence which transitorily overshoots the fourth statement. Pattern b, by contrast, follows with descending sequences and the confirmation of the minor key, thus causing a slight dynamic decay which closes the first section.
- The second section begins in softer tone color (differing not only in volume but also in terms of the intensity expressed in the *non legato* articulation). The episode which closes this section contains five bars of descending sequences, thus bringing the tension down to the lowest level in the fugue.
- The incomplete statement which prompts the third section quickly reverts this process, both by returning to the major-key realm and by extending, as it were, the tension-increasing first half of the subject to altogether four bars. One thus finds the two major-key entries in the third section on a dynamic level comparable to that attained in the middle of the first section. The final episode, while resuming pattern a, uses it in much a different way: the upper and middle voices appear considerably lowered in pitch, thus producing an effect almost like that of octave displacement; and the connection between statement-tail and episode is not that of a sequence but that of a repeat in inverted voices (one could say that the pitch development seems as if paralyzed), thus adding to the effect of energy depletion.

- The final cadence manages, chiefly by means of its prominent large leap in the upper voice, to regain some of the tension and conclude the fugue in an confident mood.

WTC I/23 in B major -- Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/23.1.1 The prelude-type

The material of this prelude derives almost entirely from a short ornamental figure introduced in the first half bar; in fact there is only one instance in the piece where this motive is momentarily absent! It can thus safely be claimed that this prelude belongs to the motivically determined compositions. In its texture, the major prelude is polyphonic, with three parts which are amplified only in the final bars (after a splitting of the upper voice on the middle beat of bar 16) to four parts.

I/23.1.2 The overall design of the prelude

The very first harmonic closure occurs - one could say implicitly - on the middle beat of bar 2. Here the F#⁷ chord, represented in the upper and middle voices above a sustained tonic pedal, resolves onto the tonic. The tonic is embodied by its third (D#) and the "silent" root B which the listener hears in the middle-voice rest as a melodic continuation of the rising line before. This cadential close, however, is structurally not decisive. Reasons are, above all, that the harmonic progression coincides with the first melodic phrase (made up by the motive, two sequences and a final note), that neither of the other two voices has yet taken part in the polyphonic display of material, and that the bass has not even begun to participate in any harmonic development.

The first structural caesura appears at the subsequent perfect cadential close. As the frequent E#s from bar 3 onwards indicate, the prelude modulates to its dominant F# major, in which key it closes on the downbeat of bar 6. This cadential close is firmly established in bars 5/6 with a cadential-bass pattern (ii-V-I) and a melodic closing-formula *do-si-do* (keynote / leading-note / keynote). Similar cadential features mark the next structural break which occurs, after a modulation to the relative key (G# minor) on the middle beat of bar 10, as well as the return to the tonic in bar 15. (The bass patterns in bar 4: C#-F#-B and in bar 13: F#-B,-E which both seem to support V/V-V-I progressions, are not convincing as structural closes since in both cases the upper voice remains unresolved.)

The prelude contains altogether three sections and a short coda.

I	bars 1 - 6d	tonic to dominant
II	bars 6 - 10m	dominant to relative minor
III	bars 10 - 15d	relative minor back to tonic
	coda bars 15 - 19	confirmation of tonic

There is only one short structural analogy:

bars 4 - 6d	correspond with	bars 13 - 15d
including the melodically hampered cadential close in B major (tonic)		including the melodically hampered cadential close in E major

followed by the
structurally relevant cadential
close in F# major (dominant)

(subdominant)
followed by the
structurally relevant cadential
close in B major (tonic)

I/23.1.3 Practical considerations for performers

The basic character of this prelude must be interpreted as *rather lively*. This is supported both by the ornamental character of the principal motive and by the rhythmic pattern which includes melodically relevant note values from sixteenth-notes to whole-notes. The tempo allows for a brisk pace in the quarter-notes; the sixteenth-notes should sound ornamental - i.e. without emphasis on each single note - but by no means hasty.

The general pattern of articulation includes *legato* for the sixteenth-notes and *non legato* for all other note values. Going into more detail, a gentler, dynamically shaped detached style in the melodic quarter-notes (see e.g. bars 1, 6) and equally melodic eighth-notes (see e.g. bars 5, bars 10m-12) should be distinguished from a more neutral *non legato* touch in the cadential-bass patterns in quarter-notes (see bars 3/4, 5/6, 13, 14/15, 18/19) and eighth-notes (see bar 10). Conversely, one should single out those among the larger note values which demand absolute *legato*; this is the case in the melodic closing-formulas (see bars 5/6 upper voice: F#-E#-F#, bars 9/10 middle voice: G#-F^x-G#, bars 14/15 and 18/19 upper voice: B-A#-B).

The phrasing before or after the principal motive, however, deserves detailed discussion. The question whether or not phrasing should be expressed by a slight cut in the sound flow arises mainly in three cases:

- (a) wherever the motive's after-beat beginning is preceded by an on-beat note belonging to a previous melodic line (as e.g. in bar 4 beat 3, lower voice, and in bar 5 beat 3, middle voice);
- (b) wherever the principal motive, originally only seven sixteenth-notes long and omitting the strong beats, is extended to include a final on-beat note, and is then sequenced (as e.g. in bar 6 beat 3, lower voice, and in bar 7 beat 3, upper voice).

Any all-too-obvious jump between notes is definitely inappropriate in this piece, but, for performers with good skills in subtle articulation, slight interruptions certainly constitute the more plausible solution than simple *legato* continuation. (The interruption may be more noticeable in all cases (a), but hardly perceptible in all cases of (b)).

I/23.1.4 What is happening in this prelude?

A description of the material Bach uses here must begin with the principal motive. It consists of seven sixteenth-notes circling around a center note (in the first half of bar 1, e.g., this center note is B). The circling motion resembles an inverted turn (B-A#-B-C#) and is followed by a repetition of the three ascending notes (A#-B-C#). The figure thus ends one note above what was recognized as its center. Harmonically, this ascent is already established in the middle of the motive (on beat 2); the step to the higher pitch, accompanied by a step upwards in the middle voice, represents a progression also on the harmonic level. The motive is thus not just "self-centered" and circling without aim, but can be said to comprise an active step. In terms of melodic tension, this active step is expressed in a delicate *crescendo* through the initial notes up to the middle note - the note which is also metrically the strongest in this

group. The three notes which complete the motive provide the complementing *diminuendo*, so that the motive ends as softly as it had started.

For two reasons is it essential to delineate the tension-curve within this motive very clearly. Firstly, due to the short duration of the motive in relatively fast tempo, the figure may easily come out as mere finger work, i.e. with no melodic expressivity whatsoever. Secondly, the fact that Bach later extends the motive by adding another sixteenth-note which then falls on the strong beat, easily traps performers into an awkward accent on this extra note, thus distorting the original shape of the figure.

Apart from the extension just mentioned, the principal motive suffers two other modifications. Four times, a slight change in one of the intervals (see bars 2₂ and 12₂; bars 5₁ and 14₁) eliminates the ascending step inherent in the original shape. In addition, inversions convey a resolving tendency and are almost exclusively found in the coda (see six times in bars 15-18 and once in bar 12).

Besides this principal motive, there are two characteristic note-groups which recur.

- One is the ascent in quarter-notes which is introduced in the middle voice of bar 1. It describes a gentle dynamic rise which strings the consecutive figures of the principal motive together in one overall direction. This quarter-note motive recurs in the first bar of section II (see bar 6: middle voice) as well as in double notes in the coda (see bar 17, split upper voice).
- The other secondary motive graces only section III of the prelude. It moves primarily in eighth-notes (the three motives thus each favor a different note value) and is conceived as a question-and-answer pattern between the outer voices (see bars 10/11, U: D#-G#-F#-E# / L: C#-B-A-G#-F#; sequenced in the subsequent bar). One very convincing way of molding this motive-pair is to choose complementing dynamics for the complementing segments: *crescendo* for the upper-voice "question" and *diminuendo* for the lower-voice "answer".

The development of tension in each of the sections is fairly straight-forward as it follows largely the overall pitch outline. In section I, an initial increase of tension (bars 1/2) is followed by a long decrease (bars 2m-6). In section II, proportions are reversed with a much more extended increase (bars 6-9m) and a short relaxation (bars 9m-10m). Section III begins in minor mode and with a new motive - both reasons to create a little contrast in color (bars 10m-12m), followed then by a long decrease which corresponds with that of the first section (bars 12m-15). In the coda, the tendency of withdrawal is thwarted by three features: the replacement of the principal motive by a figure with an ascending-scale component (bar 15 second half), the increase in texture after a splitting of the upper voice (bar 16m onwards) and the recurrence of the ascending-quarter-note motive, now in double thirds (bar 17). The prelude thus ends in an assertive mood.

WTC I/23 in B major - Fugue

I/23.2.1 The subject

The subject of the B major fugue is two bars long. It commences with an up-beat gesture after an initial eighth-note rest and concludes after an ornamented C# (representative of the dominant harmony) with a return to the keynote on the downbeat of bar 3.

The pitch pattern exhibits almost exclusively seconds, interrupted only for the interval C#-F#. This leap of a perfect fifth is not of expressive quality, and thus does not immediately match the stepwise motion around it. Upon closer inspection of the pitch pattern in the subject it becomes clear that what occurs here is a change in pitch level rather than an interval between two notes. The initial ascent, launched from the keynote, breaks off with a quarter-note on the first strong beat, only to start afresh from the lower F# and

climb even higher up. The subject thus consists of two subphrases which relate to one another in such a way that the first appears as an abandoned attempt of what the second then completes in a more powerful format.

A look at the rhythmic design confirms this assumption. Considering that the longest note value, the half-note C#, is ornamented by a trill and thus sounds very animated, the quarter-note C# at the beginning of the subject is in fact a powerful rhythmic interruption and marks the point where the regular motion comes to a halt, to start newly from F#.

The harmonic background of the subject is difficult to determine as Bach harmonizes it differently in almost each statement. It seems, however, safe to claim that there is a two-fold progression, with an interrupted cadence either on the downbeat of the second subject bar (as e.g. in bar 6) or slightly later (as e.g. in bar 30), and the perfect cadence taking place in the two final notes (ex. 49):



In a subject with two subphrases one can obviously expect two climaxes. As it was already established that the second subphrase completes the aborted efforts of the first, the weighting between the components is obvious. The first climax is easy to determine since the melodic rise (B to C#), the harmonic movement (tonic to dominant), the rhythmic value (quarter-note) and the metric position (middle beat) all support the final note of the first subphrase. Determining the climax of the second subphrase is, however, not so simple. Here the pitch motion reaches its peak on E, a note which is neither harmonically nor rhythmically or metrically supported. By contrast, the ornamented C# represents two important steps of the cadence, apart from being in a rhythmically and metrically stronger position than the off-beat eighth-note E. As a result, a climax on E will give the subject (and, with it, the entire fugue) a more virtuoso touch by stressing superficial features (pitch), while a climax on the trilled C# gives the subject more depth by emphasizing its structural traits.

I/23.2.2 The statements of the subject

The fugue contains altogether twelve statements of the subject.

- | | | | |
|-----------------|---|------------------|---------|
| 1. bars 1 - 3 | T | 7. bars 18 - 20 | S (inv) |
| 2. bars 3 - 5 | A | 8. bars 20 - 22 | A (inv) |
| 3. bars 5 - 7 | S | 9. bars 21 - 23 | B |
| 4. bars 7 - 9 | B | 10. bars 24 - 26 | T |
| 5. bars 11 - 13 | T | 11. bars 29 - 31 | A |
| 6. bars 16 - 18 | A | 12. bars 31 - 33 | S |

(ex. 50)



There are two kinds of modifications occurring in the subject statements throughout the fugue, one at the beginning and the other at the end of the subject.

- The initial intervals of both subphrases are adjusted in all tonal answers (see bars 3, 7, 31), while in the inverted answer, only the beginning step of the first subphrase is enlarged (see bar 20).
- The final resolution appears delayed (bars 7, 31), diverted (bars 18, 20) or omitted (bar 22). In one instance, the subject ending is varied without causing a change in the essential steps (bar 26).

Parallel statements do not occur; nor do true strettos in which a crucial segment of one subject entry is overlapped by the beginning of the subsequent statement. The only instance where an entry commences at less than two bars' distance from the beginning of the previous one, occurs in bar 21, i.e. in connection with the one entry in the fugue which omits the resolution. (Thus the process one is hearing - as opposed to seeing in the score - can be said to be concluded by the time the subsequent statement enters).

I/23.2.3 The counter-subject

Bach invents one counter-subject for this fugue. It is introduced against the answer of the subject in bars 3-5. Beginning two eighth-notes later than the subject itself, the counter-subject also displays two subphrases separated by a change in pitch level (see bar 3 beat 4). The phrasing falls one eighth-note after that in the subject, and, interesting enough, in its first appearance the counter-subject even ends with a metrically delayed resolution, i.e. one eighth-note after the subject (see bar 5 beat 1).

Besides this similarity in phrase structure, the counter-subject is also related to the subject in pitch pattern as it displays an overwhelming majority of seconds and a scalar ascent in the second subphrase. Independence in dynamic design is also limited. Whether a performer follows the first subphrase in its pitch outline with a *diminuendo* (and thus links the tension decline over the phrase cut between the subject's two subphrases), or whether the performer expresses an active gesture in a downwards *crescendo* (and thus imitates that in the subject's first subphrase), not much individuality can be gained. In the second subphrase, both pitch and rhythm favor the syncopated highest note - with the result that this climax very nearly coincides with that of the subject. There is, to conclude, fairly little challenge for the subject.

Furthermore, the counter-subject is not a very faithful companion. In its complete range it recurs only three times (see A: bars 5-7, S: bars 7-9, A: bars 31-33). Additionally, the second subphrase appears once without the first (see A: bars 12/13). Finally, there is an even more truncated second half of the second subphrase (see S: bar 17).

Here are two possible ways in which the counter-subject may be heard against the subject - depending on the performer's preference for a more virtuoso (pitch-oriented) or more structurally supported interpretation of both components:

(ex. 51a) .



(ex. 51b)



I/23.2.4 The episodes

The fugue contains five subject-free passages.

E ¹	bars 9 - 11m	E ³	bars 23m - 24d
E ²	bars 13m - 16d	E ⁴	bars 26 - 29d
		E ⁵	bars 33 - 34

The first episode introduces the listener to several motives which, as they are independent from both subject and counter-subject, must be regarded as genuine episode motives. When attempting to distinguish these motives, closer inspection reveals that they all derive from a single common source. The different versions share the shape of a concave curve in which the longest note (which provides both the harmonic and the dynamic climax) falls on the lowest pitch. The example below gives the three versions of this one motive; see bars 9-11 and 26-28 (ex. 52):



In the three more substantial episodes (excluding the merely half-bar long E³ and the final cadential close), M1 can be found at every opening. In each case, M1 is accompanied by M1a in such a way that these two run in parallel thirds or sixths throughout their "tail". Also in each of the three cases, M1 is sequenced by the variation M1b, which is then followed by an extra "tail". Before this sequence and in stretto to the original M1, there appears a variation in which the quarter-note is replaced by two eighth-notes in octave displacement. (In E², this octave jump even involves a swap of voices; see bar 14: from tenor to bass.) All three episodes then end with separated "tails" and "heads" of the motive.

The following table visualizes this play with the episode motive.

	<u>M1</u>	<u>M1a</u>	<u>M1b</u>	tail	tail
			<u>M1b</u> _{var}	head	head
E ¹ bars 9/10:	S+A	B	10/11: S	A+B	S+A+B
E ² bars 13/14:	A+S	T/B	14/15: A	S+T	A+S+T
E ⁴ bars 26/27:	S+T	B	27/28: S	T+B	S+T+B

Both the short E³ and the final episode E⁵ only feature the "head" of M1b (see B: bars 23/24, and T: bars 33/34). In the former, the two upper voices continue with sequence and imitation drawn from the fragmentary counter-subject figure in the soprano, so that this episode appears more like an extension to the preceding subject statement - an extension which serves, one might say, to re-establish the original metric position of the subject after the premature entry of the tenor in bar 21. In the final episode, the three surrounding voices state closing patterns; this episode appears not as an extension but as a traditional cadential bar.

As regards the relationship between the episodes in this fugue, the above table demonstrates the analogy between E¹, E² and E⁴. The remaining two episodes, while both featuring the same segment from the motive variation, fulfill structurally different purposes and should therefore not be interpreted as related. While the motivically determined episodes constitute a noticeable color contrast in the fugue (each of them with a slight *diminuendo* in the descending sequence of M1b and a slight *crescendo* in the ascending sequences of the "head"), the two shorter episodes are integrated into the level of the primary material - one bridging between two subject statements, the other providing the final relaxation, but both without too much of a dynamic development.

I/23.2.5 Character, tempo, articulation, ornament realization

The predominance of stepwise motion, coupled with the variety of note values, determines this fugue as a piece in *rather calm* basic character. The pace is serene, neither hasty nor hesitant. The relative tempo of the prelude to the fugue is complex. This is mainly owing to the fact that both pieces are in common time and based on the same note values, so that a simple proportion would create an effect of dullness in the succession of the two pieces. This is the translation of one tempo into the other:

three quarter- notes	correspond with	two quarter- notes
in the prelude		in the fugue

(Approximate metronome settings: prelude beats = 108, fugue beats = 72.)

The overall articulation is *legato*. (Exceptions occur in the cadential-bass patterns of bars 13, 17/18 and 33/34, as well as in other consecutive quarter-note or eighth-note leaps, e.g. bar 24: B, 31/32: T.)

The trill in the subject poses some problems. It is, without any doubt, conceived as an integral part of the thematic phrase - so much so that playing the half-note without an ornament would sound extremely dry. (This is certainly the impression we get when we play the voice alone. It is also what any string or wind player, performing this fugue in a quartet, would feel. Only pianists, busy with figures in other parts but still in their own ten fingers, sometimes choose to ignore the single-voice demands, with the excuse that "there is already enough happening in this bar".) How, then, should the trill in its original setting be executed? As it is approached in stepwise motion, it commences on the main note. As the fastest note values in this piece are sixteenth-notes, it shakes in thirty-second-notes. And as its resolution appears - at least in the two initial statements - in proper metric position, it ends with a suffix. This long trill thus contains altogether fifteen notes (see below in ex. 53), to be played very regularly and, what is even more often neglected, with a dynamic shading that reflects the decrease of tension in the subject at this moment.

Whatever problems arise with the trill in this fugue are caused by several irregular endings - those which were earlier mentioned as "statements with delayed resolution". In all these cases, the trill begins in the same manner but ends prematurely and without a suffix, stopping short on the last main note before the

bar line. (The only statements which forgo the trill are those with omitted resolutions or varied endings: bars 17, 21 and 25.)

To provide those performers who now decide against playing this fugue - just because of the trills - with an incentive for trying, the following examples give the most prominent occurrences spelled out, with some suggestions for appropriate fingering in the trickier cases (ex. 53):

b.2/3 (similarly b.4/5, 8/9)

b.30/31

b.12/13

b.32/33

b.6/7

b.19/20

I/23.2.6 The design of the fugue

When trying to determine how this fugue is structured, one cannot rely on any of the data which normally guide such an analysis. Except for the final bar, there are no explicit cadential formulas outside the

confines of the subject statements. (The only obvious cadential-bass patterns mark the endings of the fifth and sixth statements respectively; they thus follow one another too closely to indicate section endings.)

The texture is unusual insofar as there are only two subject statements (among the twelve of the fugue) which appear in full ensemble. All other entries either include one resting voice or maintain the full four-part texture only for a short span (see bar 7 first half, bar 21m-22m, bar 31). The harmonic design is quite atypical insofar as no note-worthy modulation takes place throughout the entire composition; except for one entry in the subdominant, the statements alternate regularly between tonic and dominant positions of the home key.

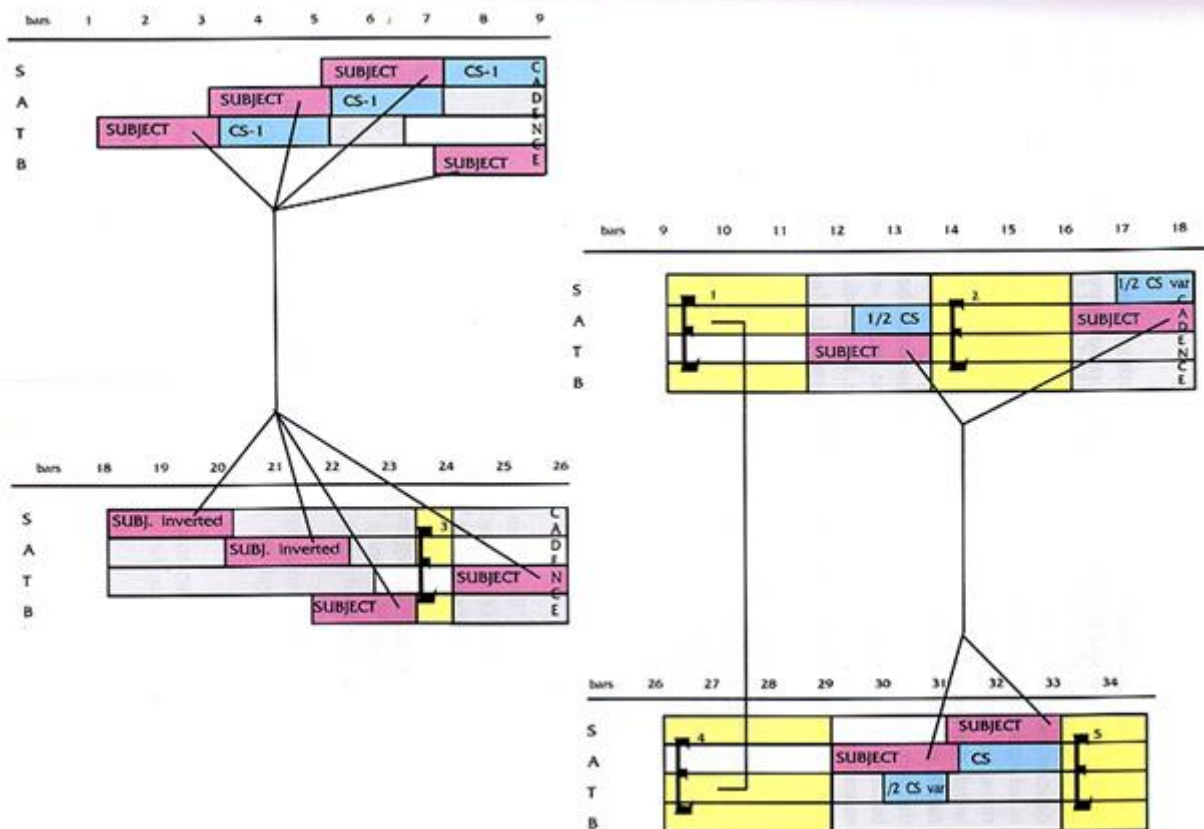
However, the analogies observed earlier in the design of the episodes continue as one inspects the structural layout of the entire composition. The pattern of subject statements and episodes is as follows:

4 consecutive statements (bars 1-9)	4 consecutive statements (bars 18-26)
	(if one regards E ³ as an extension)
E ¹ (bars 9-11)	E ⁴ (bars 26-29)
2 additional statements	2 additional statements
interrupted by E ²	rounded off by E ⁵

As both the fourth entry in bar 9 and its correspondent in bar 26 close with a perfect cadence while the ensuing episodes feature open endings leading into the next statements, one has to assume that these episodes open sections - rather than close them, as in so many other fugues. The result of these investigations leaves us with four sections, of which

- the first and third each consist of four consecutive subject statements and end in a perfect cadence (bar 9: F# major, bar 26: C# major);
- the second and fourth each encompass an opening episode of equal material and design, two subject statements and one additional episode (incorporated into the second section but closing the fourth section).

For a sketch showing the design of the fugue in B major, see ex. 54.



I/23.2.7 The development of tension

Concerning the dynamic design valid in the sections of this fugue, two basically different patterns can be distinguished.

On the one hand, there are the first and third sections which are made up exclusively of subject statements. Within the first section, the tension rises gradually along with the usual increase in the number of voices. Due to the fact (already mentioned above) that this section does not truly establish the expected four-part texture, the growth should be restrained in such a way as to avoid the sensation of a powerful climax. In the third section, the two initial statements appear in inversion. Given the particular shape of this subject with its two rising motions which are now converted to falling ones, the inversions sound much less cogent and self-confident than the original. As a result, the four entries of this section also give the impression of curbed tension.

On the other hand, there are the second and fourth sections which encompass alternations of episodes and subject statements. The prominent musical message expressed in the structure of these sections is obviously that of color contrast. A very light and delicate touch in the episodes, conveying both playful character and melodic openness, is set against a much more assertive touch in the subject statements which, by comparison, are clearly directed towards their goal and assuredly closing. If one wished to weigh the two entries in each section against each other, one would find that in the fourth section, the final subject statement surpasses the preceding one, both because of the compelling rise in these consecutive entries from the alto to the soprano and because of the temporary four-part texture. In the second section, however, where the statements are separated by a substantial episode, the question of any dynamic relation between the statements seems beside the point.

WTC I/24 in B minor - Prelude

from Siglind Bruhn
J.S. Bach's Well-Tempered Clavier
In-depth Analysis and Interpretation

I/24.1.1 The prelude-type

This is a piece in three-part texture. The lower voice is conceived as a thorough bass in continuous eighth-note motion which is only given up at the end of both large sections. Meanwhile, the upper and middle voices weave a polyphonic pattern with manifold imitations and occasional freer contrapuntal passages.

With regard to the material used in these two voices it is interesting to observe that the principal motive - with its rising fourth followed by a syncopation on beat 2 and a stepwise descent - is immediately related to the *fugato* motive in the Eb major prelude:

compare	Prelude in Eb major, bars 10/11 tenor	Bb-Eb---D-C
with	Prelude in B minor, bars 1/2 middle voice	F#-B---A-G#.

I/24.1.2 The overall design of the prelude

The first harmonic progression concludes in bar 4. The lower voice, after the prominent octave jump on the dominant note F#, ascends in a segment of the melodic minor scale until the keynote B on bar 4d. The upper voice, however, diverts its expected course at this very moment with a jump to the F# before reaching the keynote on the second beat, which is also where the middle voice resolves its suspension. Thematically, this cadence marks (belatedly) the end of the initial statement of the extended motive in the upper voice. In its actual position of overlap, it can certainly not be regarded as a structural caesura.

The second harmonic close occurs in the middle of bar 7. The cadential-bass pattern indicates a modulation to D, the relative major key; this is supported by a typical closing-formula in the soprano (D-C#-D). With two traditional formulas in the outer voices and the simultaneous resolution in all three parts, this cadence clearly represents a structurally relevant close. The sixteenth-note figure in the upper voice, unique in this composition, makes it possible to hear the third beat in this bar both as a resolution to the preceding cadence and as the upbeat to the subsequent syncopation, i.e. as the beginning of a new statement of the motive.

Further cadences in this prelude often make it difficult to distinguish whether a harmonic close marks the end of (only) a phrase or that of a structural section.

A progression of keys in the same order as the one just described can be found in the second half of the prelude where a phrase-ending cadence in D major on the downbeat of bar 21 is followed by a structurally more relevant one in F# minor on the middle beat of bar 27. After this, the sequence closes in E (bar 29) - the last perfect cadence for a long time.

Strangely, those harmonic closes which can be expected to be the most straightforward, i.e. the ones before the repeat sign and at the end of the composition, present themselves as evasive:

- On the downbeat of bar 16, the traditional patterns - this time in the lower and middle voices - indicate the return to the tonic B minor. Yet the next two bars which, with their growing note values and eventual stop, determine a definite structural break, depart again from this tonic and end in an imperfect cadence before the repeat sign.

- Towards the end of the piece, the listener's anticipation of a return to the tonic in the middle of bar 42 is deceived by the sudden twist to the chord on VI, and when B minor is finally regained (in the middle of bar 46), it takes quite a while for the higher voices to give in and settle.

I/24.1.3 Practical considerations for performers

This is a *rather calm* piece, with complex rhythm including manifold syncopations, and distinct melodic tension between the notes. The tempo as given by Bach, one of the very few tempo indications found in the Well-Tempered Clavier, is *Andante*; the articulation is *legato*. Interruption of the continuous sound flow occurs only in the context of phrasing.

The score contains two ornaments, both located at the end of the first large section (see lower voice: bar 16, upper voice: bar 17). The trill in the lower voice resolves properly on the next downbeat and is therefore note-filling with a suffix. As it is approached in stepwise motion, it begins on the main note. Although sixteenth-notes do not play a major role in the rhythmic pattern of this prelude, they are nevertheless the fastest note values to which the speed of the shake in the trill has to relate. The appropriate note values in the trill are therefore: an initial sixteenth-note due to the beginning on the main note, followed by thirty-second-notes. The ornament in the upper voice designates a short mordent. It, too, commences on the main note and contains either three or (better) five fast notes (C#-D-C# or C#-D-C#-D-C#).

Phrasing is a very important issue in this prelude. While the thorough-bass line in the lower voice is not conceived with melodic qualities and should obviously remain without any interruptions, the upper and middle voices require careful structuring in order to fully realize their potential. In ex. 62 below, these two parts have been written out in two staves for easier reference, with detailed indications of the thematic material, the corresponding phrasing, and the structural units.

I/24.1.4 What is happening in this prelude?

The first section of the prelude (until to the repeat sign) is built entirely on two motives, M1 and M2. Both are introduced in the middle voice and imitated in stretto, with some modifications, in the upper voice. The principal motive M1 was already described above; it consists of a fourth interval ascending to a syncopated half-note, followed by a quarter-note descending stepwise to the subsequent downbeat. (This final strong-beat note changes its value throughout the piece.) The second motive M2 commences with a two-beat syncopation and descends in two eighth-notes to the next strong beat. (That this motive does not, as M1, begin with a fourth-upbeat, may not become quite clear in the first statement of bar 2; further appearances in the prelude, however, confirm this beginning.)

The first phrase of the prelude contains two group statements: the initial middle-voice statements of M1 and M2 and their stretto imitations, starting half a bar later in the upper voice, in which the final note of M1 melts with the beginning of M2, and an M1 entry in the upper voice (bars 4/5) imitated now in the middle voice (ending rhythmically varied). A further M1 statement, this time with a rhythmically varied beginning, may be recognized in bars 6/7. The stretto statement in the upper voice bends its final note back upwards and thus creates a well-known closing-formula. (All details may be verified in ex. 62 below.)

phrase I
bars 1-7m

phrase II
bars 7-12d

phrase III
bars 12-16d
+ ext.16-17

phrase IV
bars 18-21d

phrase V
bars 21-27m
+ ext.27-29m

phrase VI
bars 29-42m

phrase VII
bars 42-47

This pattern of consecutive stretto entries with changing leadership are further developed in the second and third phrases. The second phrase features a string of ascending M1 sequences in the upper voice which follow one another in such a way that the final note of one serves simultaneously as the beginning of the next; all are imitated after half a bar. The same process can be observed, with the middle voice in the lead, in the third phrase. The latter sequences in both patterns feature variations - most are those already established in the first phrase, only one detail is new (see bar 14, middle voice). After the perfect cadence in bar 16, an extension completes the section with a closing formula. As was already mentioned, this formula ends in an imperfect cadence and thus creates a strong anticipation for a repetition of the entire first half of the prelude.

In the second section of the prelude Bach introduces seemingly new material which is, however, all related to the two earlier motives. The first motive to appear here, introduced like the two earlier ones in the middle voice, consists of three eighth-notes leading to a strong beat. The pitch pattern contains one ascending fourth followed by descending steps - i.e. M3 (as it will be called to avoid confusion) is conceived as a rhythmical variation and diminution of M1. This motive reigns, extended through a few linking notes in each voice, in the short fifth phrase of the prelude.

M4 enters after the D major close in bar 21. It is rhythmically close to M3 with three eighth-notes leading to a strong beat, but its pitch pattern points in a single direction - as in M2. The motive is introduced ascending in bar 21, but is later also presented descending, e.g. in bars 23 and 26.

After a closely knit pattern with alternations of M4, M3 and M2, the middle segment of the fifth phrase displays a complementary-rhythm pattern with half-notes and syncopated half-notes (see bars 24-26) which closes with M2. (We shall meet this again in the subsequent phrase.) The closing-formula of this phrase, as well as that of its modulating extension, presents yet another motive, made up this time of the three ascending eighth-notes from M4 and a diminution of M1" (that was the variation of the first motive which sounded like the traditional closing-formula). This new motive, here called M5, also serves to indicate a cadential close (see M5 in bars 27 and 29, middle voice).

The sixth phrase (which begins on the fourth beat of bar 29) sets out with motives that are by now familiar: in the upper voice, M2 gives way to a variation of M5 and partial sequences thereof, followed by a string of M4 sequences. The middle voice, however, having accompanied for several bars, presents a sixth motive which is to play an important role in this phrase. Related to M2, it commences with a syncopation followed by three eighth-notes leading to a strong beat; the direction, however, is changed to describe a curve, with the interval of a third between syncopation and first eighth-note. This motive, M6, soon takes over all activities and from bar 36 onwards appears in stretto between the two voices. The phrase ends similarly to the preceding one: a segment with complementary rhythm (half-notes and syncopated half-notes) ending with M2 statements (compare bars 39-41 with bars 24-26) is followed by a closing-formula featuring M5 in the middle voice (compare bars 41/42 with bars 26/27).

After the interrupted cadence in bar 42, the final phrase presents the last motive of this prelude: M7 consists of a syncopated quarter-note followed by a eighth-note which jumps up to the strong beat in the interval of a fourth (perfect, diminished and augmented fourths alternate here). Introduced in the middle voice of bar 42, this motive is then imitated and sequenced in ascending direction, before giving way to the final closing-formula.

As a conclusion it may be stated that this prelude builds on a number of motives which are introduced one by one, and which all betray some kind of relationship with the two initial ones. These motives are confined to the two higher voices, while the lower voice maintains a steady pace of eighth-notes in thorough-bass style. The piece thus conveys unity and development in a unique blend.

Asked to describe the structural design in a simplified pattern one might make the following comparison.

- The first section of the prelude consists of three phrases plus a cadential extension in - roughly - an a b' c pattern.

- * The initial thematic phrase introduces the first two motives as well as the rhythmic pattern (which, for the melodic voices, consists primarily of quarter-notes and syncopated half-notes).
- * The two phrases in the center of this section display structural analogies, particularly in their first halves.
- * A short closing-formula leading to an imperfect cadence completes the section.
- The second section of the prelude consists of four phrases; a roughly similar design can be recognized.
 - * The initial phrase introduces the third motive with the diminution of the principal figure; at the same time it announces a shift in the predominant rhythmic values, from quarter-notes and half-notes to eighth-notes and quarter-notes.
 - * The two phrases in the center of this section display structural analogies, particularly in their second halves.
 - * A shorter phrase with a new motive and a different closing-formula completes the prelude.

At the same time, the second section must be comprehended as an intensified development of the first.

- It is much longer (30 bars against the 17 bars of the first section)
 - It uses far more motivic material (M3, M4, M5, M6, M7 are new, and M2 recurs in addition, against only M1 and M2 in the first section)
 - The introduction of new material is spread through the entire section, with motives being introduced in bars 18, 21, 26/27, 32/33 and 42/43, while in the first section, the two initial motives were both presented already in bars 1-3
 - Two of the phrases in the second section comprise distinct subphrasing with cadential closes (see bar 19m: E minor preceding the D major close in phrase IV, and bar 27m: F# minor preceding an E minor close in phrase V); similar subphrasing in the sixth phrase is impeded at the last moment by a raised upper-voice note (see bar 32m the G major chord with G#); finally, even the final phrase reaches the subdominant key E minor in a V-I progression (see bar 44m) before terminating in B minor. In the first section, only the initial phrase contains such subphrasing (on the downbeat of bar 4), yet conversely to all other subphrases mentioned, this one is not harmonically active but simply confirms the tonic.

In terms of the development of tension in each phrase, the composition contains:

In the first section

- a rounded phrase I, with two gentle increases and decreases,
- followed by two dynamically active phrases which, in the ascending patterns of their sequencing stretto, raise the level of tension considerably and climax in bar 14, in the middle of the third phrase, and an extending subphrase bringing a relaxation which, due to the imperfect cadence, remains somewhat incomplete.

In the second section

- two phrases (IV and V) both commencing with heightened tension but featuring predominantly descending lines (see particularly in bars 22-26 the upper-voice descent from B² to E#¹; similarly in the middle voice),
- followed by phrase VI which begins again with descending lines but surprises, after its thwarted G-major subphrasing, with a large-scale ascent in both voices, intensified in its latter portion by chromatic steps in the upper voice (see in bars 32-38, U: G#¹ to B², M: E¹ to F#²). It is interesting to

notice that these seven bars are also the only ones in the prelude where the lower voice emancipates itself from a mere accompanying function and develops figures of its own (see the eight-eighth-note figure in bars 32 (D) to 33 (B) and the inverted curve in bars 36 (B) to 37 (C#) both of which are sequenced twice). This passage must be regarded as the climax of the prelude. Its position in the structural layout of the prelude corresponds with the (lighter) first climax: one occurs in the middle of phrase III, the other in the middle of phrase VI, the third phrase of the second section.

- The final phrase is not restricted to a simple closing-function but builds up its own little climax on the middle beat of bar 45. The metrically unusual cadential close (in which the tonic is reached on the middle beat; see bar 46), combined with the obvious reluctance of the upper voices to give in to a final release of all tension, create a closure to this prelude which can be interpreted either as hesitant or as fairly powerful - and be played accordingly, with either a return to complete *piano* or a rich, *mezzoforte* ending.

WTC I/24 in B minor - Fugue

I/24.2.1 The subject

The subject of this fugue is exactly three bars long. It begins after a eighth-note rest and ends on the downbeat of bar 4. This downbeat seems, at first glance, like a melodic return to the note from which the subject started. At the beginning, however, the F# was the fifth degree of the tonic chord (as can clearly be seen in the first half bar), whereas the same pitch in bar 4 serves now as the root of the minor-dominant harmony to which the subject has modulated. (For more details on the harmonic background see below.)

Pitch and rhythm within this phrase constitute very special cases. The rhythm consists, with the exception of the ornamented second-last note, exclusively of eighth-notes. This rhythmic pattern is, however, not characteristic of the entire fugue where sixteenth-notes, quarter-notes and a variety of tied notes abound. The subject's pitch pattern, particularly if considered for a moment without Bach's slurs, includes a great number of large intervals besides the two obvious broken chords, and an almost equally large number of semitone steps besides only two whole-tone steps (before and after the trill). This unusual combination of intervals is again not shared by other components of the fugue's material; outside the subject, stepwise motion in regular diatonic progression prevails.

With regard to its phrase structure, this subject can be split into two very unequal segments. Both begin with a falling broken chord (compare bar 1 eighth-notes 2-4 with bar 3 eighth-notes 2-4). The first subphrase then winds its way through six note-pairs before coming to a halt on the only unpaired note, the B# on the downbeat of bar 3. The second subphrase is much more concise, comprising only the target note to the broken-chord upbeat and its harmonic resolution.

When investigating the harmonic background of the subject it is vital first to determine the nature of the note-pairs. Slurred by Bach himself, each pair reveals the relationship of *appoggiatura-resolution*. Having found this, one can safely claim that only the *resolutions* (i.e. the second note under each slur) are essential for the harmonic outline, while the *appoggiaturas* create additional harmonic relationships of secondary order. The example visualizes the two layers of harmonic events and analyzes Bach's harmonization as found e.g. in bars 21-24 of the fugue (ex. 63).



When determining the dynamic outline of the subject, one is looking for tension-enhancing features in each of the two sub-phrases, and will then establish a relationship between the two climaxes. The highest degree of harmonic tension within the initial two bars is reached in the chord which marks the modulation, i.e. in the C#⁷ which determines the second half bar 2. Within this half bar, the D natural particularly captures attention. This note is further exceptional in two respects. In terms of structure, it appears as the peak of the ascending sequences (B-A#, C-B, D-C#). With regard to its scale degree it represents the sixth in F# minor which serves as a secondary leading-note.

The climax of the second subphrase is the long G#. This note again stands out for several reasons. It is not only much longer in duration than all other notes in the subject, but also incorporates the two most essential steps of the target-key cadence: the subdominant (as a six-five chord) and the dominant of F# minor. Balancing these two climaxes against each other, one can observe that the second represents natural tension which is resolved immediately afterwards, while the first expresses artificial tension which, due to the structural cut between B# and C#, is only indirectly released. On a higher structural level one could thus claim that the first subphrase creates tension which is resolved in the second one.

I/24.2.2 The statements of the subject

This fugue contains thirteen full subject entries. Another seven are incomplete; they are marked with asterisks in the table below:

1. bars 1 - 4	A	11. bars 42/43	A*
2. bars 4 - 7	T	12. bars 43/44	B*
3. bars 9 - 12	B	13. bars 44 - 47	T
4. bars 13 - 16	S	14. bars 47 - 50	B
5. bars 21 - 24	A	15. bars 53 - 56	T
6. bars 30 - 33	T	16. bars 57 - 60	B
7. bars 34/35	A*	17. bars 60 - 63	T
8. bars 35/36	S*	18. bars 69/70	T*
9. bars 38 - 41	B	19. bars 70 - 73	B
10. bars 41/42	S*	20. bars 74/75	A*

(ex. 64)



The most prominent modification of the subject is of course the shortened version, particularly since the fragment Bach chooses is of exactly the same length each time, breaking off after the third note-pair. Another expected change occurs in the tonal answer which adjusts the intervals in the initial broken chord

and in the first note-pair. Further alterations include the final resolution which may be delayed (see bars 46/47) or omitted (see bars 15/16, 55/56, 62/63). Strettos are not used; all apparent combinations feature an abridged first entry in the lead (see nos. 7/8, 10/11, 12/13, 18/19).

I/24.2.3. The counter-subject

Bach has invented one counter-subject for this fugue; it is introduced against the second subject statement, in the alto part of bars 4-7. Consisting of three segments which are often used separately, it is extremely versatile and plays a vital role both as an accompaniment to the subject and, represented by its components, in the episodes. (The segments will be referred to as CSa, CSb and CSc.)

- CSa (see bar 4: E#-F#) contains two irregular ascents in sixteenth-notes
- CSb (see bars 4-6: F#-B) includes a diatonic descent in quarter-notes ending in a *do-si-do* (keynote / leading-note / keynote) figure
- CSc (see bars 6/7: C#-D) moves again in sixteenth-notes.

While in the initial statement of the counter-subject CSa and CSb have one note in common (the F#), Bach often later separates the two segments and allocates them to different voices. (See e.g. bars 9-12 where an inversion of CSa appears in the currently highest voice which is the alto; the tenor follows with CSb/CSc. Similarly in bars 13-15: CSa inversion in tenor, CSb/CSc in bass.)

All three segments suffer modifications. CSa, more varied than the other two, appears shortened (see e.g. bar 30) or lengthened (see e.g. bar 38), inverted or even completely altered in pitch; CSb is frequently shortened at the beginning and/or varied at the end, while CSc changes only its final interval.

Here is a complete listing of the CS-segments:

<u>CSa</u> :	4	9	13	21	30	34	38	41	42	43	44	53/54	57/58	69	70
bar															
voice	A	A	T	B	S	T	S	B	B	S	S	A	A	S	S
<u>CSb</u> :	4/5	9-11	13-15	21-23	30-32		39/40		45/46	48/9	54/55	58/59		71/72	
bar															
voice	A	T	B	S	S		S		A	S	S	S		S	
<u>CSc</u> :	5/6	11/12	15/16	23/24	32/33		40/41		46/7	50	56	60		72/73	
bar															
voice	A	T	B	S	S		S		A	S	S	S		S	

Concerning dynamic shape, the first two segments (whether occurring in the same voice or split into two) build one curve with a *crescendo* in CSa and a very gradual *diminuendo* in CSb. The third segment CSc creates its own little build-up and relaxation within the few notes it comprises, due to the very prominent pitch ascent and subsequent fall. This counter-subject acts as a fairly regular companion to the subject; it accompanies (in more or less complete version) the subject entries in bars 4-7, 9-12, 13-16, 21-24, 30-33, 38-41, 44-47, 47-50, 53-56, 57-60 and 70-73.

Besides this counter-subject, there is another short motive which serves several times to support the beginning of a subject entry. As this motive materializes only in the context of a subject entry but never in an episode, it must be regarded as a fragmentary second counter-subject and will therefore be referred to as CSd. This motive is easily recognizable: with its syncopation and ensuing sixteenth-note figures it constitutes a single relaxing gesture. It is introduced in bar 21 (S), against the beginning of the fifth subject entry, where its relationship to CSa becomes most obvious. It recurs in bars 34 (S), 35 (A), 38 (T), 41 (A) and 42 (S), almost exclusively against incomplete subject entries. The sketch shows the phrase structure and the dynamic design in the primary material of this fugue (ex. 65):

I/24.2.3 The episodes

This fugue contains twelve subject-free passages*.

E ¹ bars 7 - 9	E ⁷ bar 47
E ² bars 12/13	E ⁸ bars 50 - 53
E ³ bars 16 - 21	E ⁹ bars 56/57
E ⁴ bars 24 - 30	E ¹⁰ bars 63 - 69
E ⁵ bars 33 - 34	E ¹¹ bars 73 - 74
E ⁶ bars 36 - 38	E ¹² bars 75/76

*The incomplete subject entries have here been counted among the essential subject statements, both because of their substantial material and because they appear accompanied by counter-subject segments. This is, of course, a matter of interpretation. The theoretically equally possible concept of regarding these incomplete statements as subject-related episode material would lead to slightly different results in the counting of the episodes:

E ⁴ bars 24 - 30	E ¹⁰ bars 63 - <u>70</u>
E ⁵ bars 33 - <u>38</u>	E ¹¹ bars 73 - 74
E ⁶ bars <u>41</u> - 44	E ¹² bars <u>73</u> - 76

There are only particles in these episodes which derive from the subject. Two are "fake entries": in bar 19, the alto (which is otherwise silent in bars 17m-21d, i.e. during almost the entire E³) presents the falling broken triad from the subject beginning; it thus anticipates the true alto entry in bar 21. Exactly the same occurs with the fake tenor entry in bar 28; the tenor had withdrawn in bar 21 and only resurfaces in bar 30. In a third instance (see bar 16), the tenor imitates the falling broken chord, the half-note and its resolution from the subject's second subphrase, but with the pitch pattern of the subject beginning (see the sixth interval).

The first counter-subject is all the more active in the episodes, contributing its third segment (CSc) to each and every one of them. Even the extremely short E⁷ features a partial sequence of CSc (see S: bar 47), and the episodes E², E⁵ - E⁹ and E¹¹/E¹² are determined exclusively by this sixteenth-note figure. In the first part of the fugue, however, the CS-segment is complemented by three genuine episode motives.

M1 is introduced in E¹, in imitation between alto and tenor, and recurs in E⁴, in parallels (see S+A: bars 24-26). It consists of three eighth-notes leading to a longer note on the strong beat.

M2 is first heard in E³ (in the bass part of bars 17-21), and recurs, likewise in the bass, in E⁴ (bars 26-30). It is very similar to M1: rhythmically it also consists of three eighth-notes leading to the strong beat, and its pitch only differs in the first note (an ascending instead of a descending step).

M3 is also presented in E³. From the first sequence onwards a curved shape is established (see S: bars 17/18 E-D-C#-D-E) which then remains consistent. This motive consists primarily of sixteenth-

notes. Its gentle climax falls on the strong beat in the middle of the respective curves.

None of the episodes equals a disguised cadential close. In fact, none of them contains any obvious cadential features. It needs a closer analysis to reveal those harmonic closes which do occur. Investigating into the episode endings one finds that only E⁵ with its half-bar modulation and E¹² terminate with a complete harmonic close; all others end with a suspension in one of the voices, a suspension which is resolved only at the beginning of the subsequent subject entry and thus prevents a feeling of closure.

In addition to these cadences there are two others which materialize half-way through an episode; in both cases, this occurs after a subject entry which remains somewhat "open". In bar 16, the soprano entry of the subject ends unresolved. The subject-derived fragment which follows in the tenor at the beginning of E³ determines the harmonic background as F# minor, and this key -the minor dominant in B minor - is confirmed with a perfect cadence in the first half of bar 17. (Both the C# in the tenor and the CSc in the soprano overshoot the harmonic ending by one sixteenth-note.)

Similarly, the tenor entry in bars 60-63 ends without resolving its trill; instead, the ensuing episode E¹⁰ contains a cadential close in the home key (see bar 65, third eighth-note). In the course of any further investigation it would thus be meaningful to distinguish the following segments: E^{3a} / E^{3b} (bars 16-17m-21), E^{10a} / E^{10b} (bars 63m-65m-70). If thus two of the episodes consist of two structurally detached portions, one should go ahead and have a closer look at the others. There is in fact a third episode which can be thus divided: E⁴ also consists of segments E^{4a} and E^{4b} (bars 24-26-30).

With regard to the relationship between the episodes, it is easy to discover that E^{3b}, E^{4b} and E^{10b} are very much alike; all contain M2 in the lowest voice and M3 in a pattern of imitations of the two higher voices. A more remote analogy can be found between E¹ and E^{4a}, both of which contain M1 in connection with CSc (though the pattern does not quite correspond).

The role played by each episode in the development of tension can be described as follows:

- E¹ *crescendo* : ascending sequences
- E² *diminuendo*: descending sequences
- E^{3a} closing
- E^{3b} *diminuendo* after a new start: descending sequences
- E^{4a} *crescendo* : ascending sequences
- E^{4b} *diminuendo*: descending sequences
- E⁵ closing
- E⁶ *diminuendo*: descending peak notes
- E⁷ almost like an extension - releasing
- E⁸ self-contained, with *crescendo* / *diminuendo*
- E⁹ resolving previous S, building up anew
- E^{10a} closing
- E^{10b} *diminuendo*: descending sequences
- E¹¹ *crescendo* : ascending sequences
- E¹² closing

I/24.2.5 Character, tempo, articulation, ornament realization

A calm character and a slow tempo are clearly indicated by the heading *Largo*. The relative tempo to the prelude must be complex since both pieces are in calm four-four time and simple proportion would therefore give a somewhat monotonous result. There are two possible solutions between which the individual performer may choose.

- | | | | |
|-----|--|------------------|----------------------------------|
| (a) | three eighth-notes
in the prelude | correspond with | one quarter-note
in the fugue |
| or | | | |
| (b) | one assumed triplet quarter-note
in the prelude | corresponds with | one eighth-note
in the fugue |

Approximate metronome settings: prelude beats = 64, fugue beats (a) = 42, (b) = 48.

The articulation requires *legato* in all notes except for the few cadential-bass patterns and consecutive leaps; this means that the two broken chords in the subject are to be played gently detached. Another aspect of articulation to be pondered in the subject is the connection between the note-pairs. These should also be slightly disconnected from one another, not only because this allows the *appoggiatura-resolution* structure in the pair to become clearer, but also because of the underlying pattern of consecutive jumps (refer back to the melodically reduced version given earlier). By contrast, the counter-subject segments and the three episode motives all require unbroken *legato*.

The sole ornament in this fugue is the trill in the subject. This trill always begins on the main note as it is introduced stepwise. After an initial note of double duration it moves in thirty-second-notes (i.e. twice as fast as the faster note values in the piece). Wherever the subject ends regularly, i.e. with the resolution following the ornamented note on the subsequent strong beat, the trill is a note-filling one and ends with a suffix; in this case it would encompass fifteen trill-notes to the half-note.

The trill forms an integral part of the subject. In this fugue as in most others, the composer does not specify the trill in later subject statements, just as he stops indicating the slurs in the middle of the third entry. Both articulation and ornamentation in the subject of a fugue are such characteristic features that a performer could be trusted to observe them where applicable, without further reminders from the composer. Regarding the trill, the key word is: "where applicable". It is necessary to study the melodic and harmonic surroundings of a subject-ending (and not just the technical feasibility!) to find out where a trill is needed, where it might have to be modified and where it should be omitted. The rule of the thumb is:

- (a) if the originally ornamented note is resolved on time,
play the original trill;
- (b) if the originally ornamented note is resolved early or belatedly,
play an interrupted trill without suffix, stopping short
 - * immediately before the bar line (for delayed resolution)
 - * or before the dot (for anticipated resolution);
- (c) if the originally ornamented note is not resolved,

no trill is needed.

In this fugue, however, there are two instances where an ornament is thwarted by a literally crossing line from another voice. (In these cases, the trill may be pianistically impossible but would be played in, say, a string-quartet rendition. These cases are marked with an asterisk in the table below.) Trills in the subject-endings are thus as follows:

bar 6 (a), bar 11 (a), bar 15 (c), bar 23 (a)*,
bar 32 (a), bar 40 (a), bar 46 (b)*, bar 50 (a),
bar 56 (c), bar 60 (a), bar 63 (c), bar 72 (a).

I/24.2.6 The design of the fugue

The structural layout of this fugue cannot be deduced quite as easily as that of others.

- On the one hand, this is due to the texture which is quite peculiar: although the fugue is written in four voices, only two of the thirteen complete subject entries appear in four-part setting (see the fourth statement, bars 13-16, and the last unabridged one in bars 70-73). As the latter full-texture entry only confirms what the listener already knows, i.e. that it is the final complete statement in the fugue and thus of structural importance, the former four-part statement assumes a crucial position.
- On the other hand, the slightly complex appearance of this fugue is due to the absence of very ear-catching cadential closes at the end of an episode. Instead, structural understanding must rely here on the earlier investigations regarding the three cadential closes occurring within the episodes, and on the usage, so striking in this piece, of incomplete subject statements.

As has been shown, the first of the mid-episode perfect cadences occurs half-way through E^3 , in bar 17 beat 2. It concludes the first section and confirms that the four-part texture in the statement of bars 13-16 indeed marks the pending close of this structural entity. Section I thus contains four statements, A T B S, and encompasses the episodes E^1 , E^2 and E^{3a} . (This in itself would not be remarkable at all. What does appear both unusual and ingenious is the fact that E^2 displays a clearly relaxing tendency - an attentive listener gets the impression that the exposition of the ensemble is completed after the third entry! Correlating this observation to the fact that four-part entries are in fact an exception in this four-part fugue, it seems as if Bach consciously created the impression of a three-part composition with only occasionally enhanced density in chosen spots.)

The second section thus commences with the episode segment (E^{3b}) which is significantly characterized by episode-material: the interplay of M2 with the M3 imitations. The corresponding episode segment which presents the same material in a very similar setting (E^{4a}) precedes the next subject statement. These two pairs of episode segment plus subject statement are linked by material which was already in the first section identified as bridging: the rising sequences of M1 (compare E^{4a} with E^1). The section is closed by the only episode in the entire fugue which ends in a fully resolved perfect cadence (see E^5 in bars 33/34).

The third section embarks on incomplete subject statements from its very outset. Including these abridged statements, this section contains altogether eight entries, i.e. A* S* B, S* A* B* T, B. Its confines are determined by the entering order of the complete statements: when the bass which had provided the first unabridged entry (in bars 38-41) sets in again (in bars 47-50), the signal is given that this round is closed. The actual closure occurs here on the final note of the bass entry which falls into a fully resolved D major chord (see bar 50₃).

Looking back on these three sections of the B minor fugue one could go as far as to suggest that they represent three *expositions* - in the sense that an exposition "exposes" new material which will later be taken up. This can be supported as follows:

- The first section obviously exposes the primary material (subject and counter-subject), the episode-use of CSc (in E¹, E² and E^{3a}), the first episode motive and its ascending sequences; last but not least it introduces the intended texture by presenting the fourth entry in four-part setting.
- The second section exposes that episode-type which relies on the extended sequence pattern of M2 and M3 and which is conceived to precede, rather than follow, a subject statement.
- The third section then introduces the pattern of several incomplete subject entries preceding a complete one.

The fourth section is comparably easy to determine. Its third subject statement appears, as did that in the third section, as a redundant entry (here: T B T). Moreover, this third entry is followed by the episode which was recognized as analogous to E³ in the first section: E¹⁰ also consists of two segments, the first of which concludes in a perfect cadence (bar 65 beat 2). The fact that the remainder of this episode then opens the ensuing final section is consistent as it displays the M2 / M3 combination which in section II also preceded the entries.

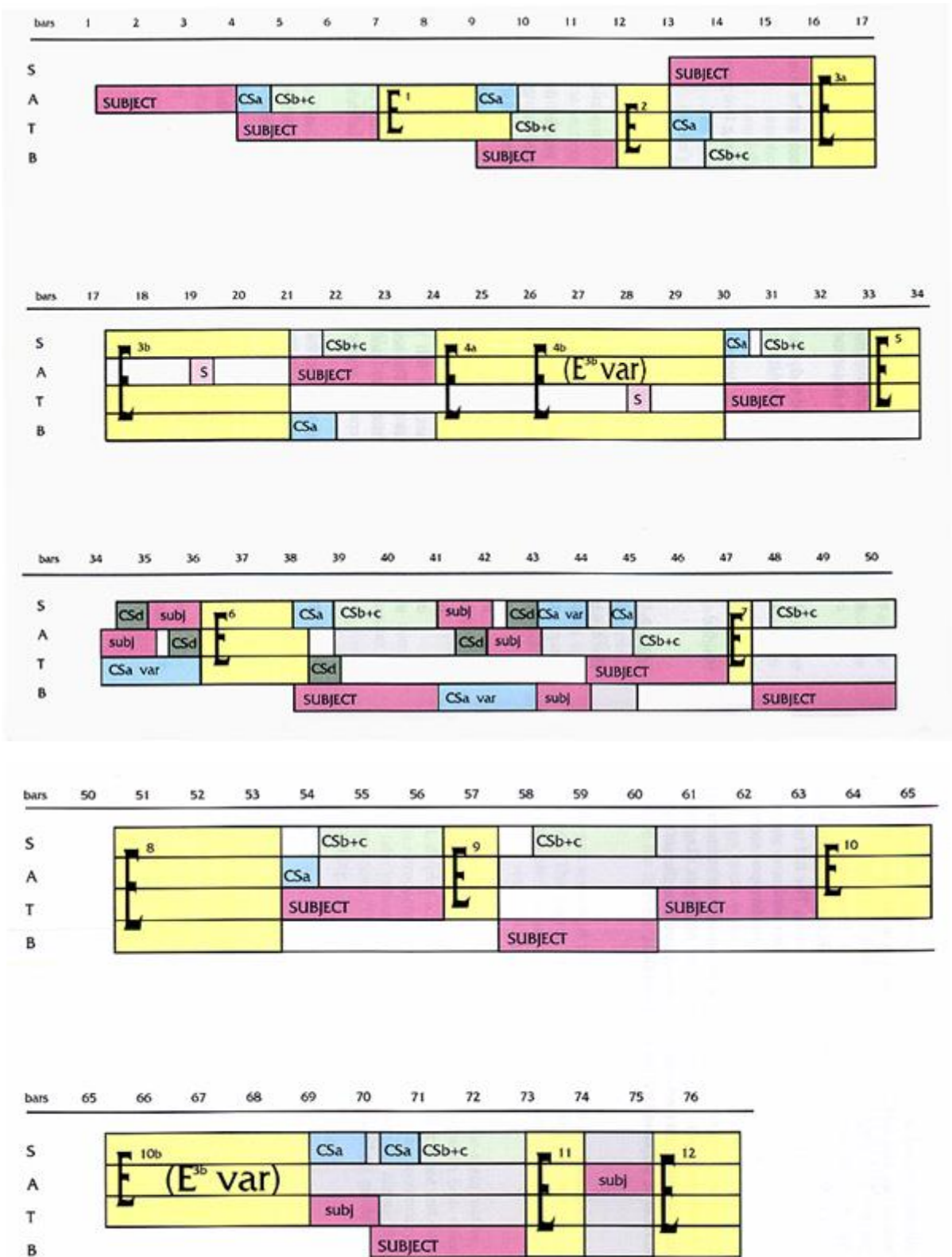
Seen from the same angle which earlier revealed three expositions, one now finds that sections IV and V develop that which has been presented earlier.

- Section IV returns to the uncluttered structure with no incomplete entries (thus leaning on sections I and II), but imitates the entry pattern of section III (B T B becomes T B T).
- Section V, on the other hand, takes up the abridged entries from section III but also the beginning with M2 / M3 from section II, and the four-part statement from section I.

The harmonic development in the fugue encompasses the following steps which confirm the layout described above:

- Section I contains exclusively entries which modulate from the tonic to the minor dominant and back.
- The two entries of section II are both conceived in original tonal setting (i.e. neither of them contains the features of the tonal answer). They are harmonically arranged in such a way that a return to the tonic is nevertheless granted: the first modulates i-v, the second reciprocates with iv-i.
- The third section commences once more in the i - v environment but then modulates for good, so that the remaining two entries move from the relative major of the tonic to the relative major of the dominant, and back again, concluding this section in the major mode.
- The fourth section begins and ends on v, leaving the crucial return to the home key in a iv - i modulation to the fifth section.

For a sketch of the design showing the fugue in B minor, see ex. 66.



I/24.2.7 The development of tension

The dynamic outline is quite different in each of the five sections.

- Section I is characterized by a build-up of tension which is gradual though interrupted. The superimposed increase of tension occurs from the single-voiced entry to the four-part statement. The first episode, after an initial drop in intensity, contributes to the impression of mounting tension in its ascending sequences. Only the second episode decreases and thus suggests deceptively (as was observed earlier) that this might be a three-part fugue and any further entry would be redundant. The full four-part texture of the fourth subject statement, however, defies this. The section thus ends on a high level of intensity which, due to the "fake entry" and the fully maintained ensemble of four voices in the concluding episode segment, hardly dwindles before the cadence.
- The second and third episodes are each made up of two very nearly corresponding halves (compare bars 17-21 with 26-30 / bars 21-24 with 30-33; and bars 34-36 with 41-43 / bars 38-41 with 47-50). In the case of section II, the protracted episodes with their descending motion prepare two relatively soft statements, so that the entire section remains somewhat subdued. In section III the apparent density of material - with eight occurrences of the subject beginning - raises the overall tension level. At the same time, the incompleteness of five of the entries and the fact that they appear accompanied by the relaxing CSd restrict the dynamic development, so that only the final consecutive entries of T and B (bars 44-50) gain momentum.
- Sections IV and V both begin with longer spans of diminishing tension (see e.g. the descending line in the bass of E⁸, bars 51-53: F# E, C# B A G# F#, and the descending sequences in E^{10b}, bars 65-69). In section IV, the final entry is the sole statement in the fugue to do without any segment of the counter-subject; instead it is accompanied by ascending sequence patterns in two voices (see bars 60-62, soprano and alto) which help create a certain intensity. Section V, having recalled section II with its opening episode, then jumps directly to the final statement of section I. Prepared only by the incomplete tenor entry, the bass entry in bars 70-73 soon gains full four-part texture and thus provides the fugue with a glorious ending. The full texture is maintained throughout the ensuing E¹¹ (which builds up tension in ascending sequences) and the incomplete entry, and surpassed in the five-part setting of bars 75/76.

When relating the climaxes of the sections to one another, it seems irrefutable that the endings of sections I and V represent the overall highlights. Regarding the sections in-between, a possible interpretation is to take section II as the softest, and the climax of section III to be surpassed by that of section IV.